जयपुर विकास प्राधिकरण, जयपुर

कमरा नं. 139-C, First Floor, Main Building, रामकिशोर व्यास भवन, इन्दिरा सर्किल जवाहर लाल नेहरू मार्ग, जयपुर–302004

दूरभाष : + 91-141-2569696, ई–मेल : erdk72@gmail.com

क्रमांकः जविप्रा/अधि.अभि. (Traffic Works-I)/2021–22/डी–28 दिनांकः–22.10.2021

निविदा सूचना

निविदा सूचनाः जविप्रा/अधि. अभि. (Traffic Works-I)/03/2021–22

जयपुर विकास प्राधिकरण द्वारा **"बी 2 बाईपास जयपुर पर यातायात सुधारीकरण एंव सौन्दर्यीकरण के कार्य"** जिसकी अनुमानित लागत रू 15000.00 लाख़ के लिए ऑनलाईन बिड्स दिनांक 22.11.2021 को सायं 6:00 बजे तक आमन्त्रित की जाती है। निविदा बोली का ऑनलाईन आवेदन व भुगतान जविप्रा पोर्टल पर करने की अन्तिम तिथि 22.11.2021 को सायं 6:00 बजे तक है।

निविदा बोली के दस्तावेजों का विस्तृत विवरण www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in and www.jda.urban.rajasthan.gov.in पर देखा जा सकता है।

(UBN No.)

निविदा में भाग लेने वालो को निम्न शर्तो की पूर्ति करनी होगी।

1. निविदादाता जयपुर विकास प्राधिकरण की वेबसाईट www.jda.urban.rajasthan.gov.in पर पंजीकृत हो एवं निविदा में भाग लेने के लिए बोलीदाता को आवेदन करने के लिए दस्तावेज शुल्क, अमानत राशि, आर.आई.एस.एल. प्रोसेसिंग शुल्क ऑनलाईन जमा करनी होगी।
2. ऑनलाईन निविदा प्रस्तुत करने के लिए निविदादाताओं का राजस्थान सरकार के ई–प्रोक्यूरमेंट पोर्टल www.eproc.rajasthan.gov.in पर पंजिकृत हो।

(देवेन्द्र केवलिया)
अधिशाषी अभियन्ता (Traffic Works-I)

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

BID DOCUMENTS

TECHNICAL BID

(PRE QUALIFICATION)

Envelope – 2

FOR THE WORK OF

Traffic Improvement and beautification works at B2 Bye pass Junction, JDA, Jaipur, Rajasthan.

Period of Download Period of Upload	: :	From 22.10.2021 to 22.11.2021 From 22.10.2021 to 22.11.2021
Date of Pre Bid Meeting	:	28.10.2021 at 11:00 AM
Date of opening of technical bid	:	24.11.2021 at 12:00 P.M. (Room No. 139-C, First Floor, Main Building, JDA Campus, Jaipur.)
Approximate Cost	:	Rs. 15000.00 Lakh.
Cost of Bid document Bid processing Fee	: : :	Rs. 5000.00 payable online only. Rs. 1000.00 payable online only.
Completion period	:	18 Months

Executive Engineer-Traffic Works-I,
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY

Office of Executive Engineer Traffic Works-I, Room No. 139-C, First Floor, Main Building, JDA Campus, Jaipur, JDA Campus, Indira Circle, Jawahar Lal Nehru Marg, Jaipur- 302004

Telephone: +91-141-2569696 EPABX 1139 email: erdk72@gmail.com

No: JDA/EE- Traffic Works-I /2021-22/D- **Dated:**

NOTICE INVITING BID
NIB NO: EE- Traffic Works-I / 03/2021-22

Online Bids are invited up-to 6.00 PM of 22/11/2021 for Traffic Improvement and beautification works at B2 Bye pass Junction, JDA, Jaipur, Rajasthan estimated cost of Rs. Rs. 15000.00 Lakh. The last date for applying Bid and making online payment on JDA portal is up to 6.00 PM dated 22-11-2021.

Details may be seen in the Bidding Document at our office or the website of State Public Procurement Portal website www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in and www.jda.urban.rajasthan.gov.in

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jaipurjda.org for participating in the Bid, the Bidder has to apply for the Bid and pay the Bidding Document Fee, RISL Processing Fee online only.
2. Registered on e-Procurement Portal of Government of Rajasthan www.eproc.rajasthan.gov.in for online e- Bid submission.
3. Registered in "AA" Class in JDA or Any Central Government Department/State Government Department/Local Body/Railways.

Executive Engineer-Traffic Works-I,
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY

Office of Executive Engineer Traffic Works-I, Room No. 139-C, First Floor, Main Building, JDA Campus, Jaipur, JDA Campus, Indira Circle, Jawahar Lal Nehru Marg, Jaipur- 302004

Telephone: +91-141-2569696 EPABX 1139 email: erdk72@gmail.com

No: JDA/EE- Traffic Works-I /2021-22/D- **Dated:**

NOTICE INVITING BID
NIB NO: EE- Traffic Works-I /03/2021-22

Name & Address of the Procuring Entity	➢ Name : Executive Engineer Traffic Works-I, Jaipur Development Authority Address : Room No. 139-C, First Floor, Main Building, JDA Campus, Jaipur, JDA Campus, Indira Circle, Jawahar Lal Nehru Marg, Jaipur- 302004 ➢ **Email :** erdk72@gmail.com
Subject Matter of Procurement	Traffic Improvement and beautification works at B2 Bye pass Junction, JDA, Jaipur, Rajasthan.
Bid Procedure	➢ Two Stage tender (Envelope) open competitive E-Bid procedure at http ://eproc.rajastha.gov.in
Bid evaluation Criteria (Selection Method)	➢ L1 (eg. Least Cost based Selection (LCBS)-L1)
Websites for downloading Bidding Document, Corrigendum's, Addendums, etc.	➢ **Websites:** www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in, www.jda.urban.rajasthan.gov.in
Website for online Bid application and payment	➢ Website : www.jda.urban.rajasthan.gov.in ➢ For participating in the Bid, the Bidder has to apply for this Bid and pay the Bidding Document Fee, RISL Processing Fee and Bid Security Deposit, online only. ➢ Bidding Document fee : Rs 5000.00/-Rupees (Rupees One Thousand only) ➢ RISL Processing Fee : Rs 1000.00 (Rupees One Thousand only)
Estimated Procurement Cost	➢ INR in Lakh (Rupees 15000.00)

Bid Security Deposit	➢ All the eligble contractors should be submit Bid Security declaration on non-judicial stamp of Rs. 50/- as per office order issued by Finance Department (GF&AR) GoR dated 23.12.2020 (Declaration form attached with tender document). It is mandatory to submit bid security declaration in prescribed format along with the bid. ➢ Eligibility – Bidder who is "AA" class contractor registered in JDA and other Government Department.
Pre-Bid	➢ 28/10/2021 at 11:00 AM in "Manthan Hall", Third Floor, Main Building, JDA Campus, Jaipur.
Start/End date for Bid Applying, Online Payment and Bid Submission	➢ Start Date: 22.10.2021 from 9.30 AM onwards ➢ End Date: 22.11.2021 up to 6.00 PM
Applying bid and making online payment on JDA portal	➢ Start Date: 22.10.2021 from 9.30 AM onwards ➢ End Date: 22.11.2021 up to 6.00 PM
Date/Time Place of Technical Bid Opening	➢ 24/11/2021 at 12:00 PM in Room No. 107, First Floor, CCC Building, JDA Campus, Jaipur.
Date/Time/Place of Financial Bid Opening	➢ After evaluation of Technical Bid successful bidder shall be informed on e-proc portal. ➢ SE-II, Room No. 107 First Floor, CCC Building, Ram Kishore Vyas Bhavan, Indira Circle, Jawahar Lal Negru Marg, Jaipur- 302004 (Rajasthan)
Bid Validity	➢ 120 days from the bid submission deadline.
Time period	➢ 18 months
Job No.	➢ JDA/EE TR Works-I/A & F/2021-2022/Jul/144 28/07/2021

- The amount is to be deposited online by bidder. In case the amount exceeds the online Payment limit the payment may be made through RTGS/NEFT in ICICI Bank Account Number 675401700586 IFSC Code ICIC0006754. After Successful payment, update the UTR/Instrument number on JDA tender portal against the tender you want to participate. The amount deposited will be confirmed by JDA and will be updated online.

Note :-

1. **Bidder (authorized Signatory) shall submit their offer on-line in Electronic formats both for technical and financial proposal.**
2. **In case, any of the bidders fails to pay tender Fee and RISL Processing Fee Online (Subject to Confirmation) its Bid shall not be accepted.**
3. **To participate in online bidding process, bidders must procure a digital signature Certificate (Type III) as per information Technology Act-2000 using which they can digitally sign their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TC safecrypt, Ncode etc. Bidders who already have a valid Digital signature Certificate (DSC) need not procure a new DSC. Also bidders must register on** http://eproc.rajasthan.gov.in **(Bidders already registered on http:// eproc.rajasthan.gov.in before 30.09.2011 must register again).**
4. **JDA will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid 11th hour issues like slow speed: chocking of web site due to heavy load or any other unforeseen problems.**
5. **Bidders are also advised to refer "Bidders Manual Kit" available at e-proc website for further details about the e-tendering process.**
6. **Training for the bidders on the usage of e-tendering system (e-procurement) is also being arranged by DoIT & C, GoR on a regular basis. Bidders interested for training**

may contact e-procurement Cell, DoIT& C for booking the training slot.
Contact No. : 0141-4022688 (Help desk 10 am to 6 pm on all working days) e-mail: eproc@rajasthan.gov.in
Address : E-Procurement Cell, JDA Yojana Bhawan, Tilak Marg, C-Scheme, Jaipur.

7. **The procuring entity reserves the complete right to cancel the bid process and reject any or all of the bids.**
8. **No contractual obligation whatsoever shall arise from the bidding document/ bidding process unless and until a formal contract is signed and executed between the procuring entity and the successful bidder.**
9. **Procurement entity disclaims any factual/ or other errors in the bidding documents (the onus is purely on the individual bidders to verify such information) and the information provided therein are intended only to help the bidders to prepare a logical bid-proposal.**
10. **The provisions of RTPPA Act 2012 and Rules thereto shall be applicable for this procurement. Furthermore, in case of any inconsistency in any of the provisions of this bidding document with the RTPP Act 2012 and Rules thereto, the later shall prevail.**
11. **For procedure of Prequalification of the contractors chapter "SPECIAL CONDITIONS OF THE CONTRACT FOR PRE QUALIFICATON OF CONTRACTORS" must be referred.**

Executive Engineer-Traffic Works-I,
JDA, Jaipur

Part of NIB Document

Process for participation & Depositing Payment Online

Jaipur Development Authority, has decided to receive Bidding document fee, RISL Processing Fee through online mode only for which the bidder has to get registered himself on JDA portal www.jda.urban.rajasthan.gov.in.

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jda.urban.rajasthan.gov.in (by depositing Rs 500.00 online, the validity of which remains 3 (three) years.)
   For participating in the Bid, the Bidder has to apply for this Bid and pay the bid Document Fee, RISL Processing Fee and Bid Security Deposit online only.
2. Registered on e-Procurement Portal of Government of Rajasthan www.eproc.rajasthan.gov.in for online e-Bid submission.

Methods for depositing online amount

- Online through internet Banking, Debit card or Credit Card.
- In case the amount exceeds the online payment limit, the payment may be made through RTGS/NEFT/Transfer in Bank Account Number 675401700586 IFSC Code ICIC0006754 of ICICI Bank limited, JDA Campus Jaipur.

In Case of RTGS/NEFT/Transfer the bidder is required to deposit the requisite amount in the dedicated bank account number as mentioned above and has to get the UTR/ Reference number from the bank. This number requires to be updated whiling applying the bid on JDA portal.

While participation in the bid, a receipt will be generated through the system showing the submission details as per Annexure-4. The bidder is required to fill the instrument numbers for various heads on e-procurement portal www.eproc.rajasthan.gov.in as mentioned in the receipt.

More details about Registration Process, Terms and Conditions and FAQ along with contact detail is available on JDA website www.jda.urban.rajasthan.gov.in.

Template of Online Receipt as part of NIB Document

JIPUR DEVELOPMENT AUTHORITY

Bid Participation Receipt

Date &Time: …….

Bid Detail

Bid ID : EE- Traffic Works-I /03/2021-22	**Procurement Entity**	Executive Engineer- Traffic Works-I, JDA, Jaipur.
Bid Title :	Traffic Improvement and Beautification works at B2 Bye pass Junction, JDA, Jaipur	
Bid Value : 15000.00 lakh	**Tech Bid Opening Place :**	**Room No. 107, First Floor, CCC Building, JDA Campus, Jaipur.**

Bidder Detail

Name of Entity	**……**	**Mobile :**
Registration Type :		**Instrument Amount: ……**
Payment Mode :	**Online / UTR**	**Payment Channel : Payment Gateway/ ICICI Branch - JDA**
Instrument No.		**Instrument date: …….**

Dates Detail

Sr. No.	Event Name	Event Date
1	**Publishing date/On line start date for bid applying**	**22.10.2021 at 9.30 AM**
2	**Bid Opening Date**	**24.11.2021 at 12:00 PM**

Specific Instrument detail for e Proc Rajasthan

Instrument Type : DD			
Instrument Number	**Head Name**	**Amount**	**Date**
10000	**Bid Document Fee**	**5000.00**	**……..**
10001	**RISL Processing Fee**	**1000.00**	**……..**
10002	**Bid Security Deposit**	Bid Security declaration on non-judicial stamp of Rs. 50/- as per office order issued by Finance Department (GF&AR) GoR dated 23.12.2020	**……..**

Issuer Detail: Jaipur Development Authority Challan Number: ……

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

SCHEDULE AND SPECIFICATIONS

Name of Work: - Traffic Improvement and Beautification works at B2 Bye pass Junction, JDA, Jaipur.

1.	NIB No.	:	EE- Traffic Works-I / 03/2021-22
2.	Approximate cost	:	₹ 15000.00 Lakh
3.	Cost of the Bid document	:	₹ 5000.00 Through On Line Payment only.
4.	Bid Processing Fees	:	₹ 1000.00 Through On Line Payment only.
5.	Bid Security (In favor of Secretary, JDA, Jaipur.)	:	All the eligble contractors should be submit Bid Security declaration on non-judicial stamp of Rs. 50/- as per office order issued by Finance Department (GF&AR) GoR dated 23.12.2020 (Declaration form attached with tender document). It is mandatory to submit bid security declaration in prescribed format along with the bid.
6.	Download of Bid document	:	From 22.10.2021 At 09:30 AM to 22.11.2021 up to 6:00 PM
7.	Upload the Bid Document	:	From 22.10.2021 At 09:30 AM to 22.11.2021 up to 6:00 PM
8.	Date of Pre Bid Meeting	:	28.10.2021 at 11:00 AM
9.	Last Date of submission of Bid cost, Bid Process cost & Bid Security.	:	22.11.2021 up to 06:00 PM through online only.
10.	Date of opening of Technical Bid	:	24.11.2021 at 12:00 PM in Room No. 107, First Floor, CCC Building, JDA, Campus, Jaipur.
11.	Completion period of work	:	18 Months

SCHEDULE – A: INFORMATION USEFUL FOR THE BIDDERS:

The Bidder should see the site and fully understand the conditions of the site before bidding and include all lead, lift etc for the material in his item rate/percentage to be quoted on the rates give in the Schedule 'G'. The work shall be carried out in accordance with the MoRTH specifications/IRC specifications and to the entire satisfaction of the Engineer–In–Charge of the work.

SCHEDULE – B: LIST OF THE DRAWING:

General Arrangement Drawing (GAD) and other drawings may be seen in office of the undersigned.

SCHEDULE – C: LIST OF THE DRAWING TO BE SUPPLIED BY THE BIDDER:

List of the drawing to be supplied by the bidder- **NIL**. But the bidder shall have to arrange at his own cost drawings required for the work after deposition necessary cost with JDA.

SCHEDULE - D: TEST OF THE MATERIALS:

The testing of the materials and workmanship shall be conducted by the JDA staff as necessary. The result of such tests should confirm to the standard laid down in the Indian standard MORTH/IRC/PWD detailed specification. Qualified personnel as required duly approved by JDA shall have to be engaged at site by the contractor at his cost. The JDA reserves the right to engage such staff and recover the expenses from the contractor on such account in case of his failure to do so.

SCHEDULE – E: SAMPLES OF THE MATERIALS:

The sample of the materials to be used by the bidder shall be deposited 15 days in advance with the Engineer In charge and be got approval by him before use.

SCHEDULE - F: TIME OF COMPLETION:

The work should start by date of commencement as mentioned in Work order and complete within time limit.

SCHEDULE – G: Attached Separately

SCHEDULE – H: SPECIAL CONDITION: Attached Separately.

SCHEDULE – I: LIST OF MATERIAL TO BE SUPPLIED BY THE DEPARTMENT:

NIL

SCHEDULE – J: COST OF BID DOCUMENTS, PROCESSING FEES & B.S.D.

Date of submission of Bid document Cost, Bid Processing fees & Bid declaration form up to 22-11-2021 upto 6:00 PM through online payment after registering with JDA on www.jda.urban.rajasthan.gov.in portal. In the absence of such feed the bid of respective bidder will be considered as non-responsive and shall be rejected. All the eligble contractors should be submit Bid Security declaration on non-judicial stamp of Rs. 50/- as per office order issued by Finance Department (GF&AR) GoR dated 23.12.2020. (Declaration form attached with tender document). It is mandatory to submit bid security declaration in prescribed format along with the bid. (Format is attached herewith).

Annexure A : Compliance with the code of Integrity and No Conflict of Interest
Annexure B : Declaration by the Bidder regarding Qualifications
Annexure C : Grievance Redressal during Procurement Process
Annexure D : Additional Conditions of Contract.

Signature of the Bidder with address

Executive Engineer-Traffic Works-I, JDA, Jaipur

SPECIAL CONDITIONS
SCHEDULE 'H'

01. Use of Bitumen mixture Tar mechanical lime grinder, cement concrete mixer & vibrator is essential for the work, which shall have to be arranged by the bidder at his own level/cost.
02. If there is any typographical error or otherwise in the 'G' Schedule the rates given in the relevant BSR on which schedule 'G' has been prepared, shall prevail.
03. The bidder shall follow the bidder labour regulation and abolition Act 1970 & Rule 1971.
04. The JDA shall have right to cause on audit and technical examination of the work and the final bills of the bidder including all supporting vouchers, abstract etc. to be made within two years after payment of the final bills and if as a result such audit any amount is found to have been over paid/excess in respect of any work done by the bidder under the contract or any work claimed by him to have been done under this contract and found not to have been executed the bidder shall be liable to refund such amount and it shall be lawful ;for the JDA to recover such sum from him in ;the manner prescribed in special condition no. 6 or any other manner legally permissible and if it is found that the bidder was paid less then that was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be paid by the JDA to the bidder.
05. The bidder shall not work after the sunset and before sunrise without specific permission of the authority Engineer.
06. Whenever any claim against the bidder for the payment of a sum of money arises out or under the contracts, the JDA shall be entered to recover the sum by appropriating in part or whole of the security deposit of the bidder. In the event of the security being insufficient or if no security has been taken from the bidder then the balance of the total sum recoverable as the case may shall be deducted from any sum then due or which a any time there contract with the JDA should this sum be sufficient to recover the full amount recoverable, the bidder shall pay to JDA on demand the balance remaining due. The JDA shall further have the right to effect such recoveries under P.D.R. Act.
07. The rate quoted by the bidder shall remain valid for a period of **Four Months** from the date of opening of the bids.
08. By submission of this bid the bidder agree to abide with all printed conditions provided in the PWD manual form 64 (Chapter 3-para 36) and subsequent modification.
09. No conditions are to be added by the bidder and conditional bid is liable to be rejected.
10. All transaction in the execution of this work and this bid will be liable to sale-tax vide section 2(B) read with sub clause (4) Sale-tax Rule, 1954.
11. If any bidder withdraws his bid prior to expiry of said validity period given at S.No. 7 or mutually extended prior or makes modifications in the rates, terms and conditions of the bid within the said period which are not acceptable to the department or fails to commence the work in the specified period, fails to execute the agreement the department shall without prejudice to any, other right or remedy, be at liberty to forfeit the amount of earnest money given in any form absolutely. If any

bidder, who having submitted a bid does not execute the agreement or start the work or dose not complete the work and the work has to be put to rebidding, he shall stand debarred for six months from participating of biding in JDA in addition to forfeiture of Earnest Money / Security Deposit and other action under agreement

12. The bidder shall arrange his own machinery required for the work such as Bitumen Mixer, Batch Mix plants and paver, road roller, Tar boiler, sprayer etc.
13. The bidder shall arrange his own storage tanks upto 10 Tones capacity for storing bulk bitumen wherever supplied by the department.
14. Rules regarding enlistment of bidders provide that work; upto five times limit for which they are qualified for biding can be allotted to them Therefore, before bid the bidders will keep this in mind, and submit the details of work. Bids with incomplete or incorrect information are liable to be rejected.
15. Any material not conforming to the specifications collected at site shall have to be removed by the bidder within a period of 3 days of the instructions, issued by the Engineer-In-charge in writing. Failing which, such material shall be removed by the Engineer-In-charge at risk and the bidder after expiry of 3 days period.
16. The material collected at site and paid provisionally shall remain under the watch and ward of the bidder till it is consumed, fully on the work.
17. The rates provided in bid documents are inclusive of all Taxes royalty. Bidder will be responsible for compliance of GST Act/Rule 2017.
18. For paver work at least 3 road rollers shall be simultaneously deployed.
19. Bitumen for tack coat or any other purposes, shall be applied only be a bitumen sprayer of a mechanical pressure.
20. No extra lead of earth/material shall be paid over and above as specified in 'G' schedule. Source/borrow pit area for earth shall have to be arranged by the Bidder at his own cost.
21. Undersigned has full right to reject any or all bids without given any reasons.
22. Mortar of Masonry work and lean concrete will be permitted mixer with hopper.
23. As per Supreme Court decision "All contracts with Governments shall require registration of workers under the building and other construction workers (Regulation of Employment and Conditions of Service) Act, 1996 and extension of benefits to such workers under the act."
24. **Special Conditions of Contract regarding Defect Liability Period (DLP) for various works costing Rs. 25.00 lacs and more shall be applicable.**
25. The bidders are required to submit copy of their enlistment as bidder.
26. Conditions of RPWA-100 will be mandatory & acceptable to the bidder.
27. Any bid received with unattested cutting/overwriting in rates shall be rejected and such bidder will be debarred from bidding for three months in JDA.
28. The bidder will have to install display boards at site of work as directed by Engineer In Charge. Failing which penalty of Rs. 5000/- day will be imposed.

29. All the provisions of THE RAJASTHAN TRANPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and Rules, 2013 will be applicable. If there is any contradiction in existing special conditions and provisions of THE RAJASTHAN TRANPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and Rules, 2013 provisions of THE RAJASTHAN TRANPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and Rules, 2013 shall be applicable.

30. नगरीय विकास एवं आवासन विभाग के आदेश क्रमांक प–1(24)नविवि/1/2020 लूज जयपुर, दिनांक 20.09.2021 के निर्देशानुसार ''निविदाओं में संवेदकों द्वारा बी.एस.आर दर से कम दर डालने पर अन्तर राशि (At Par की दर से जितनी कम है) वर्क परफोरमेन्स गारन्टी के रूप में कार्य प्रारंभ करने से पूर्व ली जायेगी तथा इसे कार्य के सन्तोषजनक रूप से पूर्ण होने के पश्चात दोष निवारण अवधि में कार्य की स्थिति संतोषजनक पाये जाने पर दोषनिवारण अवधि उपरांत वापस लौटा दिया जायेगा। न्यूनतम दरदाता की बोली नियमानुसार स्वीकृत कर Letter of acceptance (LoA) जारी किया जावेगा एवं बीएसआर दर से कम दर की अन्तर राशि की BG/FDR/NSC प्रस्तुत करने हेतु 14 दिवस का समय दिया जायेगा। अन्तर राशि जमा नहीं कराने पर BID Security की राशि नियमानुसार जब्त कर ली जावे। यदि संवेदक वर्क परफोरमेन्स गारन्टी राशि जमा कराने के पश्चात कार्य सन्तोषजनक रूप से पूर्ण नहीं करता है अथवा दोष निवारण अवधि में कार्य में खराबी होती है, तो उसकी वर्क परफोरमेन्स गारन्टी की राशि जब्त कर ली जायेगी एवं अनुबन्धानुसार अन्य कार्यवाही भी संपादित की जायेगी''।

    Note: Amount of work performance guarantee shall be calculated as per the cost of Bid i.e. Rs-150.00 Cr.

31. In continuation of above (point no-30) work performance guarantee will be refunded as per UDH order no प–1(24)नविवि/1/2020 लूज जयपुर, दिनांक 20.09.2021 and rules thereto, the later shall prevail.
32. The steel strands are to be procured from TATA plant and reinforcement steel is to be procured from primary manufacturers only as approved by EIC.
33. Expansion Joints are to be procured from MoRTH Empanelled venders which are to be got approved from EIC before procurement.
34. The design of RE wall and its fascia panels will have to be got approved by JDA prior to execution of work.
35. The bidders are requested to fill properly the RTPP annexure A, B. C. and D falling which Bid may be rejected.
36. The bidders are requested to pay special attention towards Section-7, Special condition of contract for safety, health and environment (SHE) and the related penalty clause. The agency ensure all safety measures during execution to avoid any accident at work site. The Agency will solely be responsible for any accident/ Mishappening may occur at site during execution of work.
37. The bidders are requested to pay special attention towards the liquidated damages clause of O.C.C. a wherein mile stones have been defined and liquidated damages have been proposed for not achieving key dates, not mobilizing required machinery and for not installing requisite number of casting beds for PSC girders.

38. The bidders are requested to pay proper attention towards clause for Corporate Social Responsibilities (CSR). However, the DLP shall not be applicable for this part of work.
39. The design of staging shall have to be got proof checked by MNIT or any other MORTH empanelled consultant before execution of work for which no extra payment will be made.
40. Pile Load Test and Routine Test shall be executed by doing anchor piles only, for which no extra payment will be made.
41. No extra payment will be made for overlap, couplers, chairs and spacers in the steel reinforcement. If the couplers are used in replacement of overlap the design of the same will have to be got approved from JDA before execution of work, no extra cost on this account shall be payable.
42. Admixture shall be used as approved by EIC.
43. All the applicable permits/NOC's/Traffic diversion permission shall have to be arrange and borne by the bidder at their own cost. However JDA may assist in obtaining such permissions/NOC. Any delay in obtaining such permits/NOC shall not be considered for delay in works as per agreement.
44. Any damages of the utilities and underground services, during execution of work caused by contractor/machinery/labour will have to be restored by the bidder at his own cost for which no extra payment shall be made.
45. Job Mix design for bridge work and road work shall have to be got done by NABL accredited lab or MNIT and got approved by JDA before execution of work. No extra payment shall be made on this account.
46. Bidder should submit on the date of downloading of the bid documents, the documentary proof of Tax Registration Certificate. Works Executed photocopies of completion / execution certificate issued by an officer not below the rank of Executive Engineer giving detail of contract including date of start, date of completion, amount of work done, nature of work etc.) and turnover of above pre-qualification requirement. Please note that copies of award letters will not be accepted taken as proof for meeting the pre-qualification criterion.
47. The rates quoted by the bidder should be inclusive of all the taxes.

Signature of the Bidder
with address

Executive Engineer-Traffic Works-I,
JDA, Jaipur

राजस्थान सरकार
नगरीय विकास एवं आवासन विभाग

क्रमांकः— प.01(24)नविवि / I / 2020 लूज

जयपुर, दिनांकः— 20 SEP 2021

आदेश

नगरीय विकास एवं आवासन विभाग के अर्न्तगत विभिन्न विकास कार्यो की निविदाओं में संवेदकों द्वारा बी.एस.आर. दर से कम दर डालने पर अन्तर राशि (AT PAR की दर से जितनी कम है) वर्क परफोरमेंस गारन्टी के रूप में कार्य प्रारम्भ करने से पूर्व ली जाएगी तथा इसे कार्य के सन्तोषजनक रूप से पूर्ण होने के पश्चात दोष निवारण अवधि में कार्य की स्थिति सन्तोषजनक पाए जाने पर, दोषनिवारण अवधि उपरान्त वापस लौटा दिया जावेगा। न्यूनतम दरदाता की बोली नियमानुसार स्वीकृत कर Letter of acceptance (LOA) जारी किया जावेगा एव बी.एस.आर. दर से कम दर की अन्तर राशि की BG/FDR/NSC प्रस्तुत करने हेतु 14 दिवस का समय दिया जायेगा। अन्तर राशि जमा नहीं कराने पर BID SECURITY की राशि नियमानुसार जब्त कर ली जावें। यदि संवेदक वर्क परफोरमेंस गारन्टी राशि जमा कराने के पश्चात कार्य सन्तोषजनक रूप से पूर्ण नही करता है अथवा दोष निवारण अवधि में कार्य में खराबी होती है तो उसकी वर्क परफोरमेंस गारन्टी की राशि जब्त कर ली जावे एवं अनुबन्धानुसार अन्य कार्यवाही भी संपादित की जावें। यह आदेश तुरन्त प्रभाव से लागू किये जाते है। यह आदेश उन सभी निविदाओं पर लागू होगा जो कि भविष्य में जारी होगी तथा वे निविदाएं जो इस आदेश के जारी होने की दिनांक तक अप्राप्त है, इस सम्बन्ध में निविदा दस्तावेजों में आवश्यक संशोधन तुरन्त संबन्धित उपापन अधिकारी द्वारा किया जावे एवं नवीन सभी निविदाओं में उक्त शर्तों का समावेश किया जाना सुनिश्चित किया जावे।

यह आदेश सक्षम स्तर से अनुमोदित है।

(कुन्जीलाल मीना)
प्रमुख शासन सचिव
नगरीय विकास विभाग

कार्यालय का पता— खाद्य भवन, द्वितीय तल, कमरा नं0 7203, शासन सचिवालय, जयपुर—302005
ई—मेल आई.डी. CEUDHRAJASTHAN@GMAIL.COM

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

Other Informations

1. DLP period of various nature of works amounting more than Rs. 25 Lacs will be as per order No.JDA/EX.En.(TA to DE-I)/2016/ D-29 dated 11.03.2016
2. निविदा में निर्धारित राशि से अधिक/कम Bid Security राशि बिडर द्वारा Online नही जमा कराई जावें, सिस्टम द्वारा भी कम/अधिक राशि बिड स्वीकार नही की जावेंगी।
3. अलग–अलग समय में जमा कराई गई राशि सिस्टम द्वारा जोडकर एक बिड में स्वीकार नही की जावेगी।
4. एक यू.टी.आर. काम में लेने के पश्चात् पुनः उसी नम्बर का यू.टी.आर. सिस्टम द्वारा दूसरी बिड में प्रयुक्त नही किया जावें।
5. जविप्रा के आदेश क्रमांक डी–352 दिनांक 29.08.2018 के द्वारा निर्माण कार्यो के अनुबन्ध की धारा 45 के अन्तर्गत निविदा (दर संविदा) में मूल्य विचलन (Price Variation) लागू नही होगा।

Signature of the Bidder with address

Executive Engineer-Traffic Works-I, JDA, Jaipur

RTPP Annexure A: Compliance with the Code of Integrity and No Conflict of Interest

Any person participating in a procurement process shall-

(a) Not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;

(b) Not misrepresent or omit that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;

(c) Not indulge in any collusion, Bid rigging or anticompetitive behavior to impair the transparency, fairness and progress of the procurement process;

(d) Not misuse any information shared between the procuring entity and the bidders with an intent to gain unfair advantage in the procurement process;

(e) Not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;

(f) Not obstruct any investigation or audit of a procurement process;

(g) Disclose conflict of interest, if any; and

(h) Disclose any previous transgressions with any entity in India or any other country during the last three years or any debarment by any other procuring entity.

Conflict of interest:-

The Bidder participating in a bidding process must not have a Conflict of Interest.

A Conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

(i) A bidder may be considered to be in conflict of interest with one or more parties in the bidding process if, including but not limited to:

(a) Have controlling partners/shareholders in common; or

(b) Receive or have received any direct or indirect subsidy from any of them; or

(c) Have the same legal representative for purposes of the bid; or

(d) Have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder, or influence the decisions of the procuring Entity regarding the bidding process; or

(e) The bidder participates in more than one bid in a bidding process. Participation by a bidder in more than one bid will result in the disqualification of all bids in which the bidder is involved. However, this does not limit the inclusion of the same sub bidder, not otherwise participating as a bidder, in more than one bid; or

(f) The bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods, works or services that are the subject of the Bid; or

(g) Bidder or any of its affiliates has been hired (or proposed to be hired) by the procuring entity as engineer-in-charge/consultant for the contract.

Signature of Bidder.

RTPP Annexure B: Declaration by the Bidder regarding Qualifications

Declaration by the Bidder

In relation to my/our Bid submitted to .....for procurement of .....in response to their Notice inviting Bids No.....Dated..... I/we .....hereby declare under Section 7 of Rajasthan Transparency in Public Procurement Act, 2012 that:

1. I/we possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entry;
2. I/we have fulfilled my/our obligation to pay such of the taxes payable to the union and the state government or any local authority as specified in the Bidding Document.
3. I/we are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceedings for any of the foregoing reasons.
4. I/we do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
5. I/we do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

Date :

Place :

Signature of Bidder

Name:-.....

Designation:-.....

Address:- .....

RTPP Annexure C: Grievance Redress during Procurement Process

The designation and address of the First Appellate Authority is Executive Committee of JDA.

The designation and address of the Second Appellate Authority is **ACS/Principal Secretary UDH Govt. of Rajasthan.**

(1) Filing an appeal:-

if any bidder or prospective bidder is aggrieved that any decision, action or omission of the procuring entity is in contravention to the provisions of the Act or the rules or the guidelines issued there under, he may file an appeal to First Appellate authority, as specified in the Bidding document within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a bidder as successful the appeal may be filed only by a bidder who has participated in procurement proceedings:

Provided further that in case a procuring entity evaluates the technical bids before the opening of the financial bids, an appeal related to the matter of financial bids may be filed only by a bidder whose technical bid is found to be acceptable.

(2) The officer to whom an appeal is filed under Para (1) shall deal with the appeal as expeditiously as possible and shall endeavor to dispose it of within thirty days from the date of the appeal.

(3) If the officer designated under Para (1) fails to dispose of the appeal filed within the period specified in Para (2), or if the bidder or prospective bidder or the procuring entity is aggrieved by the order passed by the first appellate authority, the bidder or prospective bidder or the procuring entity, as the case may be, may file a second appeal to second appellate authority specified in the bidding document in this behalf within fifteen days from the expiry of the period specified in Para (2) or of the date of receipt of the order passed by the first appellate authority, as the case may be.

(4) Appeals not to lie in certain cases:-

No appeal shall lie against any decision of the procuring entity relating to the following matters, namely:-

(a) Determination of need of procurement

(b) Provisions limiting participation of bidders in the bid process

(c) The decision of whether or not to enter into negotiations

(d) Cancellation of a procurement process

(e) Applicability of the provisions of confidentiality

(5) From of Appeals:-

(a) An appeal under Para (1) or (3) above shall be in the annexed form along with as many copies as there are respondents in the appeal.

(b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.

(c) Every appeal may be presented to first appellate authority or second appellate authority, as the case may be, in person or though registered post or authorized representative.

(6) Fee for filing Appeal:-

(a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.

(b) The fee shall be paid in the form of bank demand draft or banker's cheque of a scheduled bank in India payable in the name of appellate authority concerned.

(7) Procedure for disposal of Appeal:-

(a) The first appellate authority or second appellate authority as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing

(b) On the date fixed for hearing, the first appellate authority of second appellate authority, as the case may be shall-

(i) Hear all the parties to appeal present before him; and

(ii) Peruse or inspect documents, relevant records or copies thereof relating to the matter.

(c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the appellate authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.

(d) The order passed under sub-clause (c) above shall also be placed on the state public procurement portal.

Signature of Bidder.

FORM No. 1

[see rule 83]

Memorandum of Appeal under the Rajasthan

Transparency in Public procurement Act, 2012

Appeal No……..…… of ……..……

Before the……..……..……(First/Second Appellate authority)

1- Particulars of appellant :

(i) Name of the appellant:

(ii) Official address, if any:

(iii) Residential address:

2- Name and address of the respondent(s):

(i)

(ii)

(iii)

3- Number and date of the order appealed against and name and designation of the Office/authority who passed the order (enclose copy), or a statement of a decision, action or omission of the procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:

4- If the Appellant propose to be represented by a representative the name and postal address of the representative:

5- Number of affidavits and documents enclosed with the appeal:

6- Grounds of appeal : .....

(Supported by an affidavit)

7- Prayer : .....

Place :.....

Date : .....

Appellant's Signature

RTPP Annexure D: Additional Conditions of Contract

1. Correction of arithmetical errors

Provided that a financial bid is substantially responsive, the procuring entity will correct arithmetical errors during evaluation of financial Bids on the following basis:

(i) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the procuring entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

(ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(iii) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.

If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified and its bid security shall be forfeited or its bid securing declaration shall be executed.

2. Procuring Entity's Right to Vary Quantities.

(i) At the time of award of contract, the quantity of goods, works or services originally specified in the bidding documents may be increased or decreased, by a specified percentage, but such increase or decrease shall not exceed fifty percent, of the quantity specified in the bidding documents. It shall be without any change in the unit prices or other terms and conditions of the bid and the conditions of contract.

(ii) If the Procuring entity does not procure any subject matter of procurement or procures less than the quantity specified in the biding document due to change circumstances, the bidder shall not be entitled to any claim or compensation except otherwise provide in the conditions of contract.

(iii) In case of procurement of goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of the original order. However, the additional quantity shall not be more than 50% of the value of goods of the original contract and shall be within one month from the date of expiry of last supply. It the supplier fails to do so, the procuring entity shall be free to arrange for the balance supply by limited bidding or otherwise and the extra cost incurred shall be recovered from the supplier.

3. Dividing quantities among more than one bidder at the time of award (In case of procurement of Goods):-

As a general rule all the quantities of the subject matter of procurement shall be procured from the Bidder, whose Bid accepted. However, when it is considered that the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the Bidder, whose Bid is accepted, to deliver the entire quantity or when it is considered that the subject matter of procurement to be procured is of critical and vital nature, then in such cases, the quantity may be divided between the Bidder, whose Bid is accepted and the second lowest Bidder or even more Bidder in that order, in a fair, transparent and equitable manner at the rates of the Bidder, whose Bid is accepted.

Signature of Bidder

JAIPUR DEVELOPMENT AUTHORITY JAIPUR

SPECIAL CONDITION OF THE CONTRACT FOR PRE QUALIFICATION OF CONTRACTORS

Name of work: Traffic Improvement and Beautification works at B2 Bye pass junction, JDA, Jaipur.

Special conditions of contract for **PRE QUALIFICATION** as detailed here under, shall be applicable in addition to all other terms and condition already prescribed under standard agreement forms/rules and regulations to contract. These conditions are over and above all the conditions.

1. Procedure:

Procedure for PRE QUALIFICATION would be as follow:

(a) Bid document shall be submitted online e-procurement website http:// www.eproc.rajasthan.gov.in with digital signature certificate (DSC). The bid is to be submitted in 3 **envelops** which shall comprise of-

Envelop-1: Being for Registration, Bid Security Declaration form (on non-judicial stamp of Rs. 50/-), Bid document fee, Bid Processing Fee, GST Registration, latest GSTR-3B return for quarter/ Month ending September-2021

Envelop-2: Being for Technical Bid.

Envelope-3: Being for Financial Bid.

(b) The technical bid will be opened only of those bidders who deposit cost of bid document, bid processing fee and submitted bid security declaration (on non-judicial stamp of Rs. 50/-). All the payments shall be accepted through online process only.

(c) The Technical Bid envelope would be opened on the date 24.11.2021 at 12.00 A.M.in the chamber of Superintending Engineer–II, JDA, Jaipur Room No. 107, First floor, CCC Building, JDA, Jaipur.

(d) The Financial Bid envelope would be opened only of those bidders who fulfill all the **PRE QUALIFICATION** criteria.

(e) The bidder should be registered in "AA" class in JDA/ and AA or equivalent class in Any central Government Department/ State Government Department/ Local body/ Railways.

2. Qualification Criteria:

Criteria for PRE Qualification would be as follows:-

(a) The bidder should have executed following quantities of work in any one of last seven financial year i.e. from 2014-15 to 2020-21, however he may include the work done of year 2021-22 also.

S. No.	Item	Quantity
1	RCC/PSC/ Design Mix Concrete Work (M-25 & Above)	24740.40 cum
2	Steel Reinforcement/ Structural Steel	4273.0 M.T.

Note:-

(i) The Bidder should enclose the certificate having quantities financial year wise. Certificate not having financial year wise bifurcation will not consider.

(ii) Certificate issued by Govt. of India, State Govt., Union Territory and Govt. Undertakings, Autonomous Bodies shall only be considered issued by Ex. Engineer & above or equivalent.

(iii) The bidder should enclose the GST Registration and latest GSTR-3B return for quarter/ Month ending September-2021.

(b) The bidder should have completed/executed at least one single Civil Engineering work of similar nature (ROB/RUB/Underpass/Flyover/Elevated Road) in last Seven financial year (in addition to current financial year, if opted by the bidder) of value not less than 60% (₹ 9000.00.lacs) of the estimated cost of work. (updated to present price level).

OR

The bidder should have completed/executed at least two single Civil Engineering work of similar nature (ROB/RUB/Underpass/Flyover/ Elevated Road) in last Seven financial year (in addition to current financial year, if opted by the bidder) of value not less than 35% (₹ 5250.00 lacs) of the estimated cost of work (updated to present price level).

OR

The bidder should have completed/executed at least three single Civil Engineering work of similar nature (ROB/RUB/Underpass/Flyover/ Elevated Road) in last Seven financial year (in addition to current financial year, if opted by the bidder) of value not less than 25% (₹ 3750.00 lacs) of the estimated cost of work (updated to present price level).

Note:-

(i) The starting & completion date of the work is to be in between above said financial year. If no, then maximum work (not less than 70%) is to be completed/executed in above said financial year.

(ii) "Civil Engineering Work Of Similar Nature" would mean Construction of ROB/ RUB/ Underpass/ Flyover/ Elevated Road.

(c) The bidder should have achieved an annual financial turnover of at least (₹ 9000.lacs.) in any one of last Seven financial years (including current year, if opted by the bidder)

Note:-

(i) The bidder should enclose certificate of Turn over from Chartered Accountant for last seven financial years & audited balance sheet of the year which is considered by the bidder in criteria 2 (c).

(ii) If current year or last year has been opted by bidder whose balance sheet is not submitted till the submission of bid then certificate from Chartered Accountant should be enclosed.

(d) The bidder should give Affidavit to deploy the machinery and equipment as specified in Schedule– III, for the execution of this work.

(e) Bid Capacity: Bidders who meet the minimum qualification criteria will be qualified only if available bid capacity is equal to or more than the total Bid value.

The available bid capacity will be calculated as under:

Bid Capacity= (A x N x 3 – B)

Where

A = Maximum value of civil engineering works executed in any one year during the last seven financial years (updated to present Price level) taking in to account the completed as well as works in progress. However, the bidder may opt current year in the seven year assessment period.

N = Number of year prescribed for completion of the work for which bids are invited. In present case value of N shall be 1.5

B = Value, at present price level of existing commitments and ongoing works to be executed during 'N' period (period prescribed for completion of the works for which the bids are invited)

Note:-

(f) Certificate from Chartered Accountant should be enclosed by bidder clearly indicated maximum value of Civil Engineering Work in one Financial Year.

(g) Litigation History: - Bidder should provide accurate information on any litigation or arbitration resulting from contracts completed or under execution by him over the last seven years. The maximum value (updated at the present price level) of disputed amount claimed in the litigation/arbitration resulting from contracts executed in last seven years shall be deducted from the calculated Bid Capacity of the bidder. The details shall be furnished in Schedule VI.

Note:-

(i) The present price level for turnover, cost of completed work & disputed amount of similar nature, the previous year's value shall be given weightage of 10% per year as follows :-

(a)	**For Current Year**	**(2021-22)**	**1.00**
(b)	**For last year**	**(2020-21)**	**1.00**
(c)	**For one year before**	**(2019-20)**	**1.10**
(d)	**For two year before**	**(2018-19)**	**1.21**
(e)	**For three year before**	**(2017-18)**	**1.33**
(f)	**For four year before**	**(2016-17)**	**1.46**
(g)	**For five year before**	**(2015-16)**	**1.60**
(h)	**For six year before**	**(2014-15)**	**1.76**

3. Documentation:

The bidder should furnish the following documents along with the technical bid:

(a) Information regarding financial resources and capability in Schedule –I.

(b) Information regarding works executed in the last Seven years in Schedule–II

(c) Certificates from the concerned Engineer–In–Charge in support and verification of the information furnished in Schedule–II

(d) Affidavit regarding machinery and equipment required for deployment, as detailed in scheduled – III.

(e) Information regarding details of maximum value of civil engineering works executed in any one year during the last Seven years taking into account the completed as well as works in progress in schedule – IV.

(f) Information regarding existing commitments and ongoing works to be completed in schedule – V.

(g) Information regarding details of litigation or arbitration contracts to be furnished in schedule – VI.

(h) Calculation of Bid capacity in schedule – VII.

(i) Information regarding technical staff to be furnished in Schedule-VIII

(j) Affidavit as per Annexure I.

(k) Self-Declaration Certificate as per format.

(l) Undertaking for not to be blacklisted- Annexure-2

(m) RTPP Annexure A, B, C, D duly signed and uploaded by bidder.

(n) The Bidder should submit / upload the complete Bid document available on the portal

4. Important Notes:

(a) The bidder must ensure that all the information required in the Documents is furnished by him complete in all respects. He would not be allowed to withdraw any document, or to rectify any information furnished therein, after submitting the bid.

(b) The bidder should give an affidavit that the information furnished in schedule I to VIII is correct. If any information is found incorrect, the offer of the bidder shall be rejected and action be taken as per rules.

(c) Bidders must do paging of all enclosure of bid documents.

5. Rejection of bids

The department reserves the rights to reject any bid or to disqualify any or all the bidders, without assigning any reasons at any stage.

I. If Bid is not accompanied with the requisite documents mentioned in clauses 3 (a) to 3 (n) or is not in accordance with procedure specified in Para 1, or is not accompanied with Bid security declaration, GST Registration, latest GSTR-3B return for quarter/ Month ending September-2021 and registration of bidder in required category it would be liable for rejection.

II. Furnishing of incorrect or incomplete or concealment of any information required in the bid documents would render the bid liable for rejection.

III. The Bidder should submit / upload the complete Bid document available on the portal failing which the bid liable for rejection.

6. Eligibility

i) The bid for this contract will be considered only from those bidders (proprietorship firms, partnership firms, companies, corporations,) who meet requisite qualification criteria prescribed.

ii) Bidders shall not have conflict of interest. All bidders to have a conflict of interest in this bid shall be disqualified. Bidders shall be considered to have a conflict of interest if:
   a) One firm applies for bid both as an individual firm and in a group.
   b) If bidders in two different applications have controlling shareholders in common.
   c) Submit more than one application in this bid process.
   d) If the bidder has participated as a consultant or it has more than 50% stake in consultant engaged in the preparation of the design or technical specification of the works that are subject to this bid.
   e) A firm which has purchased the bid documents in their name can submit the bid as an individual firm only,
   f) Bidders must not have been black listed or deregistered by any Central/ State Government department or Public Sector Undertaking. Also no work of the bidder must have been rescinded by client after award of contract during last 10 years. The bidder should submit undertaking on Non Judicial stamp of Rs.10/- to this effect in the Performa of **Annexure 2**.

iii) A firm shall submit only one bid either by himself. If a firm submits more than one bid by himself all the bids in which he has participated shall be considered invalid.

iv) All the bidders shall submit with his bid, general information about the bidder in prescribed Performa of (Annexure 3 with full details of his ownership and control.

v) To qualify for award of contract, the bidders shall submit a written power of attorney authorizing the signatory (ies) of the bid to commit the bidder. In case of foreign members, power of attorney(s) and board resolution confirming authority on the persons issuing the power of attorney for such actions, shall be submitted duly notarized by the notary public in the country of origin and stamped by the Indian Embassy/ High Commission.

vi) Cancellation, modification or creation of a document such as power of attorney, partnership deed, constitution of firm etc., which may have bearing on the bid / contract, shall be communicated forthwith in writing by the bidder to the Engineer-in-charge or Employer.

vii) The bidder should confirm and declare that in the bid submitted that they, or any associate have not engaged in any fraudulent and corrupt practice and that no agent, middleman, or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award of this contract.

viii)

Note: No Joint Venture is allowed in this Bid.

7. Bid Evaluation Sheet:--

The contractor has to submit on line, duly filled Bid Evaluation Sheet in the prescribed form given as **Annexure 4**. For this purpose the bidder should mark page numbers on all the documents being uploaded by him in support of the bid and mention carefully the relevant page number in the Bid Evaluation Sheet. Any unwanted pages should not be uploaded. Only the page number mentioned by the bidder in the respective column No 5 of the Bid Evaluation sheet will be considered for evaluation of the bid.

Executive Engineer-Traffic Works-I
JDA, Jaipur

7. Bid Evaluation Sheet:--

The contractor has to submit on line, duly filled Bid Evaluation Sheet in the prescribed form given as **Annexure 4**. For this purpose the bidder should mark page numbers on all the documents being uploaded by him in support of the bid and mention carefully the relevant page number in the Bid Evaluation Sheet. Any unwanted pages should not be uploaded. Only the page number mentioned by the bidder in the respective column No 5 of the Bid Evaluation sheet will be considered for evaluation of the bid.

Executive Engineer-Traffic Works-I
JDA, Jaipur

Schedule – I

FINANCIAL RESOURCES AND CAPABILITY

[Reference clause 3 (a)]

1. Name of Bidder: - M/s.....

2. Total financial turnover achieved by the bidder in the last seven financial years:

S.No.	Year	Turnover
(1)	2021-22	
(2)	2020-21	
(3)	2019-20	
(4)	2018-19	
(5)	2017-18	
(6)	2016-17	
(7)	2015-16	
(8)	2014-15	

Note: Balance Sheets and Profit & Loss Accounts is to be enclosed by the bidder which is considered by him as per criteria 2 (a).

3. Total financial Turnover projected in the current financial year

4. Has the bidder ever been debarred from bidding for Central Government/State Government/any Government undertaking?

   Yes / No, if yes give details.

5. Has bidder ever been declared insolvent?

   Yes/No, if yes give details.

6. Name(s) and Address of Branch/(s) for bidder's Bankers.

I/We hereby certify that the above information is correct to the best of my/our knowledge and belief.

Signature of Bidder

Date : **(With Seal wherever applicable)**

SCHEDULE – II

[Reference clause 3(b)]

Details of Quantities of work executed during last Seven financial years

S. No.	Name of Works (With agreement No. & Date)	Client	Place (district)	Financial Year	Principal Items of work		Page No.
					RCC/PSC/ Design Mix Concrete Work (M-25 & Above)	Steel Reinforcement/ Structural Steel	

Signature of Bidder

Note: Certificate from concerned Engineer-in-Charge should be enclosed in support and verification of the above statement.

To be given on Non-Judicial stamp
Paper of Rs. 10/- only, duly attested by
Oath-Commissioner/Notary Public

SCHEDULE – III
[Reference Clause 3(d)]
AFFIDAVIT

I/We ..... Proprietor/Partner/Authorized signatory of M/s ..... under take the oath that I/We will deploy the machinery and equipment listed below as and when required in the execution of this work.

S. No.	Name of Machinery	Minimum Requirement	availability		
			Owned	Leased	Hired
1	Piling and Drilling Rig Machine (Owned/Lease/Hired)	2			
2	Computerized Batch Mix Concrete plant minimum 30 Cum/Hr capacity (Owned/Lease)	2			
3	Transit Mixers (TM) (Owned/Lease)	6			
4	Poklain (Owned/Lease)	1			
5	Hydra 20 T (Owned/Lease/Hired)	2			
6	Earth Compactor (Owned/Lease)	1			
7	a) No. of Casting Bed for precast Girder b) No. of Shuttering for precast Girder c) No. of Shuttering for cast in situ Box Girder	06 02 05			
8	Hydraulic Crane of minimum 100 T capacity (Owned/Lease/Hired)	2			
9	Pre stressing Jacks	8			
10	Concrete Pump with boom placer (Owned/Lease)	1			
11	Concrete Pump (Owned/Lease)	2			
12	JCB (Owned/Lease)	2			
13	Dumper (Owned/Lease)	2			
14	Vibrator (Needle, Plate & screed) (Owned/Lease)	8			
15	Water Tanker (Owned/Lease)	2			

I/We hereby certify that the above information is correct to the best of my/our knowledge and belief.

Date:

Signature of Bidder
(With seal)

SCHEDULE - IV

[Reference Clause 3(e)]

DETAILS OF MAXIMUM VALUE CIVIL ENGINEERING WORKS EXECUTED IN ANY ONE YEAR DURING THE LAST SEVEN YEARS TAKING INTO ACCOUNT THE COMPLETED AS WELL AS WORKS IN PROGRESS

S. No.	Name of Works (with agreement No. & Date)	Client	Place (district / state)	Financial Year	Cost of Work as per Work Order	Stipulated date of commencement	Stipulated date of completion	Value of work done during the year

Signature of Bidder

SCHEDULE - V

[Reference Clause 3(f)]

DETAILS OF EXISTING COMMITMENTS & ON GOING WORKS TO BE COMPLETED

S. No.	Name of Works (With agreement No. & Date)	Client	Cost of Work as per Work Order	Stipulated date of commencement	Stipulated date of completion	Value of balance work on date of bid	Likely date of completion of balance work

Signature of Bidder

SCHEDULE - VI

[Reference Clause 3(g)]

DETAILS OF LITIGATION OR ARBITRATION CONTRACTS

S. No.	Name of Works (with agreement No. & Date)	Client	Work Order Amount	Disputed Amount Claimed in Litigation / Arbitration	Date of Raising Disputed Amount	Actual Award Amount, if the case is Decided	Cause of Litigation & matter in Dispute

Signature of Bidder

SCHEDULE –VII

[Reference Clause 3(h)]

BID CAPACITY

Name of Bidder: - _____

1.	A = Maximum value of civil engineering works executed in any one year during the last seven financial years (updated to present Price level) taking in to account the completed as well as works in progress	_____Lacs	Certified details enclosed at Page No._____
2.	N = Number of years prescribed for completion of the Work for which bids are invited	2.0	
3.	B = Value, at present price level of existing Commitments and ongoing works to be Completed during the next N Period.	_____Lacs	Certified details enclosed at Page No. _____

Bid Capacity = A x N x 3 - B

= _____ Lacs

Signature of Bidder

SCHEDULE – VIII

[Reference Clause 3(j)]

INFORMATION REGARDING TECHNICAL STAFF ON PAYROLL OF THE CONTRACTOR SINCE LAST ONE YEAR

Name of bidder: - ……..

S. No.	Name	Designation	Technical Qualification	Month and year of Joining The contractor

ANNEXURE-I

(Reference Clause 3(j)

To be given self-declaration,
duly self attested

Photo

AFFIDAVIT

I/We……S/O Shri.....
Age.....Year, Resident
.....of.....District..... Rajasthan
Proprietor/ Partner/ Authorize signatory of M/s …….....…… hereby declare that the information furnished by me/us in schedule I to VIII of the assessment Bid for the work **Traffic Improvement and Beautification works at B2 Bye pass Junction, JDA, Jaipur, Rajasthan** correct to the best of my/our knowledge and belief and nothing has been concealed therein. I am well aware of the fact that If the information given by me is proved false/not true, I will have to face the punishment as per the law. Also all the benefits availed by me shall be summarily withdrawn and JDA has right to reject the Bid and to take action against me/us as per rules.

Enclose: I.D. proof with self-declaration

.....

Proprietor/ Partner/ Authorized signatory
M/s …….....
...…….

To be given by bidder, if Tender Documents and Affidavit submitted by Self Attested

SELF-DECLARATION

I/We……..…… S/O Shri..... Age..... Year, Resident ..... of..... District..... Rajasthan, hereby declare that the information given above and in the enclosed documents is true to the best of my knowledge and belief and nothing has been concealed therein. I am well aware of the fact that if the information given by me is proved false/not true, I will have to face the punishment as per the law. Also, all the benefits availed by me shall be summarily withdrawn.

Proprietor/ Partner/ Authorized signatory

M/s …….....

...…….

Annexure-2

(Refer clause 6,(ii),f, of Special Conditions of Contract)

UNDERTAKING FOR NOT BLACKLISTED

(On a Non Judicial Stamp of Rs 10/- and duly attested by Notary Public)

We do hereby undertake that we have not been Blacklisted or Deregistered by any Central/ State Government or Public Sector Undertaking, Autonomous Bodies etc., and also that none of our work has rescinded by the client after award of contract during last 10 years.

Stamp and Signature of Authorized Signatory

Note:

1. The undertaking shall be signed by authorized signatory of the bidder.

Form of Bid-Securing Declaration

Date :
Bid No. :
Alternative No. :

To :

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we are required to pay the bid security amount specified in the Term and Condition of Bid, in the following cases, namely :-

(a) when we withdraw or modify our bid after opening of bids;
(b) when we do not execute the agreement, if any, after placement of supply/work order within the specified period;
(c) when we fail to commence the supply of the goods or service or execute work as per supply/work order within the time specified;
(d) when we do not deposit the performance security within specified period after the supply/work order is placed;and
(e) if we breach any provision of code of integrity prescribed for bidding specified in the Act and Chapter VI of these rules.

In addition to above, the State Government shall debar us from participating in any procurement process undertaken for a period not exceeding three years in case where the entire bid security or any part thereof is required to be forfeited by procuring entity.

We understand this Bid Securing Declaration shall expire if :-

(i) we are not the successful Bidder;
(ii) the execution of agreement for procurement and performance security is furnished by us in case we are successful bidder;
(iii) thirty days after the expiration of our Bid.
(iv) the cancellation of the procurement process; or
(v) the withdrawal of bid prior to the deadline for presenting bids, unless the bidding documents stipulate that no such withdrawal is permitted.

Signed :----------

Name :----------

In the capacity of :----------

Duly authorized to sign the bid for and on behalf of :

Dated on day of
Corporate Seal ----------

[Note: In case of a Joint Venture, the Bid Securing Declaration must be signed in name of all partners of the Joint Venture that is submitting the bid.]

GENERAL INFORMATION OF TENDERER

ANNEXURE_3

page 1 of 2

Refer clause 6 (iv,1) of Special Conditions of Contract for Pre qualification of contractors.

A. BIDDER INFORMATION SHEET		
BIDDER s Legal Name	Sole Proprietorship Firm/Partnership Firm /Private Limited Company/Public Limited Company/ Joint Venture/Consortium	
In case of single entity, ownership & control of the Tenderer		
In case of JV/Consortium, Legal name of each partner with percentage participation (also Provide information of each member in separate sheet (page 2 of 2)	Legal Name of JV/Consortium member	% participation
Lead member of JV/Consortium,		
Bidder's actual or intended country of constitution		
Bidder's legal address, telephone numbers, fax numbers, e-mail address.		
Bidder's authorized representative or person-in-charge in case of JV/Consortium, (name, designation address)		

SIGNATURE OF AUTHORIZED
SIGNATORY
ON BEHALF OF BIDDER

ANNEXURE_3

page 2 of 2

B. JV/CONSORTIUM MEMBER INFORMATION	
JV/Consortium Member of Legal Name	
Legal status of the JV/Consortium Member	Sole Proprietorship Firm/Partnership Firm /Private Limited Company/Public Limited Company
Ownership & control of the JV/Consortium Member	
JV/Consortium Member country of constitution	
JV/Consortium Member of legal address, telephone numbers, fax numbers, e-mail address)	
JV/Consortium Member's authorized representative (name, designation address)	

ATTACH ATTESTED COPIES OF FOLLOWING ORIGINAL DOCUMENTS

- Document in support of legal status and ownership & control of the bidder or each member in case of JV/Consortium (undertaking for sole proprietorship/ partnership deed/ Memorandum & Articles of Association
- In case JV/Consortium, submit MoU/Agreement (duly notarized) entered into by the joint venture/consortium members, containing intended percentage participation, nomination of Lead Member and division of responsibility to clearly define the work of each member etc.
- Authorization/POA in favour of authorized representative of tenderer to represent the bidder and also in favour of authorized representative of each member in case of JV/Consortium

SIGNATURE OF AUTHORIZED
SIGNATORY
ON BEHALF OF BIDDER

ANNEXURE 4

Bid Evaluation Sheet

Name of Work:- Traffic Improvement and Beautification works at Jawahar circle, JDA, Jaipur

S.No.	Criteria	Required Qualification	Bidders qualification	Bidders uploaded document Page No.	Remark
1	2	3	4	5	6
1	Registration Certificate - As per Clause 1e of Special Conditions of Contract for Pre Qualification.	The bidder should have a valid Registration Certificate in AA Category as specified. AA class in JDA or AA class or equivalent class in other department.			
2	GST Registration, latest GSTR-3B return for quarter/ Month ending June-2021- As per Clause 2-a-(iii) of Special Conditions of Contract for Pre Qualification.	latest GSTR-3B return for quarter/ Month ending September-2021			
3	Fee Payment Details				
(i)	Cost of Bid Document	Rs.5000			
(ii)	Bid Processing Fee	Rs. 1000			
(iii)	Bid Security Declaration form				
4	The bidder should have executed following quantities of work in any one financial year of the last Seven financial years. As per Clause 2a of Special Conditions of Contract for Pre Qualification.				
I	**RCC/ PSC/ Design Mix concrete work (M-25 & Above)**				
A	Year of execution				
B	Quantity executed				
II	**Steel Reinforcement / Structural Steel**				
A	Year of execution				
B	Quantity executed				
5	The bidder should have completed at least one similar				

	nature work in last Seven financial years (including current year, if opted by the bidder) of value as specified under Clause 2(b) of Special Conditions. Or The bidder should have completed at least two single similar nature work in last Seven financial years (including current year, if opted by the bidder) of value as specified under Clause 2(b) of Special Conditions.				
A	Value of work executed				
B	Financial year				
6	The bidder should have achieved an annual financial turnover of at least 60 % of the estimated Cost of the work (bid cost) in any one of last Seven financial years (including current year, if opted by the bidder). As per Clause 2(c) of Special Condition.				
A	Annual Turn over				
B	Financial Year				
7	Affidavit to deploy machinery and equipment as specified in Schedule -III, As per Clause 2d of Special Conditions.				
8	Bid Capacity=(A x N x 3 - B) As per Clause 2e of Special Conditions.				
(i)	A= Maximum value of civil engineering works executed in any one year during the last seven financial years.				
(ii)	N= 2.0 years				
(iii)	B=Value at present price level of existing commitments and ongoing works to be executed during "N" period.				
9	Litigation History- As per Clause 2 (g) of Special Conditions.				
10	Affidavit for Correctness of documents Clause 3(j)				
11	Declaration by bidder under RTTPAct. (Annexure A, B, C, D)				
12	Undertaking for not being blacklisted.				
13.	Information regarding technical staff to be furnished in				

	Schedule-VIII				

Signature of Bidder with Seal

Special Conditions of Contract regarding Defect Liability Period (DLP) for Various works costing Rs. 25.00 Lacs and more

1. ROAD WORKS

1.1 The Defect Liability Period (DLP) for all Road works excluding patch repair work shall be as per table-1. Road works executed by the Contracting agency shall be maintained by them at their own cost for Schedule as per table-1 (DLP) from the actual date of completion of work as per the clause in the Contract Agreement and Special Condition of Contract.

1.2 No extra payment shall be made to the contracting agency on account of maintenance of Road works and removal of defect during Defect Liability Period.

1.3 The word "Road Works" means all new Road Works construction, strengthening and renewal works.

1.4 The word "Maintenance of Road Works during Defect Liability Period" means

(i) Routine maintenance of Road Works,

(ii) To remove the defect as & when appear in part and entire structure of Road Works, in specified time and keeping the Road Surface with good riding quality and

(iii) Damages due to improper drainage / drains, local flooding, depressions on roads etc.

1.5 The contracting agency shall do the routine maintenance of Road works, including pavement, road side and cross drains including surface drains to the required standards and keep the entire road surface and structure in Defect free conditions during the entire period of routine maintenance, which begins at completion of the construction work and ends after Schedule as per table-1.

1.6 The routine maintenance shall consist of the routine maintenance operation defined in manual for maintenance of roads of MoRTH and shall be carried out accordingly.

1.7 (a) <u>The routine maintenance activities and their periodicity as per JDA Office order no: JDA/Ex.En.(TA to DirEngg.-I)/2016/D-29 dated 11.03.2016</u>

Table-I

S.No.	Type of work	DLP Period
1	Bridge work	5 Years
2	CD work	5 Years
3	CC road, PQC work	5 Years
4	CC tiles/Kerb/ Medians	5 Years
5	Drains	3 Years
6	Roads	
	(i) Two Layer WBM/GSB	6 Months or one full rainy season whichever is later
	(ii) For Renewal/Strengthening	
	(a) BT upto 30 mm thickness	1 Year
	(b) BT above 30 mm to upto 40 mm	2 Years
	(c) BT above 40 mm to upto 90 mm	3 Years
	(d) BT above 90 mm	5 Years
	(iii) New roads	
	(a) BT upto 90 mm	3 Years
	(b) BT more than 90 mm	5 Years
7	Compound wall	3 Years
8	Building work	
	(i) Work pertaining to sanitary works electrical works, Joinery works and painting works.	2 Years
	(ii) Work pertaining to building structure and other civil works.	5 Years
9	Electric work except maintenance	3 Years
10	Sewer/water supply all including STP and water supply related work except maintenance works	3 Years

1.7 (b) <u>The routine maintenance activities and their periodicity</u>

S.No.	Name of Item/Activity	Frequency of operations in one year
1	Restoration of rain cuts and dressing of berms.	Once in a year, generally after rains.

2	Making up of shoulders.	As and when required.
3	Maintenance of Bituminous surface road and/or gravel road/WBM road including filling pot holes and patch repairs etc.	As and when required.
4	Insurance of proper functioning of drains including civil maintenance and desilting of drains. (If constructed by the same Road agency or not)	As and when required.
5	Maintenance of road signs. (If installed by the same Road agency)	Maintenance as and when required. Repainting **once in every one and half years.**
6	Road Marking, Kerb Stone/Dand. (If done by the same Road agency)	**Thermoplastic Paint** Maintenance as and when required. Repainting **once in every one and half years.** **Ordinary Paint** Maintenance as and when required. Repainting **thrice in every years.**
7	Damages beyond control of agency.	Road cuts made by various agencies for utility, duly permitted by JDA / JNN will have to be repaired by agency on the same rates of the contract agreement till DLP.

2. **General**

2.1 Inspection of works during Defect Liability Period

2.1.1 The contracting agency shall undertake joint detailed inspection along with Engineer-in-charge/A.En., at least once in three months in case of all Road works. The Engineer-in-charge can reduce this frequency in case of emergency. The Contracting agency shall forward to the Engineer-in-charge the record of inspection and rectification immediately after the joint inspection. The Contracting agency shall pay particulars attention on those road sections, which are likely to be damaged during rainy season.

2.1.2 One register has to be maintained by every A.E.n for recording the inspection details of works in his jurisdiction under defect liability period.

2.2 **Conditions regarding Security Deposit**

2.2.1 Security for DLP-

The contracting agency shall have to furnish security deposit (SD) in the form of Bank Guarantee valid from the actual date of completion, which shall be assigned by the Engineer-in-charge.

2.2.2 Refund of SD –

The release of SD amount shall be as following table:-

S.No.	Released SD / DLP period	1st year	2nd year	3rd year	5th year
1	Upto 1 year	100 %	40 %	20 %	10 %
2	Upto 2 Year		60 %	20 %	10 %
3	Upto 3 Year			60 %	10 %
4	Upto 4 Year				20 %
5	Upto 5 Year				50 %

Various conditions for managing DLP are as under:-

(i) At the time of completion of work, final component shall be worked out for each individual item like BT/CC /tiles/drains etc (as per different categories in Table I), DLP shall be operative based upon type of individual item ex:- CC-5 years, BT- 1/2/3/5 years, Drain- 3 years etc.

(ii) Similarly for all new works, these components should be calculated at the time of TS itself, which should be made part of BID document.

(iii) If any work, amount is less than Rs. 25 lakhs but later on due to extra/excess work, if amount of final work crosses more than Rs. 25 lakhs, DLP shall be operative as per rule for each individual item.

(iv) Similarly if any work is more than Rs. 25 lakhs but later finalization amount of work is less than Rs. 25 lakhs, DLP should be operative for six months or rainy season whichever is late.

(v) During DLP period if contractor fails to repair any work even after issue of 7 days written notice, same work shall be got executed by respective Executive Engineer at the contractor's risk and cost. This process shall be applicable throughout the DLP period. After completion of DLP period in such works contractor should be debarred and blacklisted from JDA for three years as per RTPP Rule 2012 and 2013 where he defaults twice in a single agreement or in two different works.

(vi) Quarterly inspection as per rules shall be carried out and DLP registers shall be maintained by respective Executive Engineers to monitor the DLP repairs.

(vii) Special and regular inspection shall also be carried out as per order no. JDA/Ex.En& TA to DE-I/ 2014-15/D-223 dated 12.03.2015 and order no. SE (PMGSY) CIRCULAR 2006/D-115 dated 04.05.2006 point no. 3

(viii) In case JDA feels to take up work on any existing DLP road due to any reason, following procedure should be adopted.

(a) At the time of withdrawal total liability of repairs as per DLP conditions to be carried out and contractor shall be asked to complete the same. After completion of assessed repairs DLP period shall be released after deduction amt. as per table III.

% recovery on withdrawal of DLP of work order / **DLP period**	**1 Year**	**2 Year**	**3 Year**	**4 Year**	**5 Year**
1 Year	1.12	-	-	-	-
2 Year	2.55	1.43	-	-	-
3 Year	4.38	3.26	1.83	-	-
5 Year	9.00	7.88	6.45	4.62	2.47

Note :- Calculation is to be done on quarterly basis.

(b) In case Contractor fails to carry out these repairs, same shall be carried out at his risk and cost. If the total amt. of such repairs works out to be more than total retained amt. of SD, same shall be recovered from other works and as per PDR rules. The amount as per Table-III is also to be deducted in addition to this amount.

(c) Based upon type of work, DLP conditions for works to be carried out during DLP period with their frequency of respective type of work shall be prepared by respective SE's after approval of these periods.

2.2.3 Force Majeure

The defect arises due to earthquake, cyclone, and natural calamities shall not be the responsibly of contracting agency.

Signature of the Bidder
with address

Executive Engineer-Traffic Works-I,
JDA, Jaipur

Jaipur Development AuthorityJaipur

FINANCIAL BID DOCUMENT

Name of Work:"Traffic Improvement and Beautification works at B2 Byepass Junction, JDA, Jaipur, Rajasthan.

VOLUME - I
GENERAL INFORMATION

Executive Engineer –Traffic Works-I

Jaipur Development Authority
Jaipur

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SECTION – 1

(Instructions to Bidders)

SECTION – 1
INSTRUCTIONS TO BIDDERS

1.1 SCOPE OF WORK

1.1.1 **Percentage Rate Bids** are invited from eligible contractors for the

Name of work : Traffic Solutions and Beautification Work at B2 Byepass Junction, Jaipur, Rajasthan.

(hereinafter referred to as the "Contract Work").

1.1.2 The Work shall include the Traffic Solutions and Beautification Work at B2 Byepass Junction, Jaipur, Rajasthan with electrification, Monument Lighting, horticulture, fountain work etc based on departmental design and will include:

A) Construction of Clover Leaf, Underpass, Subways, Monument, Drain and Road Work:

a) Construction of Clover Leaf

The structure for Clover consists of Viaduct with cast in situ PSC Box Girders on viaduct followed by RE wall structure. The main activities in construction are as follows:

- Site clearance
- True and proper setting out and layout of the work, providing location marks, bench marks, preparation of reports and plans
- Pile foundation for Clover.
- Construction of bored pile by using hydraulic rigs in all type of strata.
- RCC Pile Cap, Pier and Pier cap for Clover.
- Pre stressed Superstructure for Clover
- Construction of Approach Roads.
- Construction of Service Roads.
- Construction of R.E. Walls for the Approaches.
- Providing Drainage Arrangement.
- ACP cladding.
- Casting of RCC Crash Barrier with Railings.
- Thermoplastic lane marking on road surface and painting of railings and crash barrier pipe etc.
- Road Furnitures, Signages, etc

b) Construction of Underpass

- Site clearance with Shifting of 1600mm & 600mm dia Sewer Line.
- True and proper setting out and layout of the work, providing location marks, bench marks, preparation of reports and plans
- Construction of bored pile by using hydraulic rigs in all type of strata for earth Retaining.

- Excavation up to the founding level of base slab.
- Construction of RCC curtain Walls for boxand ramps.
- Construction of cycle track.
- Construction of R.C.C. Pile, Pilecap, Piercap for column in Box portion.
- Pre stressed Superstructure for underpass Box Portion.
- Construction of Concrete pavement of M-30 grade in Ramp and Box portion.
- Traditional concrete/ stone kerb stone.
- cadappa cobble stone for cycle track flooring.
- ACP cladding for ceiling of box portion.
- Thermoplastic lane marking on road surface and painting.
- Road Furnitures, Signages, etc.

c) Construction of Monument :-

- Miniature model of the Monument.
- Excavation up to the founding level of base slab.
- Pile foundation and construction of RCC structure for monument.
- Brick work, plaster work.
- Jodhpur Stone cladding on monument.
- Construction of Sculpture and various segment of monument with Super Banswara white stone.
- Gun Metal sculpture.

d) Road work and Drain work:

- Construction of bituminous Service Road.
- Footpath with utility trench.
- Precast Drain boxes along the road.
- Renewal of existing Road around the project.
- Renewal of existing footpath with new concrete kerb and stone flooring.
- Signages, Road Furnitures, thermoplastic lane marking on road surface and painting of existing railings etc.
- Construction/ Improvement of junction/ intersection as per design
- Construction of Rain water Harvesting system.

e) Subway: pedestrian subway across the vehicular underpass of RCC box with ramp approaches to facilitate the pedestrian to cross the road.

f) Electrification and Illumination work

g) Horticulture and fountain work

h) **Intelligent Transport System.**

B) Miscellaneous:

- Submission of monthly progress photograph prints 165 X 215 mm (2 sets) and soft copy as directed in external hard disks;

- All aspects of quality assurance (including test loading) for various components of the work as specified or as directed;
- Clearing of Site and handing over of the works, as specified or as directed;
- Submission of detailed programme showing the sequence of activities, method of construction, details of constructional plant and equipment, with which the bidder proposes to carry out the entire work, as shown in the relevant drawings and as specified.,
- Detail project planning programme is to be given by using Prima Vera/ MS Project software on fortnightly basis.
- Furnishing of all requisite particulars as stated above in Para 2.1.2 (a) substantiated with detailed design calculation for each constructional stage and its effect on substructure and foundation on the basis of departmental design;
- Any other work required to be carried out to complete the works in all respects in accordance with the provisions of the contract and / or as directed by the Engineer in Charge ensuring structural stability and safety during and after construction even though not specifically mentioned in the contract but reasonably implied as necessary for successful implementation of the contract.

1.2 COST OF BID DOCUMENTS, BID PROCESSING FEE AND BID SECURITY

The bidder shall bear all costs associated with the preparation and submission of the bids for the works and Director (Engineering-II), Jaipur Development Authority will, in no case, be responsible or liable for any such costs, regardless of the conduct or outcome of the bid process.

1.2.1 Process for participation & Depositing Payment Online

Jaipur Development Authority, has decided to receive Bidding document fee, RISL Processing Fee through online mode only for which the bidder has to get registered himself on JDA portal www.jda.urban.rajasthan.gov.in

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jda.urban.rajasthan.gov.in (by depositing Rs.500.00 online, the validity of which remains 3 (three) years.)
   For participating in the Bid, the Bidder has to apply for this Bid and pay the bid Document Fee, RISL Processing Fee and Bid Security Deposit online only.
2. Registeredon e-Procurement Portal of Government of Rajasthan www.eproc.rajasthan.gov.in for online e-Bid submission.

Methods for depositing online amount.

- Online through internet Banking, Debit card or Credit Card.
- In case the amount exceeds the online payment limit, the payment may be made through RTGS/NEFT/Transfer in Bank Account Number **675401700586**IFSC Code **ICIC0006754** of ICICI Bank limited, JDA Campus Jaipur.

In Case of RTGS/NEFT/Transfer the bidder is required to deposit the requisite amount in the dedicated bank account number as mentioned above and has to get the UTR/ Reference number from the bank. This number requires to be updated whiling applying the bid on JDA portal.

While participation in the bid, a receipt will be generated through the system showing the submission details as per Annexure-4. The bidder is required to fill the instrument numbers for various heads on e-procurement portal www.eproc.rajasthan.gov.in as mentioned in the receipt.

More details about Registration Process, Terms and Conditions and FAQ along with contact details is available on JDA website www.jaipurjda.org under e-Services>>JDA tender.

NOTE :
JDA will not be responsible for delay in online submission due to any reason. To avoid this, bidders are requested to upload the complete bid well advance in time so as to avoid 11 th hour issues like slow speed, chocking of web site due to heavy load or any other unforeseen problems.

1.3 SITE VISIT

1.3.1 The bidder shall, prior to submitting his bid for the work, visit and examine the Site of works and its surroundings at his own expense and obtain and ascertain for himself on his own responsibility all information that may be necessary for preparing his bid and entering into a Contract - including, the actual conditions regarding the nature and conditions of site, availability of materials, labour, probable sites for labour camps, stores, etc., and the extent of lead and lift required for the work in complete form over the entire duration of the Contract after taking into consideration local conditions, traffic restrictions, obstructions in work, if any, and allow for all expenses likely to be incurred due to any such conditions, restrictions, obstructions, etc., in the quoted Contract price for the work.

1.3.2 A bidder shall be deemed to have full knowledge of the site, whether he inspects it or not, and no extra charges consequent on any misunderstanding or otherwise shall be allowed.

1.3.3 The bidder and any of his personnel or agents will be granted permission by the Director (Engineering-II) or his authorized nominee, on receipt of formal application in respect thereof a week in advance of the proposed date of inspection of site, to enter upon his premises and lands for purpose of such inspection, but only on the express condition that the Bidder, his personnel or agents, will release and indemnify, the Employer and his personnel and agents from and against all liability in respect thereof and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused which, but for the exercise of such permission, would not have arisen.

1.4 CONTENTS OF BID DOCUMENTS

1.4.1 The set of Bid Documents issued for the purpose of biding shall comprise the following :

SECTION	DESCRIPTION
SECTION-1	INSTRUCTIONS TO BIDDERS
SECTION-2	GENERAL CONDITIONS OF CONTRACT
SECTION-3	OTHER CONDITIONS OF CONTRACT
SECTION-4	TECHNICAL SPECIFICATIONS
SECTION-5	FORM OF AGREEMENT
SECTION-6	BANK GAURANTEE
SECTION-7	CONDITIONS OF CONTRACT FOR SAFETY, HEALTH AND ENVIRONMENT (SHE)
SECTION-8	DRAWINGS

1.4.2 The bidder is expected to examine carefully all instructions, conditions, forms, terms, and performance specification and drawings in the Bid Documents. Failure to with the requirements of Bid submission shall be at the Bidder's own risk. Pursuant to clause 1.18,bids which are not substantially responsive to the requirements of the Bid documents shall be summarily rejected.

1.4.3 At any time prior to the last date for submission of bids, the employer may, for any reason whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bid Documents by the issuance of an Addendum.

1.4.4 The Addendum will be prepared in writing and uploaded on E- Tendering portal for information of all prospective Bidder who wish to participate, and will be binding upon them, irrespective of whether the prospective bidder acknowledge receipt of the same or not.

1.4.5. The forms, Bill of Quantities, Performa and schedules provided in these Bid Documents shall be filled without exception (subject to extensions of the schedule in the same format).

1.4.6 The bid prepared by the bidder, and all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the English language only. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied with an appropriate translation of pertinent passages in English language. For the purpose of interpretation of the Bid, the English language shall prevail.

1.5 BID PRICES

1.5.1 Unless explicitly stated otherwise in the Bid Documents, the contract shall be for the whole work based on the departmental design, Bill of quantities, rates and prices submitted by the Bidder.

1.5.2 The Bidder shall fill in **rates on percentage above/below for items of schedule "G" i.e. BSR items and the bidder shall quote rate for each Non BSR item as detailed in BOQ** in both figures and words. In case, there is any discrepancy in the rates quoted in figures and words, the rate quoted in words will be applicable**.**

If on check there are discrepancies the following procedure shall be followed:-

(i) Where there is a difference between the rates in figures and words, lower of the two rates shall be taken as valid and correct rate.

(ii) When the rate quoted by the contractor in figures and in words tallies, but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount worked out.

(iii) While quoting rates, if rate/rates against any item or items are found to be omitted, the rate given in the Schedule 'G' by the department for such items will be taken into account while preparing comparative statement and contractor shall be bound to execute such item on 'G' Schedule rates.

In case where percentage is given but the 'above' or 'below' not scored, the bid will be non-responsive.

The Contractor should quote his rates only in one language i.e. either in Hindi or English. Rates should be quoted in figures as well as in words. In case a Contractor has quoted rates in both the languages, and the rates so quoted differ, then the lower of the two shall be treated as the rate quoted by the Contractor.

1.5.3 All duties, taxes, fees and other levies (present and future) payable by the contractor under the Contract, or for any other cause, as on the date thirty days prior to the closing date for submission of bids, shall be included in the total Contract Price submitted by the Bidder and the evaluation and comparison of Bids by the Employer shall be made accordingly.

1.5.4 M/s Sincere Architect & Engineers, Jaipur,was engaged by the Employer for consultancy of the project preparation of this work. The said firm or any of its associates or employees shall not be engaged by the Bidder for any assistance in preparation of bid, drawings, Bill of Quantities and any other part of the Bid Documents for this work. The said firm or its associates or employees shall not be

engaged or associated by the Contractor in any manner in the preparation of any contractual matters. Non-compliance with the above conditions shall render the bid / contract invalid.

1.6 **BID SECURITY**

All the eligble contractors should be submit Bid Security declaration on non-judicial stamp of Rs. 50/- as per office order issued by Finance Department (GF&AR) GoR dated 23.12.2020. (Declaration form attached with tender document). It is mandatory to submit bid security declaration in prescribed format along with the bid.

The Bid Security amount to be paid by the Bidder in the following conditions as per

1.6.1 Any bid not accompanied by Bid Security declaration will be summarily rejected by the Employer as non-responsive.

1.6.2 Deleted

1.6.3 Deleted

1.6.4 Deleted

1.6.5 If a bidder withdraw his bid during the period of bid validity; or

a) In the case of a successful Bidder, if he fails or refuses within the specified time limit to :

i sign the agreement , or

ii furnish the required performance security.

Then the action will be taken as per clauses mentioned in Bid Security Declaration form.

1.6.6.Deleted.

1.7 VARIATIONS OR DEVIATIONS IN BID DOCUMENTS

1.7.1 The Bidder shall submit an offer which complies fully with the basic requirements of the Bid Documents as indicated in Drawings and Specifications.

1.7.2 All bidder are cautioned that no conditional offers, variations or deviations by the bidder in respect of any items proposed by the bidder shall be entertained or considered further in the process of bid evaluation. Furthermore, any deviation from contract conditions, specifications, or other requirements stipulated in these Bid Documents shall be summarily rejected as non-responsive.

1.8 VALIDITY OF BID

1.8.1 The Bid shall remain valid and open for acceptance for a period offour months after the date of opening of bid.

1.8.1 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request the Bidder for a specified extension in the period of validity. The request and the responses thereto shall be made in writing through post, fax etc. A bidder may refuse the request without forfeiting his Earnest Money. A bidder agreeing to the request will neither be required nor permitted to modify his bid, but will be required to extend the validity of his Earnest Money correspondingly. The provision of Clause 1.6 regarding discharge and forfeiture of earnest money shall continue to apply during the extended period of bid validity.

1.9 FORMAT AND SIGNING OF BIDS

1.9.1 If the Bid is made by a proprietary firm, it shall be signed by the proprietor with his full name and the full name of his firm with its current address.

1.9.2 If the bid is made by a firm in partnership, it shall be signed by a partner holding the power of Attorney for the firm. A certified copy of the power of Attorney shall accompany the Bid. The Certified copy of the partnership deed, current address of the firm and full name and current address of all the partners of the firm shall also accompany the Bid.

1.9.3 If the bid is made by a private limited company or a public limited corporation, it shall be signed by a duly authorized person holding the power of attorney for such limited company or corporation. A certified copy of the Power of Attorney shall accompany the Bid. Such Limited company or corporation may be required to furnish satisfactory evidence of its existence before the contract is awarded.

1.9.4 The bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign the Bidder legally to the contract in all respects. Proof of such authorization shall be furnished in the form of a written Power of Attorney which shall accompany the Bid on stamp paper duly notarized. All pages of the Bid where entries or amendments have been made shall be initialed by the person or persons signing the Bid.

1.9.5 The complete bid shall be without alterations, interlineations or erasures, except those to accord with instructions issued by the Employer or as necessary to correct errors made by the Bidder, in which case such corrections shall be initiated by person and persons signing the Bid.

1.10 SEALING AND MARKING OF BIDS

1.10.1 THE BIDDER SHALL SUBMIT THE BID THROUGH E-TENDERING ONLY.

1.11 DEADLINE FOR BID SUBMISSION

1.11.1 Bids must be submitted by bidders on E-Tendering portal not later than 6:00 PM I.S.T on22.11.2021,and bid shall be opened at 12:00PM I.S.T on24.11.2021in the presence of those bidders who may choose to be present. If such last date is declared as a public holiday by the Employer in the Receiving Office, the next official working day would be deemed as the last date for submission and opening of the bids.

1.11.2 Any Bidsubmitted by the bidder without depositing requisite fee on the due date and time will not be opened and shall be treated as non-responsive and thus, rejected.

1.11.3 The bidder shall have to submit the original affidavits etc. and other documents uploaded in the Technical Bid as and when demanded by JDA.

1.11.14 **JDA will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid 11th hour issues like slow speed: chocking of web site due to heavy load or any other unforeseen problems.**

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1.12 MODIFICATION AND WITHDRAWAL OF BIDS

1.12.1 The Bidder may modify or withdraw his bid after bid submission, provided that the modification or notice of withdrawal is received in writing by the Employer in the office of the Director(Engineering-II), Jaipur Development authority, prior to the prescribed deadline for submission of Bids.

1.12.2 The Bidder's modification or notice of withdrawal shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause **1.11** for submission of Bids, with the inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.

1.12.3 Modifications to Bid will be permitted only pursuant to Clause **1.13.1** above. Any subsequent set(s) of modifications will be summarily rejected.

1.12.4 No Bid shall be modified by the Bidder subsequent to the deadline for submission of the Bids, failing which the Earnest Money Deposit shall stand forfeited.

1.12.5 No Bid shall be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of validity of bids specified in the Bid Documents. The withdrawal of bid in any form whatsoever during this interval shall entail the forfeiture of the Earnest Money Deposit pursuant to Clause **1.8,** without any further notice or opportunity to the bidder and without prejudice to any other legal rights and remedies open to the Employer.

1.13 BID OPENING & EVALUATION

1.13.1 Bids, including submissions made pursuant to Clause **1.14** shall be opened by the Superintending Engineer (II) or his authorized representative on behalf of the Employer, in the presence of such of the Bidder representatives who choose to attend, at12:00 PM I.S.T.on24.11.2021and at the following address.

Room No 107,First Floor, Citizen Care Centre Building
Jaipur Development Authority
Indira Circle, JawaharLal Nehru Marg
Jaipur - 302004
(Rajasthan)

The Bidder's representatives who are present shall sign a register giving evidence to their attendance.

1.13.2 Bids for which an acceptable Notice of withdrawal had been submitted pursuant to Clause **1.13.1** shall not be opened. The Employer will examine bids to determine whether they are complete, whether the requisite bid securities have been furnished, whether the documents have been properly signed and whether the bids are generally in order.

1.13.6 At the Bid Opening the Employer will announce only the Bidders' names, the Bid Prices, written notification of Bid modifications and withdrawals (if any), the deposit of the requisite Earnest Money Deposit, and such other details as the Employer, at his discretion, may consider appropriate.

1.13.7 Minutes of the bid opening including the information disclosed to those present in accordance with sub-clause **1.14.3** shall be prepared by the Employer for his own records only and the process of bid opening shall be confidential.

1.13.8 After the public opening of bids, information relating to the examination, clarification, evaluation and comparison of bids and recommendations

concerning the award of contract shall not be disclosed to bidders or other persons not officially concerned with such process.

1.13.9 Any efforts by a bidder to influence the Employer in the process of examination, clarification, evaluation and comparison of bids, and in decisions concerning award of contract, may result in the rejection of the Bidder's bid. Any proved act or attempt by any bidder in breach of the above may immediately entail delisting without prejudice to any other legal rights and remedies available to the Employer.

1.14 CLARIFICATION OF BIDS

1.14.1 To assist in the examination, evaluation and comparison of bids, the employer may ask the Bidders individually for clarifications of their bids as per order issued in JDA vide No.-169 dated 21.11.14

1.15 CORRECTION OF ERRORS

1.15.1 Tenders determined to be substantially responsive will be checked by the Employer for any arithmetical errors in computation and summation. The Employer will correct errors as follows:

a) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern ;

b) In case of any discrepancy between the descriptions in the Scope of Work, Specifications, Drawings, Drawings of Contract and Bill of Quantities, the following order of preference in descending order of importance, shall prevail :

1. Description of Work
2. Specification
3. Drawings
4. Conditions of Contract
5. Bill of Quantities

1.15.2 The amount in the 'Form of Bid' will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the bidders, shall be considered as binding upon the bidders.

If a bidder does not accept the corrected amount of bid, his bid shall be rejected and the tender Earnest Money shall be forfeited.

1.16 EVALUATION AND COMPARISON OF BIDS

1.16.1 The Employer will evaluate and compare only those bids determined to be substantially responsive to the requirements of the Bid Documents in accordance with Clauses **1.15** and **1.16** hereof.

1.16.2 In evaluating bids, the Employer will determine for each bid its Evaluated Bid Price by adjusting the Bid Price by making any corrections for errors in accordance with clause **1.15,** by making an appropriate adjustment for any other applicable or quantifiable variations not reflected in the priced bid in accordance with clause **1.15** and such other factors as the Employer deems necessary.

1.16.3 If the bid of the successful bidder is seriously unbalanced or 'front- loaded' in relation to the Engineer-in-Charge's estimate of the real cost of the work to be performed under the contract (as determined by the Engineer-in-charge) by more than the amount of the performance security, the Employer may require that the amount of the performance security be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of subsequent default of the successful bidder under the Contract.

1.16.4 Variations, deviations and other factors which are in excess of the requirements of the Tender Documents, or otherwise result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in the tender evaluation.

1.17 AWARD OF CONTRACT CRITERIA

1.17.1 Subject to clause **1.19,** the Employer will award the contract to the bidder whose tender has been determined to be substantially responsive to the Tender Documents and who has offered the lowest Evaluated Tender Price PROVIDED FURTHER that, in the opinion of the Employer, the bidder has the capability and resources to carry out the Contract work effectively.

1.18 EMPLOYER'S RIGHT TO ACCEPT ANY TENDER AND TO REJECT ANY OR ALL TENDERS.

The Employer reserves the right to accept or reject any bid, and to annul the biding process and reject one or 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 of the Employer's action.

1.19NOTIFICATION OF AWARD OF CONTRACT

1.19.1 Prior to the expiry of the period of tender validity prescribed by the Employer, the Employer will notify the successful bidder by telegram / cable fax or E-mail (and subsequently confirm in writing by Registered Letter) that his tender has been accepted. This letter called "Letter of Acceptance" shall name the sum which the Employer will pay to the Contractor in consideration of the execution, completion and maintenance of the work by the Contractor as prescribed by the Contract (called the "Contract Price").

1.19.2 The Letter of Acceptance will form part of the Contract and agreement executed between the parties in accordance with the Form of Agreement provided in the Bid Documents.

1.19.3 Upon furnishing by the successful bidder of a Performance Security in accordance with the provisions of the special conditions of contract, the Employer will promptly notify the unsuccessful bidders that their bids have been unsuccessful and will discharge / return without interest.

1.20 SIGNING OF AGREEMENT

1.20.1 At the same time as he notifies the successful Bidder that his Bid has been accepted, the Employer will instruct the successful bidder to sign and execute the agreement within fourteen (14) days of issue of the Letter of Acceptance.

1.21 FAILURE TO EXECUTE AGREEMENT

The contractor shall execute the agreement within fourteen (14) days of issue of Letter of Acceptance; failure to do so shall constitute sufficient grounds for the annulment of the award of contract and forfeiture of the Earnest Money Deposit.

SECTION – 2

(General Conditions of Contract)

SECTION - 2

GENERAL CONDITIONS OF CONTRACT

DEFINITIONS

1. The "Contract" means the documents forming the bid and acceptance thereof and the formal agreement executed between the Jaipur Development Authority and the Contractor, together with the documents referred to therein, including these conditions, Notice inviting Bids, Instructions to Bidders, Special Conditions of Contract, Specifications, Drawings and Designs, Tender and other information submitted by the Contractor and instructions issued from time to time by the Engineer-in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to another.

2. In the contract the following expressions shall, unless the context otherwise requires, have the meanings herein respectively assigned to them :-

    a) The "WORKS OR WORK" shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by, or by virtue of the contract contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

    b) The "SITE" shall mean the land an/or the other places on, into or through which work is to be executed under the contract, or any adjacent land, path or street, through which work is to be executed under the contract, or any adjacent land, path or street, which may be allotted or used for the purpose of carrying out the contract.

    c) The "CONTRACTOR" shall mean the individual or firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representatives of such individual or the persons composing such firm or company, the successor of such firm or company and the permitted assign of such individual or firm or company.

    d) The "ENGINEER-IN-CHARGE" shall mean the Executive Engineer In charge of Jaipur Development Authority who shall supervise and be in-charge of the work.

    e) The "GOVERNMENT","DEPARTMENT" shall mean the Jaipur Development Authority.

f) The "Accepting Authority" shall mean Executive Committee of Jaipur Development Authority.

g) The "Director" or "Chief Engineer" shall mean The Director (Engineering-II) of Jaipur Development Authority.

h) The 'Superintending Engineer' shall mean the Superintending Engineer of Jaipur Development Authority.

i) "ESTIMATED COST" shall mean the cost of the work or works as estimated on the basis of the TENDERED rate or rates agreed to between the parties to the contract.

j) Where the context so requires, words importing the singular only also include the plural and vice-versa. Any reference to masculine gender shall wherever required include feminine gender and vice versa.

k) Headings and marginal notes to these General Conditions of Contract shall not be deemed to form a part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

The clause 23 of contract agreement i.e. standing committee for settlement of disputes is read as:
If any question, difference or objection, whatsoever shall arise in any way, in connection with or arising out of this instrument, or the meaning of operation of any part thereof, of the rights, duties or liabilities of either party men, save in so far, as the decision of any such matter, as herein before provided for, and been so decided, every such matter/ constituting a total claim of Rs. 50,000/- or above, whether its decision has been otherwise provided for an whether it has been finally decided accordingly, or whether the rights or obligations of the parities, as the result of such termination, shall be referred for decision to the empowered standing committee, which would consist of the followings:

(i) Jaipur Development Commissioner, JDA, Jaipur -Chairman
(ii) Director (Engineering-II), JDA, Jaipur
(iii) Director (Finance), JDA, Jaipur
(iv) Director (Law), JDA, Jaipur
(v) Superintending Engineer, JDA, Jaipur - Member Secretary

The Engineer-in-Charge, on receipt of application along with nonrefundable prescribed fee, (the fee would be two percent of the amount in dispute, not exceeding Rs. One lac) from the contractor, shall refer the disputes to the committee within a period of three months from the date of receipt of application.
The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications. Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the Bid Documents. None of these documents shall be used for any purpose other than that of this contract.

Procedure and application form referring cases for settlement by the Standing Committee shall be, as given in form RPWA 90.

AGREEMENT No. .....

Year 20

..... Circle.

Division .....

Sub- Division .....

Name of Work .....

Name of Contractor .....

Sanction No. ..... Dt. .....RS. .....

Technical Sanction No. .....

Job No. .....

(a) Stipulated Date of Start of work .....

(b) Stipulated Date of Completion of work .....

(c) Actual Date of Completion .....

Extension applied on &sanctioned .....

Vide: C.E./S.E./E.E. No..... Dt. 20

Details of Documents Page :

(a) Percentage Rate Tender R.P. W.A. 100
(See rule 322 & note 1 below rule 331)

(b) Schedule A to F

(c) Schedule H

(d) Schedule G

(e) Schedule

(f) General Specification and Conditions of Contract

(g) Contractor's Labour Regulations

(h) .....

(i) .....

No. Date :

Copy forwarded to:

1. DirectorEng (II) / (Finance), JDA, Jaipur
2. Additional Chief Engineer, JDA, Jaipur
3. Additional Director (Revenue)/CAO, JDA, Jaipur
4. The Assistant Engineer / JEN
5. Auditor
6. Shri ..... Contractor
7. M/s .....

Amended up to _____ Effective from _____

CONTRACT FOR WORK

GENERAL RULES AND DIRECTIONS FOR THE GUIDANCE OF CONTRACTORS

1. All works, proposed for execution by Contract, will be notified in a form of invitation to tender pasted on public places and on a board hung up in the office of and signed by the JDA or other duly authorized Engineer.

   The form of invitation to bid will state the work to be carried out, as well as the date of submitting and opening of bids and the time allowed for arraying out the work, also the amount of the Performance Guarantee and/or Security Deposit to be deposited by the successful bidder and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and estimated rates/scheduled rates and any other documents required in connection with the work signed for the purpose of identification by the Executive Engineer shall be open for inspection by the Contractor at the office of the JDA or other duly authorized Engineer during office hours.

2. In the event of the bid being submitted by a firm, it must be signed separately by each partner, thereof, or in the event of the absence of any partner, it must be signed on his behalf, by a person holding a power of Attorney, authorizing to do so. Such power of Attorney will be submitted with the bid and it must disclose that the firm, is duly registered under the Indian Partnership Act, by submitting the copy or registration certificate.

3. Receipts for payments, made on account of a work when executed, by a firm must also be signed by the several partners, except where the contractors and described in their bid as a firm, in which case the receipts must be signed in the name of the firm by one of the partners or by some other person having authority to give effectual receipts for the firm.

4. Any person, who submits percentage rate bid, shall fill up the usual printed form stating at how much percent above or below the rates specified in Schedule G. he is willing to undertake the work. Only one rate of percentage, more or less, on all the estimated rates/scheduled rates shall be mentioned. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort will be liable to rejection. No single bid shall include more than one work, but Contractors, who wish to bid for two or more works, shall submit a separate bid for

each work. Bids shall have the name and number of work, to which they refer, written outside the envelope.

5. The JDA or other duly authorized Engineer will open the bids in the presence of any contractor(s) or their authorized representatives who may be present at the time, and will announce and enter the rates/amounts of all bids in the Register of Opening of Bids, (Form RPWA20A). In the event of the bid being accepted, a receipt for the Earnest Money deposited shall be given to the Contractor, who shall sign copies of the specifications and other documents mentioned in Rule 1. In the event of a bid being rejected, the Earnest Money forwarded with such unaccepted bids shall, be returned to the Contractor making the same.

6. The JDA or other duly authorized Engineer shall have the right of rejecting all or any of the bids without assigning any reason.

7. The receipt of an Accountant, Cashier or any other official, not authorized to receive such amount, will not be considered as an acknowledgement of payment to the JDA or other duly authorized Engineer.

8. The memorandum of work tendered for, memorandum of materials and of tools and plant to be supplied by the Department and their rates, shall be filled in and completed in the office of the JDA or duly authorized Engineer before the tender form is issued.

9. If it is found that the bid is not submitted in proper manner, or contains too many corrections and or unreasonable rates or amounts, it would be open for the Engineer-in-charge not to consider the bid, forfeit the amount of earnest money and/ or de-list the contractor.

10. The bidder shall sign a declaration under the Official Secrets Act for maintaining secrecy of the bid documents, drawing or other records connected with the work given to him in form given below. The unsuccessful bidders shall return all the drawings given to them.

Declaration: -

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

11. Any percentage rate bid containing Item-wise rates, and any item rate bid containing percentage rate below or above estimated/scheduled rates, will be summarily rejected.

However, if a bidder voluntarily offers a rebate for payment within a stipulated period, this may be considered.

12. On acceptance of the bid, the name of the accredited representative (s) of the Contractor (with a photograph and signature attested), who would be responsible for taking instruction from the Engineer in charge, shall be communicated to the Engineer-in-charge.

13. Sales tax or any other tax on materials, or Income Tax in respect of the contract shall be governed by Clause 36 A, B and C and B of the Conditions of Contract. Deduction of Income Tax at source will be made as per provisions of the Income Tax Act, in *** from time to time.

14. The bid to work shall not be witnessed by a Contractor of Contractors who himself/themselves has/have bided or who may and has/have bided for the same workFailure to observe the secrecy of the bids will bid of the contractors, biding as well as witnessing the bid, liable to summary rejection.

15. If on check, there are differences between the rate quoted by the Contractor in words and figures, or in the amount worked out by him, the following procedure shall be followed :-

    (i) Where there is a difference between the rates in figures and words, the rate written in words shall prevail.

    (ii) When the rate quoted by the contractor in figures and in words tallies, but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount worked out.

    (iii) While quoting rates, if rate/rates against any item of items are found to be omitted, the rate given in the Schedule 'G' by the department for such items will be taken into account while preparing comparative statement and contractor shall be bound to execute such item on 'G' schedule rates.

    (iv) In case where percentage is given but the 'above' or 'below' not scored, the bid will be non-responsive.

16. The Contractor shall comply with the provisions of the Apprenticeship Act, 1961, and the rules and orders issued, there under, from time to time. If he fails to do so, his failure will be a breach of the contract and the original sanctioning authority in his discretion may cancel the contract. The Contractor shall also be liable for any pecuniary liability arising on account of relocations by him of the provisions of the Act.

17. The Contractor shall read the specifications and study the working drawings carefully before submitting the bid.

18. The site for execution of the work will be made available as soon as the work is awarded. In case, it is not possible for the Department to make the entire site available on the award of the work, the Contractor shall arrange his working programme accordingly. No claim, whatsoever, for not giving the site in full on award of the work or for giving the site gradually in parts will be tenable. The contractor may satisfy himself regarding site, acquisition of land, approach road etc.

19. The bid documents show already the specific terms and conditions on which bids are required by the Government. Hence, all bids should be in strict conformity with the bid documents and should be fulfilled in, wherever necessary, and initiated. Incomplete bids are liable to be rejected. The terms and conditions of the bid documents are firm; as such conditional bids are liable to the rejected.

20. The bidder, while submitting bid, must provide adequate information regarding his financial, technical and organizational capacity and working experience to execute the work of the nature and magnitude.

21. The JDA or other duly authorized Engineer reserves the right in ask for submission of samples as in respect of materials for which the bidder has quoted his rates before the bid can be considered for acceptance. If the bidder, who is called upon, to do so, does not submit within seven days of written order to do so, the Engineer-in Charge shall be at liberty to forfeit the said earnest money absolutely.

22. The Contractor shall submit the list of the works, which are in hand (progress). In the following form :

Name of work	Name and particular of the Sub Division/Division, Where work is being executed	Amount of work	Position of works in progress	Remarks
1	2	3	4	5

23. The Contractor should quote his rates only in one language i.e. either in Hindi or English. Rates should be quoted in figures as well as in words. In case a Contractor has quoted rates in both the languages, and the rates so quoted differ, then the lower of the two shall be treated as the rate quoted by the Contractor.

24. All additions, deletions, corrections and overwriting, must be serially numbered and attested by the Contractor at every page, so also by the officer opening the tenders, so as to make further disputes impossible on this score.

25. After acceptance of the bid, the Contractor or all partners (in the case of partnership firm) will append photograph and signatures duly attested, at the time of execution of Agreement.

26. If any contractor, who having submitted a bid does not execute the agreement or start the work or does not complete the work and the work has to be put to re-biding, he shall stand debarred from participating in such re-biding in addition to forfeiture of Earnest Money/Security Deposit/Performance Guarantee and other action under agreement.

27. The bid documents shall be issued to those contractors only having valid enlistment as on the date of issue of documents.

28. (a) If a bidder reduces the rates voluntarily after opening of the tenders/negotiations, his offer shall stand cancelled automatically, his earnest money shall be forfeited and action for debarring him from business shall be taken as per enlistment rules.

(b) If a non-bidder offers lower rates after opening of tenders, action for debarring him from business shall be taken as per enlistment rules.

29. Contractors shall submit only unconditional tenders. Conditional bids are liable to be rejected summarily.

Bid for works

I/ We hereby tender for the execution for the Jaipur Development Commissioner of Jaipur Development Authority of the work specified in the underwritten memorandum within the time specified in such memorandum at the rates, (in figures) ..... % (As well as in words) ..... percent below/above the amount, entered in the schedule G in all respects in accordance with the specifications, designs, drawings and instructions in writing referred to in Rule 1 in all respects in accordance with such conditions so far as applicable. I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work. I / We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns, nature and the extent of ground, working conditions including stacking of materials, installation of tools & plant, conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Memorandum

(a) **General - description of work** : Traffic Improvement and Beautification works at B2 Byepass Junction, JDA, Jaipur.

(b) **Estimated cost**Rs. Lakh

(c) **Earnest money:** Bid Security declaration form to be submitted..

(d) Performance Guarantee & Security Deposit :

(i) "The security deposit @ 3% of the gross amount of the running bill shall deduct from each running bill and shall be refunded as per rules on completions of the contract as per terms and condition. However the amount of security deposit deducted from running bills shall not be converted into any mode of securities bank guarantee, FDR etc. The earnest money deposited shall however be adjusted while deducting security deposit from first running bill of the contractor. There will be no maximum limit of security deposit.

However, a contractor may elect to deposit of full amount of 3% security deposit in the shape of bank guarantee or any acceptable form of security before or at the time of executing agreement. In that case earnest money may be refunded only after deposition of full 3% as above. However, in case during execution, cost of works exceeds as shown at the time of depositing 3% as above, balance security deposit shall be deducted from the "Running Account Bills".

(ii) Bank Guarantee shall in all cases be payable at the head quarter of the Division or the nearest District Headquarters.

(e) Time allowed for the completion of work (to be reckoned from the 15th day after the date of written order to commence the work) is 18Months. Should this bid be accepted in whole or In Part, I/We hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed hereto and of the Notice Inviting Bid, or in default thereof, to forfeit and pay to the Jaipur Development Commissioner of Jaipur Development Authority of Rajasthan or his successors in office, the sum of money mentioned in the said conditions.

(f) A sum of Rs. ..... is forwarded herewith in the form of Cash, Bank Draft, Bankers Cheque as Earnest Money. This amount of earnest money shall absolutely be forfeited to the Jaipur Development Commissioner of Jaipur Development Authority or his successor in office without prejudice to any other right or remedies of Jaipur Development Commissioner of Jaipur Development Authority of his successor in his office, should. I/ We fall to commence the work specified in the above memorandum.

Signature of Witness — Signature of Contractor

Witness's address & occupation — Address of Contractor

Date: The above bid is hereby accepted by me on behalf of the Jaipur Development Commissioner of Jaipur Development Authority.

Executive Engineer Traffic Works-I

CONDITIONS OF CONTRACT

Clause 1: Security Deposit:

The security deposit @ 3% of the gross amount of the running bill shall deduct from each running bill and shall be refunded as per rules on completions of the contract as per terms and condition. However the amount of security deposit deducted from running bills shall not be converted into any mode of securities bank guarantee, FDR etc. The earnest money deposited shall however be adjusted while deducting security deposit from first running bill of the contractor. There will be no maximum limit of security deposit.

A contractor may however, elect to furnish bank guarantee or any acceptable form of security for an amount equal to the full amount of security deposit @ 3% of the work order before or at the time of executing the agreement. In that case, earnest money may be refunded only after furnishing of the bank guarantee as above. However during execution of the work if cost of work exceeds as shown at the time of furnishing bank guarantee, balance security deposit shall be deducted from the "Running Account Bills".

All compensation or other sums of money payable by the Contractor to Jaipur Development Authority under the terms of his contract may be deducted from or paid by the sale of a sufficient part of his Performance Guarantee and/or Security Deposit, or from interest arising therefrom, or from any sums, which may be due or may become due to the Contractor by the JDA on any account whatsoever, and in the event of this Security Deposit being reduced by reason of any such deduction or sale as aforesaid, the Contractor shall within ten days thereafter, make good in cash or Bank Guarantee of Nationalized/Scheduled Bank, as aforesaid, any sum or sums which may have been deducted from or raised by sale of his Performance Guarantee and / or Security Deposit or any part thereof.

In case of Bank Guarantee of any Nationalized/Scheduled Bank is furnished by the Contractor to the Jaipur Development Authority, as part of the Security Deposit/Performance Guarantee and the bank goes into liquidation or, for any reason, is unable to make payment against the said Bank Guarantee, the loss caused thereby shall fall on the Contractor and the Contractor shall forthwith, on demand, furnish additional security to the Jaipur Development Authority to make good the deficit.

The liability or obligation of the bank under the Guarantee Bond shall not be affected or suspended by any dispute between the Engineer-in-charge and the Contractor, and the payment, under the Guarantee Bond by the bank to the Jaipur Development Authority shall not wait till disputes are decided. The bank shall pay the amount under the Guarantee, without any demur, merely on a demand from the Jaipur Development Authority stating that the amount claimed is required to meet the recoveries due or likely to be due from the Contractor. The demand, so made, shall be conclusive as regards, to amount due and payable by the bank, under the

guarantee limited to the amount specified in the guarantee Bond. The guarantee will not discharge due to the change in the constitution of the Bank or the Contractor.

The Bank Guarantee shall remain valid up to the specified date unless extended on demand by the Engineer-in-charge, which shall include the period of completion of the contract and the defect removal period as per terms or the Agreement, Bank's liability shall, stand automatically discharged unless a claim in writing is lodged with the Bank within the period stated in the Bank Guarantee including the extended period. After satisfactory completion of the contract and clearance of all dues by the Contractor, the Director (Engineering)-I or duly authorized Engineer will discharge the Bank Guarantee after expiry of the original or the extended period, as the case may be. In case the date of expiry of the Bank Guarantee is a holiday, it will be deemed to expire on the close of the next working day.

Jaipur Development Authority is not concerned with any interest accruing to the Contractor.On any form of Security (primary or collateral) lodged by him with the bank or any sums payable to sureties obtained by the Bank as counter guarantee to secure its own position. These will be the matters between the Bank and the Contractor.

Clause 2: Compensation for delay:

The time allowed for carrying out the work, as entered in the tender, shall be strictly observed by the Contractor and shall be reckoned from the 15th day after the date of written order to commence the work given to the Contractor. If the contractor does not commence the work within the period specified in the work order, he shall stand liable for the forfeiture of the amount of Earnest Money, Performance Guarantee and Security Deposit. Besides, appropriate action may be taken by the Engineer-in-charge/competent authority to debar him from taking part in future bids for a specified period or black list him. The work shall, throughout the stipulated period of completion of the contract, be proceeded with all due diligence, time being essence of the contract, on the part of the Contractor. To ensure good progress during the execution of work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month (save for special jobs), to complete 1/8th of the whole of the work before 1/4th of the whole time allowed under the contract has elapsed, 3/8th of the work before 1/2 of such time has elapsed and 3/4th of the work before 3/4 of such time *** elapsed. If the contractor fails to complete the work in accordance with this time schedule in terms of cost in money, and the delay in execution of work is attributable to the contractor, the contractor shall be liable to pay compensation to the Jaipur Development Authority at every time span as below: -

A.	Time Span of full stipulated period	1/4th	1/2th	3/4th	Full
B.	Work to be completed in	(..... days)	(..... days)	(..... days)	(..... days)

	terms or money.	1/8th	3/8th	3/4th	Full
C.	Compensation payable by the contractor for delay at the stage of :	(Rs.....) 2.5% of Scheduled work remained unexecuted on the last day of (1/4) time span.	(Rs.....) 5% of Scheduled work remained unexecuted on the last day of (1/2) time span.	(Rs.....) 7.5% of Scheduled work remained unexecuted on the last day of (3/4) time span.	(Rs.....) 10% of Scheduled work remained unexecuted on the last day of contracted full period.

Note: In case delayed period over a particular span is stilt up and is jointly attributable to government and contractor, the competent authority may reduce the compensation in proportion of delay attributable to government over entire delayed over that span after clubbing up the split delays attributable to government and this reduced compensation would be application over the entire delayed period without paying any escalation. Following illustration is given.

First time span is of 6 months, delay is of 30 days which is split over as under 5 days [attributable to government] + 5 days [attributable to contractor] + 5 days [attributable to government] + 5 days clubbed to 15 days [attributable to government] and 15 days [attributable to contractor]. The normal compensation 30 days as per clause 2 of agreement is 2.5 which can be reduced as 2.5 15/30 1.25 over 30 days without any escalation by competent authority.

The contractor shall, further, be found to carry out the work in accordance with the date and quantity entered the progress statement attached to the bid.

In case the delay in execution of work is attributable to the contractor, then span wise compensation as laid down in this clause shall be mandatory. However, in case the slow progress in one time span is covered up within original stipulated period, then the amount of such compensation levied earlier shall be refunded. The Price escalation, if any, admissible under clause 45 of Conditions of Contract would be admissible only on such rates and cost of work, as would be admissible if work would have been carried out in that particular time span. The Engineer-in-charge shall review the progress achieved in every time span, and grant stage wise extension in case of slow progress with compensation, if the delay is attributable to contractor, otherwise without compensation.

However, if for any special job, a time schedule has been submitted by the Contractor before execution of the agreement and it is entered in agreement as well as same has been accepted by the Engineer-in charge, the Contractor shall complete the work within the said time schedule. In the event of the Contractor failing to comply with this condition, he shall be liable to

pay compensation as prescribed in forgoing paragraph of this clause provided that the entire amount of compensation to be levied under the provisions of this Clause shall not exceed 10% of the value of the contract. While granting extension in time attributable to the Jaipur Development Authority reasons shall be recorded for each delay.

Clause 3: Risk & Cost Clause:

The Engineer-in-charge or the Competent Authority defined under rules may, without prejudice to his rights against the Contractor, in respect of any delay or interior workmanship or otherwise, or to any claims for damages in respect of any breaches of the contract and without prejudice to any rights or remedies under any of the provisions of this contract or otherwise, and whether the date for completion has or has not elapsed, by notice in writing, absolutely determine the contract in any of the following cases :-

(i) If Contractor having been given by the Engineer-in-charge, a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in any inefficient or otherwise improper of un-workman like manner, shall omit to comply with the requirements of such notice for a period of seven days, thereafter, or if the Contractor shall delay or suspend the execution of the work so that either in the judgment of the Engineer-in-charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion of he has already, failed to complete the work by that date.

(ii) If the Contractor, being a company, shall pass a resolution or the Court shall make an order that the company shall be wound up or if a receiver or a manager, on behalf of a creditor, shall be appointed or if circumstances shall arise, which entitle the Court or Creditor to appoint a receiver or a manager or which entitle the Court to make a winding up order.

(iii) If the Contractor commits breach of any of the terms and conditions of this contract.

(iv) If the contractor commits any acts mentioned in clause 19 hereof.

When the contractor has made himself liable for action under any of the cases aforesaid. The Engineer in-charge behalf of the Jaipur Development Commissioner of Jaipur Development Authority shall have powers.

(a) To determine or rescind the contract as aforesaid of which determination or rescission notice in witting to the contractor under the hand of the Engineer in charge shall be conclusive evidence upon such determination or rescission,the earnest money, full security deposit of the contract and performance guarantee of the contractor shall be liable to be forfeited and shall be absolutely at the disposals of Jaipur Development Authority.

(b) To employ labour paid by the department and to supply materials to carry our the work or any part of the work debiting the contractor with the cost of the labour and the price of the material (of the amount of which cost and price certified by the Engineer in charge shall be final and conclusive against the contractor) and crediting him with the value of the work done in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract. The certificate of the divisional officer as to the value of the work done,shall be final and conclusive evidence against the contractor provided always that action under the sub clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred the department are less than amount payable to the contractor at his agreement rates the difference shall not be paid to the contractor.

(c) After giving notice to the contractor to measure up the work of the contractor and to take such part thereof as shall be unexecuted out of his hands and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of the Engineer-in-charge shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by Jaipur Development Authority under this contract or on any other accountwhatsoever or from his earnest money, security deposit, performance guarantee, enlistment security or the proceeds of sales thereof or a sufficient part thereof as the case may be.In the event of any one or more of the above courses being adopted by the engineer in charge the contractor shall not claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of contract. And in case action is taken under any of provisions aforesaid the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer in charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

Clause 4: Contractor remains liable to pay compensation,if action not taken under clause 3

(i) In any case in which any of the powers conferred by clause 3 hereof shall have become exercisable and the same shall have not been exercised the non-exercise thereof shall not constitute waiver of any of the conditions thereof and such power shall not with starting be exercisable in the event of any future case of default by the contractor for which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit/performance

guarantee/Easiest money/Enlistment security and the liability of the contractor for past and future compensation shall remain unaffected.

Powers to take possession of or require removal sale of contractor plant.

(ii) In the event of the Engineer in charge putting in force powers vested in him under the preceding clause 3,he may, if he so desires, take possession of all or any tools plants materials and stores in or upon the works or the site,thereof, or belonging to the contractor of procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates or in case of these not being applicable,at current market rates, to be certified by the JDA or duly authorized Engineer (whose certificate thereof shall be final and conclusive) otherwise the Engineer in charge may give notice in writing to the contractor or his clerk of the works foreman or other authorized agent require him to remove such tools,plant, materials or stores from the premises (within a time to be specified in such notice) and in the event of the contractor failing to comply with any requisition, the JDA or other duly authorized Engineer may remove them at the contractors expenses by auction or private sale on account of the contractor and at his risk in all respects, and the certificate of the JDA or other duly authorized Engineers, as to the expense of any such removal, and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

Clause 5: Extension of Time:

If the contractor desires an extension of time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds he shall apply in writing to the Engineer in charge within 30 days of the date of the hindrance on account of which he desires such extension as aforesaid and the authority competent to grant extension under the rule/delegation of powers or other duly authorized Engineer shall if in his opinion (which shall be final) reasonable grounds be shown therefore authorize such extension of time if any as may, in his opinion be necessary or proper,if the period of completion of contractor expires before the expiry of the period of one month provided in this clause the application for extension shall be made before the expiry of the period stipulated for completion of contract the competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finally of work.Such extensions shall be granted in accordance with provisions under clause (2) of this agreement.

Clause 5 A: Monthly returns of extra claims:

Contractor has to submit a return every month for any work claimed as extra. The contractor delivery the return in the office of the executive engineer and obtain receipt number of the receipt register of the day on or before 10th day of every month during the continuance of the

work covered by this contract a return showing details of any work claimed as extra by the contractor which value shall be based upon the rates and prices mentioned in the contractor or in the schedule of rates in force in the district for the time being. The contractor shall be deemed to have waived all claims not included in such return and will have no right to enforce any such claims not included whatsoever be the circumstance.

Clause 6: Final certificate:

On completion of the work the contractor shall send a registered notice to the Engineer in charge giving the date of completion and sending a copy of it to the officer accepting the contractor on behalf of the J.D.C. and shall request Engineer In-Charge to give him a certificate of completion but no such certificate shall be given nor shall the work be considered to be complete unit the contractor shall have removed from the site on which the work shall be executed all scaffolding surplus materials and rubbish and cleared off the dirt from all wood work doors walls floors or other parts of any building in upon or about which the work is to be executed or of which he may have possession for the execution thereof he had filled up the pits. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding surplus materials and rubbish and clearing off dirt and filling of pits on or before the date fixed for completion of the work, the Engineer-in-Charge may, at the expenses of the contractor, remove such scaffolding, surplus materials and the rubbish and dispose of the same, as he thinks fit, and clean off such dirt and fill the pit, as aforesaid and the contractor shall forthwith pay the amount of all expense so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof. On completion, the work shall be measured by the Engineer in charge himself or through his subordinates whose measurements shall be binding and conclusive against the contractor.Provided that if subsequent to the taking of measurements by the subordinate as aforesaid, the Engineer in charge had reason to believe that the measurements taken by his subordinates are not correct the engineer in charge shall have the power to cancel the measurements already taken by his subordinates and acknowledged by the contractor and to take measurements again after giving reasonable notice to the contractor and such pre-measurement shall be binding on the contractor.

Within ten/thirty days of the receipt of the notice Engineer in charge shall inspect the work and if there is no visible defects on the face of the work shall give the contractor, a certificate of completion. If the Engineer in charge finds that the work has been fully completed. It shall be mentioned in the certificate so granted. If on the other hand, it is found that there are certain visible defects to be removed the certificate to be granted by Engineer in charge shall specifically mention the details of the visible defects along with the estimate of the cost for removing these defects. The final certificate of work shall be given after the visible defects pointed out as above have been removed. Ten days will apply to works at the headquarters of Engineer-in-charge and thirty days for works at other place.

Clause: 7: Payment on intermediate certificate to be regarded as advance:

No Payment shall be made for works estimated to cost less than rupees twenty five thousand till after the whole of the works shall have been completed and a certificate of completion given. But in the case of works estimated to cost more than Rupees twenty five thousand the contractor for shall on submitting the bill therefore, be entitled to receive a monthly payment proportionate to the part thereof then approved and passed by the engineer in charge, whose certificate of such approval and passing of sum so payable shall be final and conclusive. Running Account bill shall be paid within 15 days from presentation. But all such intermediate payment shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed and shall not erected or considered as an admission of the due performance of the contract or any part thereof in any respect or the accruing of any claim nor shall it conclude determine or effect in any way the powers of the Engineer -in-charge under these conditions or any of them to final settlement and adjustment of the accounts or otherwise or in any other way vary of effect the contract. The final bill shall be made/submitted by the Contractor within one month of the date fixed for completion of the work otherwise the Engineer-in-charge's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties.

Clause 7 A: Time Limit for Payments of Final Bills:

The final bill shall be paid within 3 months on presentation by the contractor after issuance of final completion certificate in accordance with clause 6 of the conditions of contract. If, there shall be any dispute about any item(s) of the work, then the undisputed item(s) only, shall be paid within the said period of 3 monthsif a final bill (which contains no disputed item or disputed amount of any item) is not paid within the period of 3 months from presentation of final bill or 6 months from the date of receipt of registered notice regarding completion of work in accordance with clause 6 of the conditions of the contract, the defects, if any shall be brought to the notice of the higher authority. The period of 3 months shall commence from the date of rectification of the defects. The higher authority shall ensure that in no case final bill should be left unpaid after 9 months from the receipt of registered notice regarding completion of work. The contractor shall submit a memorandum of the disputed items along with justification in support within 30 days from the disallowance thereof, and if he fail, to do so, his claims shall be deemed to have been fully waived and absolutely extinguished.

Clause 8: Bills to be submitted monthly:

A bill shall be submitted by the Contractor each month on or before the date fixed by the Engineer-in-charge for all work executed in the previous month and the Engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, as far as admissible, authorized or paid, if possible, before the expiry of ten days from the presentation of the bill. If the Contractor does not submit the bill within the time fixed,

as aforesaid, the Engineer-in-charge may depute a subordinate to measure up to said work in the presence of the Contractor, whose signature in the Measurement Book will be sufficient warrant and the Engineer-in-charge may prepare a bill from such Measurement, Book, which shall be binding on the Contractor in all respects.

Clause 8 A: Contractor to be given time to file objection to the Measurements recorded by the Department: -

Before taking any measurement of any work, as have been referred to in preceding Clauses 6, 7 & 8, the Engineer-in-charge or a subordinate, deputed by him, shall given reasonable notice to the Contractor. If the Contractor fails to be present at the time of taking measurements after such notice or fails to sign or to record the difference within a week from the date of measurement in the manner required by the Engineer-in-charge, then in any such event, the measurements taken by the Engineer-in-charge or by the subordinates deputed by him, as the case may be, shall be final and binding on the Contractor and the Contractor shall have no right to dispute the same.

Clause 8 B: Recovery of cost of preparation of the Bill:

In case of contractors of class "A" and "AA" do not submit the bill with time fixed, the Engineer-in-charge may prepare the bill as per provision of clause 8 of the conditions of contract but deduction @ 0.5% of amount of such a bill shall be made and credited to the general revenue on account of preparation of bill.

Clause 9: Bills to be on printed forms:

The Contractor shall submit all bills on the printed forms, to be had on application, at the office of the Engineer-in-charge and the charges in the bills shall always be entered at the rates specified in the bid or in the case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the bid, at the rates hereinafter provided for such work.

Clause 9 A: Payments of Contractor's Bills to Banks:

Payments due to the Contractor may if so desired by him, be made to his Bank instead of direct to him, provided that the contractor has furnished to the Engineer-in-charge (i) an authorization in the form of a legally valid document, such as a Power of Attorney conferring authority on the Bank to receive payments, and (ii) his owe acceptance of the correctness of the account made out, as being due, to him, by Government, or his signature on the bill or other claim preferred against Jaipur Development Authority before settlement by the Engineer-in-charge of the account or claim, by payment to the Bank. While the receipt given by such bank shall constitute a full and sufficient discharge for the payment, the Contractor should, whenever possible, present his bill duly receipted and discharged through his Banker. Nothing, herein contained, shall operate to create in favour of the Bank any rights vis-à-vis the Jaipur Development Commissioner of Jaipur Development Authority.

Clause 10: Stores supplied by Jaipur Development Authority: -

If the specification of estimate of the work provides for the use of any special description of material, to be supplied from Engineer-in-charge's stores, or if, it is required that contractor shall use certain stores to be provided by the Engineer-in-charge specified in the schedule or memorandum hereto annexed, the Contractor shall be bound to procure and shall be supplied such materials and stores as are, for time to time, required to be used by him for the purpose of the contract only, and the value of the full quantity of materials and stores, so supplied; at the rate specified in the said schedule or memorandum, may be set off or which may be deducted from any sum, them due or thereafter become due, to the contractor under the contract or otherwise or against or from the performance Guarantee and or Security Deposit or the proceeds of sale, if the same is held in Jaipur Development Authority securities, the same or a sufficient portion thereof being in this case, sold for this purpose. All materials supplied to the Contractor, either from departmental stores or with the assistance of Government, shall remain the absolute property of Government. The Contractor shall be the trustee of the Stores/Materials, so supplied/procured and these shall not, on any account, be removed from the site of work and shall be all times open to inspection by the Engineer-In-charge. Any such material unused and in perfectly good condition at the time of completion or determination or rescinding of the contract, shall be returned to the Divisional Officer's Stores. If by a notice in writing under his hand, he shall so require, and if on service of such notice, the contractor fails to return the materials so required he shall be liable to pay the price of such materials in accordance with the provision of Clause 10B in bid. But the Contractor shall not be entitled to return any such materials, unless with such consent, and shall have no claim for compensation on account of any such materials, so supplied to him as a foresaid being unused by him, or for any wastage in or damage to any such materials. For the stores returned by the Contractors, he shall be paid for at the price originally charged excluding storage charges, in case of material supplied from departmental stores and actual cost including freight, cartage, taxes etc. paid by the contractor, in case of supplies received with the assistance of Government, which, however, should in no case exceed market rate prevailing at the time the materials are taken back. The decision of the Engineer-in charge as to the price of the stores returned keeping in view its condition etc, shall be final and conclusive. In the event of breach of the aforesaid condition, the Contractor shall in addition to throwing himself open in account for contravention of the terms of the license or permit and/or for criminal breach of trust, pay to the Government, all advantages or profits resulting, or which in the usual course, would result to him by reason of such breach. Provided that the contractor shall, in no case be entitled to any compensation or damage on account of any delay in supply thereof, all or any such materials and stores.

Clause 10A: Rejection of materials procured by the contractor:

The Engineer-in charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and, in case of default, the Engineer-charge shall be at liberty to employ other person (s) to remove the same without being answerable or accountable for any loss of damage, that may happen or arise to such materials to substituted thereof, and in case of default, Engineer-in charge may cause the same to be supplied and all costs. Which may attend such removal and substitution, are to be born by the contractor.

Clause 10B: Penal rate in case of excess consumption:

The contractor shall also be charged for the materials consumed in excess of the requirements calculated on the basis of standard consumption approved by the department at double of the issue rate including storage and supervision charge or market rate, whichever is higher. A Material supply and consumption statement in prescribed From RPWA35A shall be submitted with every Running Account Bill, distinguishing material supplied by the Government and the material procured by the Contractor himself. The recovery for such material shall be made from Running Account Bill next after the consumption and shall not be referred certificate of such nature shall be given in each running Account Bill.

Clause 10 C: Hire of Plant and Machinery:

Special Plant and Machinery, required for execution of the work may be issued to the contractor, if available, on the rates of hire charges and other terms and condition as per departmental Rules, as schedule annexed to these conditions. Rates of such Plant & machinery shall be got revised periodically so as to bring them at per with market rate:

Clause 11: Works to be executed in accordance with specifications, Drawings, Orders, etc.

The Contractor shall execute the whole and every part of the work in the most substantial and satisfactory manner and both as regards materials and otherwise in every respect in strict accordance with the Specification. The Contractor shall also conform exactly fully and faithfully to the designs, drawings and instructions in writing relating to the work assigned by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access at such office or on the site of the work for the purpose of inspection during office hours and contractor shall, if he so require, be entitled, at his own expense, to make or cause to be made copies of specifications and of all such designs,drawings and instructions, as aforesaid. A certificate of executing works as per approved design and specifications etc. shall be given on each Running Account.

These specifications of work, material, methodology of execution, drawings and designs shall be signed by the contractor and executive Engineer while executing agreement and shall from part of agreement.

Clause 12:

The Engineer-in-charge shall have power to make any alteration omission or additions to or substitutions for the original specification, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work accordance with any instruction which may be given to him in writing signed by the Engineer-In-Charge and such alterations, omissions, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to do in the manner above specified, as part of the work shall be carried out work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work, and the certificate of the Engineer-in-charge shall be conclusive as to such proportion. The rates for such additional altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order.

(i) If the rate for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.

(ii) If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work , such rates will be derived from the rates for a similar class of work as are specified in the contract for the work.

(iii) If the rates for the altered, additional or substituted work can not be determined in the manner specified in the sub-clause (i) to (ii) above, then the rates for such composite work items shall be worked out on the basis of the concerned Schedule of Rates of the Districts / Area specified above minus / plus the percentage which the total tendered amount bears to the estimated cost of the entire work put to bid. Provided always that if the rates for a particular part of parts of the item is not in the Schedule of Rates, the rate for such part or parts will be determined by the Engineer-in-Charge on the basis of the prevailing market rates when the work was done.

(iv) If the rate for the altered, additional or substituted work item cannot be determined in the manner specified in sub-clauses (i) to (iii) above, then the contractor shall within 7 days of the date of receipt of order to carry out the work, inform the Engineer-in-Charge of the rates which it is his intention to charge for which class of work supported by analysis of the rate or rates claimed and the Engineer-in-Charge shall determine the rates or rates on the basis of prevailing market rates, and pay the contractor accordingly. However, the Engineer-in-Charge by notice in writing will be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner, as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea of non-settlement of rates on items failing under the clause.

(v) Except in case of items relating to foundations, provisions contained sub-clauses (i) to (iv) above shall not apply to contract or substituted items as individually exceed the percentage set out in the bid documents under Clause 12.A.

For the purpose of operation of Clause 12(v) the following works shall be treated as work relating to foundations:-

(a) For buildings, compound wall, plinth level or 1.2 meters (4 ft.) above ground level whichever is lower, excluding items above flooring and D.P.C. but including base concrete below floors.

(b) For abutments, pier, retaining wall of culverts and bridges, walls of water reservoir and the bed of floor level.

(c) For retaining walls, where floor levels is not determinate 1.2 meters above the average ground level or bed level.

(d) For roads, all items of excavation and filling including treatment of sub base and soling work.

(e) For water supply lines, sewer lines underground storm water drains and similar work all items of work below ground level except items of pipe work for proper masonry work.

(f) For open storm water drains, all items of work except lining of drains.

(g) Any other items of similar nature which Engineer-in-charge may decide relating to foundation.

The rate of any such work, except the items relating to foundations, which is in excess of the deviation limit, shall be determined in accordance with the provisions contained in Clause 12A.

Clause 12A:

The quantum of additional work for each item shall not exceed 50% of the original quantity given in the agreement and the total value of additional work shall not exceed 50% of the total contract value, unless otherwise mutually agreed by the Engineer-in-charge and the Contractor.

In case of contract substituted items or additional items, which results in exceeding the deviation limit laid down in this clause except items relating to foundation work. Which the contractor is required to do under Clause 12 above, the contractor shall within 7 days from the receipt of order, claim revision of the rate supported by proper analysis in respect of such items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exist in the bid for the main work or can be derived in accordance with the provision of sub clause (ii) of Clause 12 and the Engineer-in-charge, may revise their rates having derived in

according with the provision of sub-clause may revise their rates having regard to prevailing market rates and the contractor shall be paid in accordance with the rates so fixed. The Engineer-in-charge shall be at liberty to cancel his order to carry out such increased quantities of work by giving notice in writing to the contractor and arrange to carry out in such manner, as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea of non-settlement of rates of items failing under this clause.

All the provisions of the preceding paragraph shall equally apply to decrease in rates of items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exist in the bid for the main work or can be derived in accordance with the provisions of sub-clause (ii) of the preceding clause 12 and the Engineer-in-charge may revise such rates having regard to the prevailing market rates unless otherwise mutually agreed by the engineer-in-charge and the contractor.

Clause 13: No compensation for alteration in or restriction of work to be carried out:

If at any time after the commencement of the work the Jaipur Development Authority shall, for any reason, whatsoever, not require the whole work, thereof, as specified in the bid, to be carried out, the Engineer-in-charge shall give notice, in writing of the fact to the contractor, who shall have no claim to any payments or compensation, whatsoever, on account of any profit or advantage, which he might have derived from the execution of the work in full but which he did not derive in consequence of the full amount of the work not having been carried out. Neither, shall he have any claim for compensation by reason of alterations having been made in the original specifications, drawings and design and instructions, which shall involve any curtailment of the work as originally contemplated. Provided, that the contractor shall be paid the charges for the cartage only, of materials actually brought to the site of the work by him for bonafide use and rendered surplus as a result of the abandonment or curtailment of the work or any portion thereof, and taken them back by the contractor provided, however that the Engineer-in-charge shall have, in all such cases, the option of taking over all or any such materials at their purchase price or at local market rates whichever may be less. In the case the option of taking over all or any such materials at their purchase price or at local market rates whichever may be less. In the case of such stores, having been issued from Jaipur Development Authority stores, charges recovered, including storage charges, shall be refunded after taking into consideration any deduction for claim on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of the Engineer in Charge shall be final.

Clause 14: Action and compensation payable in case of bad work:

If, it shall appear to the JDA or any authorized authority or the Engineer-in-Charge or his subordinates in charge of the work, or to the committee of retired officers / officers appointed by the Jaipur Development Authority for the purpose that any work has been executed with unsound, imperfect or unskillful workmanship, prior with material of any interior description, or

that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted, or otherwise not in accordance with contract, the contractor shall be demand in writing from the Engineer in charge, specifically the work / materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, will rectify or remove and reconstruct the work, so specified, in whole or in part, has the case may be, remove the materials or articles, so specialties and provide other proper and suitable materials or articles at his own cost and in the event of his failing to do so, within a period to be specified by the Engineer-in-charge in his demand, as aforesaid, then the contractor shall be liable to pay compensation, at the rate of one percent on the bided amount of work for every week not exceeding ten percent, while his failure to do so shall continue, and in the case of any such failure, the Engineer - in - Charge may rectify or remove and re-execute the work or remove and replace within others, the materials or articles or articles complained of as the case may be, at the risk and expense, in all respects of the contractor.

Clause 15: Work to be open to inspection: Contractor or his responsible agent to be present.

All work, under or in course of execution or executed in pursuance of the contract, shall at all times, be open to inspection and supervisor of the Engineer-in-charge and his superior officers e.g. Superintending Engineer, Additional JDA, Chief Technical Engineer, JDA, and his subordinates and any other authorized agency of the Jaipur Development Authority and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer in charge in or his subordinate and any other authorized agency of Jaipur Development Authority or committee of retired officers / officers appointed by the Jaipur Development Authority for the purpose to visit the works shall have been given to the Contractor, either himself be present to receive orders and instructions or have a reasonable agent, duly accredited in writing, present for the purpose. Orders given to the Contractor agent shall be considered to have the same force as if they had been given to the contractor himself.

Clause 16: Notice to be given before any work is covered up:

The Contractor shall given not less than 7 days notice, in writing, to the Engineer-in-Charge of the work, before covering up or otherwise placing beyond the reach of measurement, any work in order that they may be measured and correct dimensions thereof, be taken before the same is so covered up or placed beyond the reach of measurement and shall no cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge of the work and if, any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the Contractor's expenses or in default, thereof, no payment or allowance shall be made for such work, or for the materials, with which the same was executed.

Clause 17: Contractor liable for damage done and for imperfections:

If the Contractor of his work people or servants shall break, deface, injure or destroy any part of a building in which they may be working or any building, road, fence, enclosure or cultivated ground continuous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work.While in progress, from any cause, whatsoever, or any imperfections become apparent in it, within a period specified in clause 37, after a certificate, final or otherwise of its completion, shall have been given by the Engineer-in-charge, may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-charge shall be final) from any sums that may be then, or at any time thereafter, may become due to the contractor, or from his security deposit, or the proceeds of sale thereof, or of a sufficient portion thereof.

Clause 18: Contractor to supply Plant, Ladders, Scaffolding etc.

The contractor shall arrange and supply, at his own cost, all material (except such special materials, if any, as may, in accordance with the contract, be supplied from the Engineer-in-charge's stores), plants, tools, appliances, implements, ladders, cordage, tackle, scaffolding and temporary works requisite or proper for the proper execution of the work, whether original, altered, or substituted, and whether included in the specification or other documents, forming part of the contract, or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge, as to any matter as to which, under the conditions, he is entitled to be satisfied of which he is entitled to require, together with carriage thereof, to and from the work. The contractor shall also arrange and supply, without charge, the requisite number of persons with the means and material necessary of the purpose of setting out work and counting, weighing and assisting, in the measurement or examination at any time and from time to time of the work, or materials. Failing his so doing, the same may be provided by the Engineer-in-charge at the expenses of the Contractor, and the expenses maybe deducted from any money due to the Contractor under the contract, or from his performance Guarantee and / or security deposit or the proceeds of sale thereof, or a sufficient portion thereof. The contractor shall also provide all necessary fencing and lights required to protect the public from accident and shall be bound to bear the expenses of difference of every suit, action or other proceeding at law, that may be brought by any person for injury sustained owing to neglect of the above precautions, and to pay any damages and costs, which may be awarded in any such suit, action proceedings to any such person or which may, with the consent of the Contractor be paid to compromise any claim by any such person.

Clause 19: Work not to be sub-let contract may be rescinded and security deposit and performance forfeited for sub-letting, bribing or if contractor becomes insolvent.

The contract shall not be assigned or sublet without the written approval of the JDA, and if the contractor shall assign or sublet his contract or attempt so to do, or become insolvent, or commence any insolvency proceedings or mark any composition with his creditors, or attempt to

so to do, or if any bride, gratuity, gift, loan, requisite reward or advantage, pecuniary or otherwise, shall either, directly or indirectly, be given promised or offered by the Contractor or any of his servants or agents, to any public officer or person, in the employ of Government, in any way relating to his office or employment, or if any such officer or person shall become, in any way, directly or indirectly interested in the contract, the JDA may thereupon, by notice, in writing resigned the contract and the performance guarantee and security deposit of the contractor shall, thereupon, stand forfeited and be absolutely at the disposal of Jaipur Development Authority and the same consequences shall ensure as, if the contract had been rescinded under clause 3 thereof, and in addition the contractor shall not be entitled to recover or be paid for any work therefore, actually performed under the contract.

Clause 20: Sums payable by way of compensation to be considered as reasonable compensation without reference to actual loss:

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Jaipur Development Authority without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

Clause 21: Changes in Constitution of firm:

Where the Contractor is partnership firm, the previous approval, in writing, of the Engineer-in-charge shall be obtained before business any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval, as aforesaid, shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the work thereby undertaken by the contractor.If, previous approval, as aforesaid, is not obtained, the contract shall be deemed to have been assigned in contravention of clause 19 thereof, and the same action may be taken and the same consequence shall ensure, as provided in the said clause 19.

Clause 22: Work to be under direction of Engineer-in-charge

All the works, to be executed under the contract, shall be executed under the direction and subject to the approval.In all respect, of the Engineer-in-charge of the Jaipur Development Authority for the time being, who shall be entitled to direct, of what point or points and in what manner, they are to be commenced and from time to time carried on.

Clause 23: Standing committee for Settlement of disputes:

If any question, difference or objection, whatsoever shall arise in any way, in connection with or arising out of this instrument, or the meaning of operation of any part thereof, or the rights, duties or liabilities of either party then, save in so far, as the decision of any such matter, as herein before provided for, and been so decided, every such matter constituting a total claim of Rs.50000/- or above, whether its decision has been otherwise provided for an whether it has been finally decided accordingly, or whether the contract should be terminated or has been rightly terminated and as regards the rights or obligations of the parties, as the result of such termination, shall be referred for decision to the Empowered Standing Committee, which would consist of the followings:-

1. Jaipur Development Commissioner, JDA, Jaipur -Chairman
2. Director (Engineering)-II, JDA, Jaipur
3. Director (Finance), JDA, Jaipur
4. Director (Law), JDA, Jaipur
5. Superintending Engineer, JDA, Jaipur - Member Secretary

The Engineer-in-charge, on receipt of application along with nonrefundable prescribed fee, (the fee would be two percent of the amount in dispute, not exceeding Rs. one lac) from the contractor, shall refer the disputes to the committee within a period of three months from the date of receipt of application.

The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications. Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the Bid Documents. None of these documents shall be used for any purpose other than that of this contract.

Procedure and application form referring cases for settlement by the Standing Committee shall be, as given in form RPWA 90.

Clause 23 A: Contractor to indemnify for infringement of Patent or design.

Contractor shall fully indemnify the Jaipur Development Authority against any action, claim or proceeding, relating to infringement or use of any patent or design or any alleged patent or design, rights, and shall pay any royalties, which may be payable in respect of any articles or part thereof included in the contract, in the event of any, claims made under or action brought against Government. In respect of any such matters, as aforesaid, the contractor shall be immediately, noticed thereof, and the contractor shall be at liberty at his own expense, to settle any dispute or to conduct any litigation, that may arise there from provided that the contractor shall not be liable to indemnify the Jaipur Development Authority, if the infringement of the patent or design or any alleged patent, or design, right is the direct result of an order passed by the Engineer-in-charge in his behalf.

Clause 24: Imported Store articles to be obtained from Government:

The contractor shall obtain form the stores of the Engineer-in-charge, all imported store articles, which may be required for the work or any part thereof, or in making up articles required thereof, or in connection therewith, unless he has obtained permission in writing, from the Engineer-in-charge, to obtain such stores an articles from elsewhere. The value of such stores and articles, as may be supplied to the contractor by the Engineer-in-charge, will be debited to the contractor, in his account, at the rates shown in the schedule attached to the contract, and if they are not entered in the schedule, they will be debited at cost price, which for the purposes of this contract, shall include the cost of carriage and all other expenses, whatsoever, which shall have been incurred in obtaining delivery of the same at the stores aforesaid plus storage charges.

Clause 25: Lump sums in estimates:

When the estimate on which a bid is made includes lump sums, in respect of parts of the work, the contractor shall be entitled to payment in respect of the item of work involved, or the part of the work in question at the same rates, as are payable under the contract for such items or if the part of the work in question is not, in the opinion of the Engineer-in-charge capable of measurement, in Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive with regard to any sum or sums payable to him under the provisions of this clause.

Clause 26: Action where no Specification:

In case of any class of work for which there is no such specification as is mentioned in rule 1, such work shall be carried out in accordance with the detailed specification of the department and also in accordance with the instructions and requirement of the Engineer-in-charge.

Clause 27: Definition of work;

The expression "Work" or "Works" where used in these conditions, shall unless there be something either in subject or context, repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed, whether temporary or permanent, and whether original, altered, substituted or additional.

Clause 27 A: Definition of Engineer-in-charge.

The term :Engineer-in-charge" means the Executive Engineer, who shall supervise, and be in charge of the work, and who shall sign the contract on behalf of the Jaipur Development Commissioner of Jaipur Development Authority.

Clause 28:

It cannot be guaranteed that the work will be started immediately after the bids have been received. No claims for increase of rate will be entered, if the bids for starting work are delayed.

Clause 29: Payments at reduced rates on account of items of work not accepted and not completed to be at the discretion of the Engineer-in-charge.

The rates for several items of works, estimated to cost more than Rs.1000/- agreed within, will be valid only when the item concerned is accepted, as having been completed fully in accordance with the sanctioned specifications. In cases, where the items of work are not accepted, as so completed, the Engineer-in-charge may make payment on account of such items, at such reduced rates as he considers reasonable, in the preparation of final or on account bills, and his decision in the matter shall be final and binding.

Clause 29A: Payments at part rates:

The rates for several items of works may be paid at his rates provisionally in running bills in proportion to the quantum of items executed at the discretion of Engineer-in-charge. In case of item rates, if the rate quoted for certain items are very high in comparison to the average / overall bid premium, then the payment at running stages shall not be made more than the average sanctioned premium. The deferred payment, will however be released after successful completion of the work.

Clause 30: Contractor's percentage, whether applied to net or gross amount of bills:

The percentage referred to in the "Bid of Works" will be deducted / added from / to the gross amount of the bill before deducting the value of any stock issued.

Clause 31: Contractor to adhere to labour laws / regulation:

The contractor shall adhere to the requirements of the Workmen's Compensation Act and Labour Legislation in force from time to time and be responsible for and shall pay any compensation to his workmen which would be payable for injuries under the workmen Compensation Act, hereinafter called the said Act. If such compensation to his workmen which would be payable for injuries under the Workmen's Compensation Act, hereinafter called the said Act. If such compensation is paid by the State as Principal employer under sub Section (1) of section 12 of the said Act, on behalf of the contractor it shall be recoverable by the State from the Contractor under sub section (2) of the said section. Such compensation shall be recovered in the manner laid down in clause I of the conditions of contract.

Note: All Contractors with Government shall require registration of workers under the Building & other Construction Workers (Regulation of Employment & Conditions of Services) Act, 1996 and extension of benefit to such workers under the Act.

Clause 32: Withdrawal of work from the Contractor:

If the Engineer-in-charge shall at any time and for any reasons, whatsoever, including inability to maintain prorate progress, think any portion of the work should not be executed or should be withdrawn from the contractor, he may, by notice in writing to that effect require the contractor not to execute the portion of the work specified in the notice or may withdraw from the contractor for the portion of work, so specified, and the contractor shall not be entitled to any compensation, by reason of such portion of work having been withdraw from him. The Engineer-in-charge may supplement the work by engaging another agency to execute such portion of the work at the cost of the original contractor, without prejudice to his rights under Clause 2. He shall also be competent to levy compensation for delay in progress. The recovery of excess cost shall be made from next available running bill or any other claim and shall not be deferred.

Clause 33: The contractor includes clearance, leveling and dressing of site within a distance of 15 meters of the structure / building on all sides except where the building adjoins another building.

Clause 34: Project Works:

The contractor shall arrange to protect, at his own cost, in an adequate manner, all cut stone work and other work requiring protection and to maintain such protection, as long as work is in progress. He shall remove and replace this protection, as required by the Engineer-in-charge, from time to time. Any damage to the work, so protected, no matter how it may be caused, shall be made good by the contractor free of cost.

All templates, forms, moulds, centering, false works and models, which in the opinion of the Engineer-in-charge are necessary for the proper and workman like execution of the work, shall be provided by the Contractor free of cost.

Clause 35: Contractor liable for settlement of claims caused by his delays:

If the progress of the work has fallen so much in arrears as to prevent other contractors on the work, from carrying out their part of the work within the stipulated time, he will be liable for settlement of any claim, put in by any of these contractors for the expenses of keeping their labour unemployed, to the extent considered reasonable by the Engineer-in-charge.

Clause 36A: The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the Contractor.

Clause 36B:

The cost of all water connections, necessary for execution of work, and the cost of water consumed and hire charges of meters and the cost of electricity consumed in connection the execution of work, shall be paid by the Contractor except where other specifically indicated.

Clause 36C: Payment of Sales Tax and any other Taxes:

Royalty or other tax on materials, issued in the process of fulfilling contract payable to the Jaipur Development Authority under rules in force will be paid by the Contractor himself.

Clause 36D:

In respect of goods and materials procured by the Contractor for use in works under the contract, sales tax will be paid by the contractor, himself. But in respect of all such goods manufactured and supplied by the Contractor and works executed under the contract, the responsibility of payment of Sales tax would be that of the Engineer-in-charge.

Clause 37: Refund of Performance Guarantee and Security Deposit:

The performance Guarantee and / or security deposit will be refunded after the expiry of the period, as prescribed below:-

(a) In case of contracts relating to hiring of trucks and other 'T'&P' transportation including loading, unloading of materials, the amount of performance guarantee / security deposit is refundable along with the final bill.

(b) Supplies of material: As per provision of the G.F. &A.R.

(c) Ordinary repair: 3 months after completion of the work provided the final bill has been paid.

(d) Original works / special repairs / renewal works: Six months after completion except in case of works, such as building works, bridge works, cross drainage work, Dams, canals water supply and sewerage schemes (except where provided otherwise in any specified case) etc., the Performance Guarantee / Security Deposit will be refunded 6 months after completion or expiry of one full rainy season, or after expiry of defect liability period as

defined in the special condition of agreement whichever is later, provided the final bill has been paid.

(Regarding "refund of performance guarantee and security deposit").

"**In case of road, bridge and CD works (original/special, repairs/renewals). The defect Liability period shall be three years after completion of works".**

(e) In case of JDA original works/special repairs works costing more than ` 10.00 lacs, partial amount of Security Deposit will be refunded during the defect liability period @ 10% of SD amount after lapse of one year of completion and thereafter 10% of original amount of SD at the end of each subsequent year. The remaining amount of SD be refunded after the expiry of defect liability period.

Clause 38: Fair Wage Clause:

(a) The Contractor shall pay not less than fair wages / minimum wages to laborious engaged by him on the work as revised from time to time by the Jaipur Development Authority but the Jaipur Development Authority shall not be liable to pay anything extra for it except as stipulated escalation clause (clause 45) of the agreement.

Explanation: Fair wage means minimum wages for time or piece work, fixed or revised, by the State Govt. the Minimum Wages Act. 1948.

(b) The Contractor shall, notwithstanding the provisions of any contract to the country, cause to be paid fair wages to labourers indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work as if the labourers have been immediately or directly employed by him.

(c) In respect of all labourers immediately or directly employed on the work, for the purpose of the contractor's part of this agreement, the (Contractor shall comply with or cause to be complied with the Public Works Department Contractors Labour Regulations made, or that may be made by the Government, from time to time. With regard to payment of wages, wages period, deductions from wages, recovery of wages not paid, and unauthorized deductions, maintenance of wages register, wages card, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and other matters of a like nature.

(d) The Engineer-in-charge shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers, by reasons of non-fulfillment of the conditions of the contract, for the benefit of the worker or workers, non-payment of wages or of deductions made therefrom, which are not justified by the terms of the contract, or as a result of non - observance of the aforesaid regulations.

(e) Vis-à-vis the Jaipur Development Authority of Rajasthan, the Contractor shall be primarily liable for all payments to be made and for the observance of the regulations aforesaid, without prejudice to his right to claim indemnify from his sub-contractors.

(f) The regulations, aforesaid, shall be deemed to be part of this contract and any breach, thereof, shall be deemed to be breach of the contract.

Clause 39: Contractor to engage technical staff:

The contractor shall engage the technical staff as follows, on the contract works.

a) Project manager/Bridge Engineer- He should be a graduate engineer having overall experience of not less than 15 years out of which 10 years' experience should be of Bridge works. If the contractor fails to appoint such project manager, Rs. 1,00,000/- (Rupees One Lakh only) per month will be deducted.
b) Senior Site Engineer- One graduate engineer having experience of 10 years out of which 5 years experience should be of Bridge works. If the contractor fails to appoint senior site engineer, Rs. 50,000/- (Rupees Fifty Thousand) per month will be deducted.
c) Site Engineer- One graduate/diploma engineer having experience of 05 years. If the contractor fails to appoint such site engineer, Rs. 25,000/- (Rupees Twenty Five Thousand) per month will be deducted.
d) Quantity Surveyor- One diploma engineer having experience of 02 years. If the contractor fails to appoint such quantity surveyor, Rs. 20,000/- (Rupees Twenty Thousand) per month will be deducted.
e) However, in the event of non appointment of such technical personnel's, JDA may engaged such technical personnel and actual salary will be deducted in addition to the deductible amount mentioned in clause 39 (a), (b), (c) & (d). The contractor, before appointing these technical personnel will have to got the CV approved by the JDA.

The technical staff should be available at site, whenever required by Engineer-in-charge to take instructions.

Clause 39A: The contractor shall comply with the provisions of the Apprenticeship Act, 1961, and the Rules and orders issued, there-under, from time to time. If he fails to do so, his failure will be a breach of contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of said Act.

Clause 40: Safety of Works: The Contractor shall follow the safety code. The contractor shall be fully responsible for safety of works at site taking note of all the necessary provisions as per Employer's conditions of contract for Safety, Health and Environment Manual (SHE Manual) availableat Section 7,which shall be binding on the contractor. The contractor's price shall be inclusive of all the necessary costs to meet the prescribed safety standards. In the case the contractor fails in the above, the Employer may provide necessary arrangements and recover the cost from contractor.

Clause 41: Near Relatives barred from tendering: The contractor shall not be permitted to bidfor works, in same Circle,in which his near relative is posted as Accountant or as an officer in any capacity between the grades of the Superintending Engineer and Assistant Engineer (both inclusive). He shall also intimate the names of persons, who are working with him in any capacity or are subsequently employed by him and who are near relative to any gazetted officer in the organization / Department. Any breach of this condition by the contractor would render him liable to be removed from the approval list of contractors of the Department. If such facts is noticed (a) before sanction of bid, his offer shall be declared invalid and earnest money shall be forfeited, (b) after sanction of the bid then bid sanctioning authority may at his discretion forfeit his earnest money, performance guarantee, security deposit and enlistment deposit and the work / remaining work may allot to any registered contractor on the same rates as per rules.

Note : By the term 'near relative' is meant wife, husband, parents and grandparents, children and grand children, brothers and sisters, uncles and cousins and their corresponding in laws.

Clause 42: Retired Gazetted Officers barred for 2 years: No Engineer of Gazetted rank or other Gazetted officer, employed in Engineering or Administrative duties in an Engineering Department of the Jaipur Development Authority, is allowed to work as a contractor for a period of 2 years, of his retirement from Jaipur Development Authority Service without the previous permission of Jaipur Development Authority. The contract is liable to be cancelled, if either the contractor or any of his employee found, at any time, to be such a person, who had not obtained the permission from as aforesaid before submission of the bid or engagement in the contractors service as the case may be.

Clause 43: Quality Control

The Jaipur Development Authority shall have right to exercise proper quality Control measures.

Clause 43A :

The work whether fully constructed or not and all materials machinery tools and plant scaffolding temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer in charge and a certificate from him to effect obtained.

Clause 44: death of Contractor:

Without prejudice to any of the rights or remedies under the contract, if the contractor dies, the legal heirs of the contractor or the JDA or duly authorized Engineer shall have the option of terminating the contract without any compensation.

Clause 45: Price variations Clause:

If during the progress of the contract of value exceeding Rs. 50.00 lacs (accepted tendered amount minus cost of material supplied by the department)and where stipulated completion period is more than 3 months (both the conditions should be fulfilled). The price of any materials/ bitumen / diesel / petrol / cement and steel incorporated in the works (not being materials to be supplied by the department) and / or wages of labour increases or decreases, as compared to the price and / or wages prevailing at the last date of submission of bid.The amount payable to contractors for the work shall be adjusted for increase or decrease in the rates of materials (excepting those materials supplied by the department)/ labour / bitumen diesel / petrol / cement and steel.

Increase or decrease in the cost of labour / material / bitumen / cement / diesel and petrol shall be calculated and petrol shall be calculated quarterly in accordance with the following formula.

(a) Labour :

$$V_L = 0.75 \times \frac{P_L}{100} \times R\frac{(I_{L1} - I_{L.0})}{I_{L.0}}$$

V_L = Increase or decrease in the cost of work during the quarter under consideration due to change in rates for labour.

R = The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in the clause.

I_{i0} = The average consumer price index for industrial workers (whole-sale prices) for the quarter in which the last date of bid submission falls (as published in Reserve Bank of India Journal / labour Bureau Shimla, for the area).

L_{i1} = The average consumer price index for industrial workers (whole-sales-price) for the quarter of calendar year under consideration (as published in Reserve Bank of India Journal / labour Bureau Shimla, for the area).

P_L = Percent of Labour components.

Note :In case of revision of minimum wages by the Jaipur Development Authority or other competent authority, nothing extra would be payable except the price escalation permissible under this clause.

(B) Material (excluding material supplied by the department)

$$V_M = 0.75 \times \frac{P_M}{100 L_{MO}} \times R(L_{LMI} - L_{M0})$$

V_M= Increase or decrease in the cost during the quarter under consideration due to change in the rates of material.

R = The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in this clause.

L_{MO}= The average wholesale price index (all commodities) for the quarter in which last date of bid submission falls (as published in Reserve Bank of India Journal / Economic Advisor to Government of India, Ministry of Industries, for the area).

L_{M1}= The average wholesale price index (all commodities) for the quarter under consideration (as published in Reserve Bank of India Journal / Economic Adviser to Government of India. Ministry of Industries, for the area).

P_M = Percentage of material component (excluding materials supplied for the Department).

(c) Bitumen

$$V_b = 0.85 \times \frac{P_b}{100 B_O} \times R (B_1 - B_0)$$

V_b= Increase or decrease in the cost of the work during the month under consideration due to changes in the rate for bitumen.

R = The value of the work done in rupees during the quarter under consideration excluding the cost of material supplied by the department and excluding other items as mentioned in this clause.

B_o = The official retail price of bitumen at the IOC depot it nearest center on the day 28 days prior to last date of submission of Bid.

B_1= The official retail price of bitumen of IOC depot it nearest center for the 15 day of the month under consideration.

P_b= Percentage of bitumen component of the work.

(D) Petroleum

$$V_1 = 0.75 \times \frac{P_1 \times R (F_1 - F_0)}{100\ F_O}$$

V_1= Increase or decrease in the cost of work during the month under consideration due to change in the rate for fuel and lubricants.

R= The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in this clause.

F_0 = The average wholesale price index of high speed diesel (HSD) as published by the Economic Advisor to the Government of India, Ministry of Industry on the last day of submission of bid.

F_1 = The average wholesale price index HSD for the quarter under consideration as published weekly by the Economic Advisor to the Govt. of India, Ministry of Industry for the quarter under consideration.

P_1 = Percentage of fuel and lubricants component excluding fuel and lubricants supplied by the Department (Specified in the sanctioned estimate for the work).

P = Percentage of fuel and lubricants component excluding fuel and lubricants supplied by the Department (Specified in the sanctioned estimate for the work).

R = Total work done during the quarter as prescribed under this clause.

Note: For application of this clause price of HSD is chosen to indicate fuel and lubricant component.

(e) Cement

$$Vc = 0.75 \times \frac{P_c \times R(L_{C1} - L_{CO})}{100 L_{CO}}$$

Vc = Increase or decrease in the cost of the work during the quarter under consideration due to change in the rates of cement.

R = The value of the work done in rupees during the quarter under consideration excluding the cost of cement supplied by the department and excluding other items as mentioned in this clause.

L_{CO} = The average wholesale price index for the quarter in which last date of bid submission falls (as published by the Economic Adviser to Government of India, Ministry of Industries).

L_{CI} = The average wholesale price index for the quarter under consideration (as published by the Economic Adviser to Government of India, Ministry of Industries).

P_C = Percentage of cement components (excluding cement supplied by the Department).

(F) Steel

$$V_S = 0.75 \times \frac{P_c \times R (L_{S1} - L_{SO})}{100 L_{SO}}$$

Vs = Increase or decrease in the cost of the work during the quarter under consideration due to change in the rates of steel.

R = The Value of the work done in rupees during the quarter under consideration excluding the cost of steel supplied by the department and excluding other items as mentioned in this clause.

L_{SO} = The average wholesale price index for the quarter in which last date of bid submission falls (as published by the Economic Adviser to Government of India, Ministry of Industries).-For steel Rods

L_{S1}= The average wholesale price index for the quarter under consideration (as published by the Economic Adviser to Government of India, Ministry of Industries).- For steel Rods

Clause 45A: Price Variation in installation of elevators supply/installation of Centrally Air Conditioning and Central Evaporation Cooling Works.

In all cases of contracts for installation of elevators, supply/installation of Central Air Conditioning and Central Evaporation Cooling Works, the Price quoted shall be based on the Indian Electrical and Electronic Manufacturers Association (IEEMA) price variation clause based on the cost of raw materials/components and labour cost as on the date of quotation/bid and the same is deeded to be related to wholesale price index number of metal products and All India Average consumer price index number of industrial workers as specified below. In case of any variation in these index numbers the prices shall be adjustment up or down in accordance with following formula:

$$P = \frac{P_o}{100}\left\{15 + 55\,\frac{MP}{MP_o} + \frac{W_o(D)}{W_o} + 15\,\frac{W_o(I)}{W_o}\right\}$$

Where :

P = Price payable as adjusted in accordance with the price variation formula.

P_0= Price quoted/confirmed

M_{P0} = Wholesale Price Index Number for metal products as published by the office of the Economic Adviser, Ministry of Industry, Government of India, in their weekly bulleting, Revised Index Number of Wholesale Price (Base 1981-82 =100 for the week ending first Saturday of the relevant calendar month). The relevant month shall be that in which price was offered or negotiated whichever is later.

W_0 = All India Average Consumer Price Index Number for Industrial Workers (Base : 1982 = 100), as published by Labour Bureau, Ministry of Labour, Government of India, for relevant calendar Month. The relevant Month shall be that in which price was offered or negotiated whichever is later.

M_P = Wholesale Price Index Number of Metal Products as published by the office of Economic Adviser, Ministry of Industry, Government of India, in their weekly bulletin Revised index Number of wholesale price (Base : 1981-82 = 100). The applicable wholesale Price Index Number for Metal Products as pre-availing on 1st Saturday of the Month covering the date FOUR months price to the date of delivery and would be as published by IEEMA.

$W_{O(1)}$ = All India Average Consumer Price Index Number for Industrial workers (Base : 1982 = 100) as published by Labour Bureau, Ministry of Labour, Government of India. The applicable All India Consumer Price Index Number of Industrial workers prevailing for the FOUR months prior to the date of completion of installation/Progress parts of installation and would be as published by IEEMA. The date of delivery shall be the date

on which the manufactured material is actually supplied at site. The data of completion of installation (or progress part of installation shall be the date on which the work is notified as being completed and is available for inspection/duly tested). In the absence of such notification, the date of completion is not intimated, such completion shall be considered by the Engineer-in-charge which shall be final.

Note-1 The wholesale price index number for metal products is published weekly by the office of the Economic Adviser, but if there are any changes, the same are incorporated in the issue appearing in the following week. For the purpose of this price variation clause, the final index figures shall apply.

Note- 2 The sole purpose of the above stipulation is to arrive at the entire contract under the various situations. The above stipulation does not indicate any intentions to sell materials under this contact as movables.

Note- 3 The indices MP & Work are regularly published by IEEMA in monthly basic price circulars based on information bulletins from the authorities mentioned. These will be used for determining price variation and only IEEMA circulars will be shown as evidence, if required.

GENERAL CONDITIONS FOR ADMISSIBILITY OF ESCALATION

1. The exact percentage of labour/material (excluding materials to be supplied by the department /battements/diesel and petrol compensate and labour component for the work shall be approved by the authority while sanctioning the detailed estimates.

2. The breakup of components of labour/materials (excluding materials to be supplied by the department) bitumen/diesel and petrol as indicated in clause 45 have been pre-determined as bellows:

(a)	**Labour**	**-**	**%**
(b)	**Other Material**	**-**	**%**
(c)	**Bitumen**	**-**	**%**
(d)	**POL-P**	**-**	**%**
(e)	**Cement**	**-**	**%**
(f)	**Steel**	**-**	**%**
	Total	**-**	**100.00%**

3. While allowing price escalation the following shall be deducted from the value of the of work done ® (a) cost of material supplied by the department (b) cost of services rendered as per clause 34 (c) of secured Advance/any advance added earlier but deducted agreed rates. Now after work is measured (d) cost of extra items, the rates for which have been worked out based on market rates/ mutually agreed rates.

4. The first statement escalation shall be prepared at the end of three months in which the work was awarded and the work done from the date of start to the end of this period shall be taken into account. For subsequent statement cost of work done during every quarter shall be taken into account. At the completion of work the work done during the last quarter of fraction there of shall be taken into account.

5. For the purpose of reckoning the work done during any period the bills prepared during the period shall be considered. The dates of recording measurements in the Measurement book by the Assistant Engineer shall be the guiding factor to decide the bills relevant to any period.The date of completion as finally recorded by the competent authority in the measurement Book shall be the criterion.

6. The index relevant to any quarter for which such compensation is paid shall be the arithmetical average of the indices relevant of the calendar month.

7. Price adjustment clause shall be applicable only the work that is carried out with the stipulated time or extension thereof as are not attributable to the contractor.

8. If during the progress in respect of contract works stipulated to cost Rs. 50 lac or less the value of work actually done excluding cost of Material supplied by the Department exceeds Rs. 50 lac and completion period is more than 3 months then escalation would be payable only in respect of value of work in excess over Rs. 50 lac from the date of satisfying both the conditions.

9. Where originally stipulated period is 3 months or less but actual period of extension exceeds beyond 3 months on account of reasons not attributable to contractor escalation amount would be payable only in respect of extended period if amount of work is more than Rs. 50 lac.

10. In case the contractor does not make prorate progress in the first or another time span and the short fall in progress is covered up by him during subsequent time span within original stipulated period then the price escalation of such work expected to be done in the previous time span shall be notionally given based upon the price index of that quarter in which such work was required to be done.

11. No claims for price adjustment other than those provided herein shall be entertained.

12. If the period of completion including extended period attributable to Jaipur Development Authority exceeds twelve months but cost does not exceeds more than Rs. 50 lacs no escalation is admissible.

13. Similarly if cost of works increases more than Rs. 50 lac but completion period including extended period attributable to Jaipur Development Authority is less than 3 months no escalation is admissible.

14. No provisional escalation is payable on the basis of indices of the previous quarter in absence of non pub location of indices in concede quarter by the RBI.

15. Escalation is always payable quarterly and no provisional escalation is payable monthly or fortnightly.

16. In case at the time of executing agreement both the conditions (completion period 3 months and amount of work Rs. 50 lac for admissibility of price escalation are not fulfilled and subsequently due to additional work and extension of time attributable to Jaipur Development Authority both the conditions become fulfilled in that case the escalation shall be payable from the date of satisfying both the conditions and only for work done beyond Rs. 50 lacs and in period of work beyond 3 months.

17. The contractor shall for the purpose of this conditions keep such books of account and other documents as are necessary to show the amount of any increase climbed or

reduction available and shall allow inspection of the same by a duly authorized representative of Jaipur Development Authority and further shall at the request of the Engineer in charge furnish verified in such a manner as the Engineer in charge may require any documents so kept and such other information as the Engineer in charge may require.

Clause 46 Force Majeure:

Neither party shall be liable to each other for any loss or damage occasioned by or arising out of acts of God such as unprecedented floods volcanic eruptions earthquake or other invasion of nature and other acts.

Clause 47: General discrepancies and errors:

In case of percentage rate bids if there is any typographical or clerical error in the rates shown by the Department in the "G" schedule the rates as given in the basic schedule of Rates of the Department of the area shall be taken as correct.

Clause 48: Post payment audit & technical examination:

The Jaipur Development Authority shall have right to cause an audit and technical examination of the works, and the final bills of the contractor, including all supporting vouches, abstracts etc., to be made within 2 years after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been over paid in respect of any work done by the contractor under the contract or any work claimed by him to have been done by him under the contract and found not to have been executed below specifications, the contractor shall be liable to refund the amount of over payment and it shall be lawful for Department in recover the same from him in the manner prescribed in clause 50 or in any other manner legally permissible and if it is found that the contract was paid less than what due to him under the contract in respect of any work executed by him under it the amount of such under payment shall be duly paid by the Jaipur Development Authority to the contractor.

Clause 48A: Pre check or post check of Bills:

The Jaipur Development Authority shall have right to provide a system of pre-check of contractor bills by specified organization and payment by an Engineer or an accounts officer/Sr. Accounts Officer/Chief Accounts Officer/ Financial advisor as the Jaipur Development Authority may in its absolute discretion prescribe any overpayments/excess payments detected as a result of such pre-check or post check of contractor's bills can be recovered from the contractor's bills in the manner herein before provided and the contractor will refund such over/excess payments.

Clause 48 B: Check Measurements:

The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders (about which the decision of the department shall be final) checking of measurement by superior officer shall supersede measurements by the subordinate officer and the former will become the basis of the payment.Any over/excess payment detected as a result of such check measurement or otherwise at any stage upto the date completion and the defect removal period specified elsewhere in this contract shall be recoverable from the contractor as any other dues payable to the government.

Clause 49: Dismantled Materials:

The Contractor in course of the work should understand that all materials e.g. bricks still and other obtainable in the work by dismantling etc. will be considered as the property of the Jaipur Development Authority and will be disposed off to the best advantage of the Jaipur Development Authority as per directions of the Engineer in-charge.

Clause 50: Recovery from contractors:

Whenever any claim against the contractor for the payment of a sum of money arises out of or under the contract the Department shall be entitled to recover such sum by appropriating in part or whole of the performance guarantee and/or security deposit.Security Deposit at the time of enlistment of the contractor. In the event of the security being insufficient or if no security has been taken then the balance or the total sum recoverable, as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to the contractor, under this or any other contract with the Jaipur Development Commissioner of Jaipur Development Authority of Rajasthan should this sum be not sufficient to cover the full amount recoverable the contractor shall pay to the department on demand the balance remaining dues.

The department shall further have the right to affect such recoveries under public Demands recovery Act.

Clause 51: Jurisdiction Court:

In the event of any dispute arising between the parties hereto in respect of any of the matters comprised in this agreement the same shall be settled by a competent court having jurisdiction over the place where agreement is executed and by no other court after completion of proceeding under clause 23 of this contract.

Schedule of Material to be supplied by the Department if available

(Referred is in Clause 10)

S.No.	**Particulars**	**Quantity**	**Rates**		**Place of Delivery**
			Unit	Rupees	
1	NIL	NIL		NIL	

Schedule of Machinery /T&P to be supplied by the Department:

The following Machinery/ T & P shall be supplied by the Department if available to the contractor on hire as per rules of the Department for supply for machinery /T& P to the contractors on hire charges (Referred to in Clause 10 C)

S.No.	**Item**	**Rate (Rs.)**	**Place of Delivery Return**
1	**NIL**	**NIL**	

Progress Statements referred to in clause 2 of conditions of contract.

Name of work	**Date from which the work should be commenced**	**Date by which the work should be completed**	**Monthly rate of progress**
1	**2**	**3**	**4**

The contractor has been informed that his bid has been accepted.

Dated …….Signature Dated……..Signature of Contractor

Notes: For Filling in the Progress Statement Form

1. Columns 2, 3 and 4 must be initialed and dated by the contractor.
2. Column 4 must be initialed and dated by the JDA or other duly authorized Engineer also.
3. The date in column 2 correspond to the date on which the order to commence work is given to the contractor read with clause 2 of the conditions of contract.
4. The date in column 3 must correspond to the period stated in sub clause (e) of the Memorandum below bid for works:
5. Column 4 this will ordinarily be worked out proportionately thus for example if ` 240000/- is the cost of whole or portion of work bided for and six months period of completion then the monthly rate of progress should be Rs. 4000. If necessary quantities may also be specified in this column at the discretion of the JDA.
6. The certificate as to intimation of acceptance of bid printed at the foot of the form must be signed and dated both by the Director (Engineering)-II or other duly authorized Engineer and the contractor.

ANNEXURE TO APPENDIX XI
RAJASTHAN PUBLIC WORKS DEPARTMENT CONTRACTORS LABOUR REGULATIONS

1. **Short Title**: These Regulations may be called "The Rajasthan Public Works Department Contractor's-Labour Regulations."

2. **Definition** : In these Regulations unless otherwise expressed or indicated, the following works and expressions shall have the meaning hereby assigned to them respectively, that is to say -**(i) "Labour"** means works employed by a Rajasthan P.W. Department contractor directly or indirectly through a sub-contractor or other person by an agent on his behalf.

   (ii) **"Fair Wage"** means minimum wages for time or piece work fixed or revised by the State Government under the Minimum Wages Act, 1948.

   (iii) **"Contractor"** shall include every person whether sub-contractor or headman or Agent employing labour on the work taken on contract.

   (iv) **"Wages"** shall have the same meaning as defined in the Payment of Wages Act and includes time and piece, rate wages.

3. **Display of Notice regarding wages etc.**: The contractor shall (a) before he commences his work on contract, display and inconspicuous place on the work notices in English and the correctly maintain in Hindi by the majority of the workers giving the rate of wages which have been certified by the Executive, Engineer, the Superintending Engineer, the Chief Engineer or Labour Commissioner as fair wages and the hours of works for which such wages are earned, and (b) such a copy of such notices to the Certifying Officers.

4. **Payment of Wages :**

   (i) Wages due to every worker shall be paid to him direct.

   (ii) All wages shall be paid in current coin or currency or in both.

5. **Fixation of wage periods** :

(i) The contractor shall fix the wage periods in respect of which the wages shall be payable.

(ii) No wage period shall exceed one month.

(iii) Wages of every workman employed on the contract shall be paid before the expiry of ten days after the last day of the wage period in respect of which the wages are payable.

(iv) When the employment of any worker is terminated by or on behalf or the contractor, the wages earned by him shall be paid before the expiry of the day succeeding the one on which his employment is terminated.

(v) All payments of the wages shall be made on a working day except when the work is completed before the expiry of the wage period, in which case, final payments shall be made within 48 hours of the last working day.

Note: The term "working day" means a day on which labour is employed in progress.

6. **Wage Book and Wage Slips etc.**

(i) The contractor shall maintain a Wage Book of each worker in such form as may be convenient but the same shall include the following particulars :-

(a) Rate of daily or monthly wages.

(b) Nature of work on which employed.

(c) Total number of days worked during each wage period.

(d) Total amount payable for the work during each wage period.

(e) All deductions made from the wages with an indication in each case of the ground for which the deduction in made.

(f) Wages actually paid for each wage period.

(ii) The contractor shall also maintain a wage slip for each worker employed on the work.

(iii) The Executive Engineer may grant an exemption from the maintenance of the wage books and wages slips to a contractor who, in his opinion, may not directly or indirectly employ more than 50 persons on the work.

7. Fines and deductions which may be made from wages:

(i) The wages of a worker shall be paid to him without any deductions of any kind except those authorized, namely the following:

(a) Fines

(b) Deductions for absence from duty i.e. from the place or places where, by the terms of his employment, he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.

(c) Deductions for damages to or loss of goods expressly entrusted to the employed person for custody or for loss or any other deductions of money, which he is required to account where such damages or losses are directly attributable to his neglect or default.

(i) The Rajasthan Government may, from time to time, allow deductions other than those specified in clause I above.

(ii) No fines shall be imposed on a worker and on deduction for damage or loss shall be made until worker has been given an opportunity or showing cause against each fine or deductions.

(i) The total amount of fines, which may be imposed in any one wage period on a worker, shall not exceed an amount equal to three paise in rupee of the wage payable to him in respect of that wage period.

(ii) No fine imposed on any worker shall be recovered from him by installments or after expiry of 60 days from the date on which it was imposed.

8. **Register of fines etc.**: The contractor shall maintain a register of fines and of all deductions for damage or loss. Such register shall mention the reasons for which fine was imposed of deduction for damage or loss was made. The Contractor shall maintain both in English and local Indian Language a list approved by the labour Commissioner clearly stating the acts and omission for which penalty or fine may be imposed on a workman and display it in a good condition in conspicuous place on the work.

9. **Preservation of Register**: The wage register, the wage card and the register of fines deduction required to be maintained under these regulations, shall be preserved for 12 months after the date or the 1st entry made in them.

10. **Powers of Labour Welfare Officer to make investigation of enquiry**: The Labour Welfare Officer or any other person, authorized by the State Government on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the fair wage clauses and provisions of the regulations. He shall investigate into any complaint regarding default made by the Contractor of Sub-Contractor in regard to such provisions.

11. **Report of Labour Welfare Officer**: The Labour Welfare Officer or other person, authorized as a aforesaid, shall submit a report of the result of his investigation or enquiry to the Executive Engineer concerned indicating the extent, if any to which the defaults has been committed with a note that necessary deductions from the contractors bill be made and the wage and other dues be paid to the labour concerned in case an appeal is made by contractor under clause 12 of these regulations, actual payment to Labours will be made by the Executive Engineer after the Labour Commissioner had give decision on such appeal.

12. **Appeal against the decision of labour Welfare Officers**: Any person aggrieved by the decision and recommendation of the Labour Officer or other persons, so authorised, and may appeal against. Such decision to the Labour Commissioner within 30 days from the date do decision forwarding simultaneously a copy of his appeal to Executive Engineer

concerned but subject to such appeal the decision of the Officer shall be final and binding upon the contractor.

12-A. No Party shall be allowed to be represented by a lawyer during any investigation enquiry appeal or any other proceedings

13. **Inspection of Wage Books and Slips**: The contractor shall allow inspection of the wage books and wage slips and register of fines and deductions to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Welfare Officer or any other person authorized by the State Government on his behalf.

14. **Submission of Returns**: The contractor shall submit periodical returns as may be specified from time to time.

15. **Amendments**: The Jaipur Development Authority may from time to time add to or amend these regulations and on any questions as to the application interpretation effect of these regulations the decision of the Labour commissioner to the Jaipur Development Authority or any other person authorized by the State Jaipur Development Authority in that behalf shall be final. Progress Statement referred to in Clause 3 of Conditions of Contract.

Name of works	**Date from which the work should be commenced**	**Date by which the work should be completed**	**Monthly rate of progress**
1	**2**	**3**	**4**

The contractor has been informed that this bid has been accepted.

Date : **Date:**

Sig.Engineer in charge **Sig.Contractor**

NOTES FOR FILLING IN THE PROGRESS STATEMENT FROM THE LAST PAGE

1. Columns 2,3 and 4 must be signed and dated by the contractor,
2. Column 4 must be signed and dated by the Director (Engineering) or other duly authorized Engineer also.
3. The date in column 2 should correspond to the date on which the order to commence works is given to the contractor specified in line 3 clause 2 page 3 of the conditions or contract.
4. The date in column 3 must correspond to the period stated in clause (f) page 2 of the bid.
5. Column 4. This will ordinarily be worked out proportionately thus ,for example, if 240000/- is the cost of the whole or portion of work bided for and six months period of completion then the monthly rate of progress should be Rs. 4000. If necessary, quantities may also be specified in this column at the discretion of the JDA.
6. The certificate as to intimation acceptance of bid printed at the foot of the form must be signed and dated both by the JDA or other duly authorized Engineer and the Contractor.

SCHEDULE OF FAIR WAGE TO BE GIVEN BY EXECUTIVE ENGINEER LIST OF ACTS AND COMMISSION FOR WHICH FINE CAN BE IMPOSED

(1) Without insubordination or disobediences whether alone or combination with another.

(2) The fraud or dishonesty in connection with the contractors business or property of the Rajasthan P.W.D. / JDA.

(3) Taking or giving bribes or any illegal gratification

(4) Labour late attendance

(5) Drunkenness fighting not or disorderly or indecent behavior

(6) Habitual negligence

(7) Smoking near or around the area where combustible or other materials are stocked

(8) Habitual indiscipline

(9) Causing damage work in progress or to property of the Rajasthan P.W.D./ JDA or the contractor

(10) Sleeping on duty

(11) Malingering or sowing down work.

(12) Giving of information regarding name age father's name

(13) Habitual loss of wage cards supplied by the employers

(14) Un-authorizeduse of employer's property or manufacturing or making of unauthorized articles at the work place.

(15)Bad workmanship in construction and maintenance by skilled workers is not approved by the department and for which contractors are compelled to undertake rectification.

(16) Making false complains and/or misleading statement

(17) Engaging in trade within the premises of the establishment

(18) Any delinquency of business affairs of the employers

(19) Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer.

(20) Holding meeting inside the premises without previous sanction have the employer

(21) Threatening or intimidating any workman or employee during the working hours within the premises.

(Signature of contractor) (Signature of Engineer)

STATEMENT OF PAYMENT &RECOVERIES TO BE ATTACHED WITH THE AGREEMENT OF WORKS

			Recoveries									Net Amt.	C.B.Vr. No. & Date	Date rates of	
S.No.	Gross amt. of Bill	Progressive total amt. of Bills	Materials T&P	Quantity Hours	Amount	S.D.	Income tax deduction	Sales Tax	Royalty	Other Recoveries	Total Recoveries			D.A.O	E.E.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Signature of Bidder

SECTION – 3

(OTHER CONDITIONS OF CONTRACT)

SECTION - 3

OTHER CONDITIONS OF CONTRACT

3.1 GENERAL

3.1.1 THESE OTHER CONDITIONS OF CONTRACT' (OCC) SHALL BE APPLICABLE TO THIS BID IN AMPLIFICATION/MODIFICATION OF THE 'GENERAL CONDITIONS OF CONTRACT'(GCC).

3.1.2 In case any clause provided in GCC is modified/amplified in OCC, then provision in OCC will be binding and will prevail over the corresponding provisions in GCC.

3.1.3 The Contractor shall carry out the Works based on the following:

(i) Rajasthan PWD Standard Specifications (Civil works)

(ii) MORT&H/IRC Specifications (latest revision) wherever applicable

(iii) Indian Electric Rules 1956, Indian Electric Act 1910 and Rajasthan PWD specifications for electrical works or as specified in this document as directed by employer/engineer.

Any item not covered by the aforementioned documents shall be covered by CPWD specifications.

The attention of the contractor is drawn to those clauses of codes, which require supporting specification either by the engineer or by mutual agreement between the Contractor and Employer. In such cases, it is the responsibility of the Contractor to seek clarification on any uncertainty and obtain prior approval of the Engineer before taking up the supply/construction. In absence of such prior clarification, the Engineer's choice/design will be final and binding on the Contractor without involving separately any additional payment.

The latest edition of all Specifications / Standards till 30 (Thirty) days before the final date of submission of the bid, shall be adopted.

3.2 SCOPE OF WORK AND DEVIATIONS

3.2.1 Scope of work would be as specified under Instructions to Bidders (Section- 1 of Bid Documents).

3.2.2 The Contractor is not to vary or deviate from the drawings/specifications/stipulations as submitted by contractor and finally approved by Jaipur Development Authority(JDA) for execution, conditions of bid documents or instructions to execute work of any kind, whatsoever, unless so authorized by the Engineer-in-charge (E.I.C.) in writing. If, compliance with the E.I.C's aforesaid order involves extra work and/or expense beyond that is involved in the execution of the contract work, then unless the same were issued in consequence of some breach of this contract on part of the Contractor(s), the latter

shall be entitled to be paid the price of the said work to be valued as provided in 'GCC'.

3.2.3 The several documents forming the contract are to be taken as mutually explanatory to one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to the measured ones.

3.2.4 The right to carry out the work either in conformity with or in a manner entirely different from the terms of these Bid Documents that may be considered the most suitable before or subsequent to the receipt of bids due to exigencies of work is reserved with the EIC.

3.2.5 It shall be the responsibility of the Contractor to promptly bring to the notice of E.I.C. any error or discrepancy in the Contract Documents and obtain his orders thereon. Only stated dimensions are to be taken and not those obtained by scaling drawings. In case any feature of the work is not fully described and set forth in the drawings and specifications, the Contractor shall forthwith apply to the EIC for further instructions, drawings and specifications.

3.2.6 In case of errors, omission and/or disagreement between written and scaled dimension in the drawings and between the drawings and specifications, the following principles shall be followed.

a) As between the written description or written dimension in the drawing and the corresponding one in the specification, the former shall apply.

b) The drawing on a large scale shall take precedence over that on a smaller scale, and

c) Drawing approved as construction drawing from time to time shall supersede corresponding drawing previously approved.

3.3 RATES AND OTHER FINANCIAL CONDITIONS

3.3.1 The rate quoted in the bid must be for the finished work as per the drawings and specifications and unless clearly specified otherwise, shall be inclusive of all expenses for the proper and entire completion of work and shall be inclusive of all labour, material and other inputs, taxes, duties and levies including GST,sales tax, municipal taxes, local taxes, octroi, all royalties, patent rights, other incidental charges etc. The rate offered shall be final and no claim whatsoever on any account shall be entertained.

3.3.2 Sales Tax Clearance Certificate-Deleted

Reffer clause No- 2-a-iii ofspecial condition of the contract for pre-qualificationof contractors.

3.3.3 Insurance

3.3.3.1 Requirements

Before commencing execution of works, it shall be mandatory for the contractor to obtain at his own cost insurance cover to meet the cost of compensation to be paid by the contractor for any accidents/incidents pertaining to J.D.A staff, site execution staff, labour, materials, plant and third party damages etc., under the following requirements:

a. Contractor's all risk and Third Party Cover.

b. Liability under the Workmen's Compensation Act, 1923, Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act 1970.

c. Accidents to staff, Engineer, Supervisors and others who are not governed by Workmen's Compensation Act.

d. Damage to Material, Machinery and works due to fire, theft etc.

e. Any other risk may be specified in the Special Conditions of Contract.

3.3.3.2 Insurance policy in joint names of Contractor and Employer

The policy referred to under sub-clause 3.3.3.1 above shall be obtained in the joint names of the contractor and the employer and shall inter-alia provide coverage against the following, arising out or in connection with execution of works, their maintenance and performance of the contract.

- Loss of life or injury involving public, employee of the contractor, or that of Employer or Engineer, labour etc.
- Injury, loss or damages to works or property belonging to public, Government Bodies, Local Authorities, utility organizations, contractors, employers or others etc.

3.3.3.3 Currency of Insurance Policy

The policies shall remain in force throughout the period of execution of the works and till the expiry of the maintenance period. The contractor shall, submit to the Engineer or his representative the copies of various insurance policies obtained by him as also the rates of premium and the receipts for premium paid by him to ensure that the policies indeed continue to be in force.

3.3.3.4 Deduction of Income Tax (TDS)

Deduction towards income tax and any other tax shall be made at source from each on account bill by the employer as per rules of Central Govt./ State Govt.

3.3.4 Release of Security Deposit

Release of Security Deposit shall be affected as follows:

The Security Deposit amount shall become due and shall be paid to the contractor after expiry of Defect Liability Period of work as per the special condition of contract regarding defect liability period (DLP) except bearing, expansion Joint, and R.E. wall. The security deposit of Rs-10.00 Lakh shall be withheld against the amount for bearing, expansion Joint, and R.E. wall and shall remain valid throughout the respective maintenance period, however the bidder should also submit a written guarantee for minimum 10 year for expansion joint and bearing.

Provided always that, no 'Security Deposit' amount shall become due nor payable to the contractor unless all the stipulations of the contract have been fulfilled by the contractor and all claims and demands made by the employer for and in respect of damage or loss by, from or in consequence of the works have been finally satisfied.

3.4 SETTING OUT

3.4.1 The Contractor(s) is/are to set out the whole of the work in conjunction with an officer to be deputed by the EIC and during the progress of the work to amend on the requisition of the EIC any errors which may arise therein and provide all the necessary labour materials and equipments for so doing. The contractor(s) is/are to provide all tools, plant, machinery, labour and materials (with the exceptions noted in the relevant clauses for issue of departmental materials as per schedule attached) which may be necessary and required for the work. All materials and workmanship shall conform to the relevant specifications mentioned in the bid documents.

3.5 SITE AND CONTRACTOR'S OFFICE

3.5.1 The Contractor shall set up an office in Jaipur in case he does not have one already, for planning and co-ordination of the present bid/contract. He shall furnish to the Employer postal address of the same.

3.5.1.1 The Contractor shall also have anoffice at site and shall furnish to the Employer/E.I.C. the postal address of his site office.

3.5.1.2 The contractor shall provide and maintain at the work site, an air conditioned site office for Employer's engineering staff, of floor area not less than 35 Sq M with two rooms of adequate size reasonably furnished withfurniture, computer with operating system software and latest(authenticated)working software like Auto Cad, Primavera / MS project MS word, MS Excel, etc, and colouredmulti-functional printer (MFP) A-3size printer. The site office shall also be equipped with broadband connection (speed not less than 2.0 mbps), with attached toilet and watch and ward and one attendant. The contractor shall also arrange all necessary IRC codes, IS codes MoRTH Specifications and other technical literature, etc as directed by EIC of latest version in soft copies as well as hard copiesin the site office. The contractor shall bear the monthly cost of electricity, water consumption, broadband, stationary and other consumables of the site office. Nothing extra shall be payable on this account and the bided cost of

contract shall be deemed to include in the cost for the main works. In case of non-satisfaction of the services being provided or maintained a maximum deduction of Rs. 25,000.00 per month will be made by the EIC.

3.5.1.3 Any notice or instructions to be given to the Contractor under the terms of the contract shall be deemed to have been served on him if it has been delivered to his authorized agent or representative at site, or if it has been sent by registered post to the site office or to the address of the firm last provided by the Contractor.

3.5.1.4 a) The Bidder should have integrate Network Operating Centre (NOC) at JDA, Control Room at Yadgar and Abhay Command Centre. No extra payment shall be made for this work.

b) The bidder should have to integrate the PA & BGM system to JDA Network Operating Centre (NOC). No extra payment shall be made for this work.

3.5.1.5 The contractor shall provide and maintain, hard top passenger jeeps e.g. Mahindra Bolero or equivalent make for Employer's engineering staff for project related travelling in Jaipur in accordance with Clause 124 of MoRTH Specifications, IV Revision. At least one such vehicle shall be provided at all times day and night as required by the Engineer-in-charge and/or their staff.Nothing extra shall be paid for such provision of vehicle

3.5.2 Use and Care of Site

3.5.2.1 The Contractor shall not demolish, remove or alter structure or other facilities on the site without prior approval of the EIC.

3.5.2.2All garbage shall be burnt or removed from the site as it accumulates. All surface and sub soil drains shall be maintained in clean, sound and satisfactory state of performance.

3.5.3 Materials, tools and plants.

3.5.3.1 The Contractor shall supply at his own cost all materials, plants, tools, appliances, implements, ladders, tackle, scaffolding and temporary works or any other item required for the proper execution of the work, whether original, altered or substituted and whether included in the specification or other documents forming part of the contract referred to in these conditions or not, which may be necessary for the purpose of satisfying or complying with the requirements of the EIC to any matter as to which under these conditions he is entitled to be satisfied or which he is entitled to require together with carriage thereof to and from the work. Materials so supplied shall have the approval of EIC before being used on the works. All the rejected materials shall be removed at once from the site of work at the Contractor's own cost.

3.5.4 Storage of Materials

3.5.4.1 Materials required for the work whether purchased by the contractor or supplied by the Employer shall be stored by the Contractor only at places, in standard profiles and in the manner approved by the EIC. The Contractor

shall construct suitable godowns at the site of work for safety against damage due to sun, rain, dampness, fire, theft etc. Storage of cement at site of work shall be at Contractor's expense and risk. In the event of any damage occurring to cement due to faulty storage in Contractor's sheds, or on account of negligence on his part, such damage shall be the liability of the Contractor.

3.5.4.2 Safety of materials

Storage and safe custody of materials shall be the responsibility of the Contractor. He shall employ necessary watch and ward establishment for that purpose and no extra claim whatsoever shall be entertained on this account.

3.5.5 Supply of water and electric power

3.5.5.1 The contractor shall have to make his own arrangement for water supply and electric power necessary for the work. Any recommendatory letters to the concerned department shall be issued by the JDA for this purpose if requested by the contractor. However, JDA shall not be responsible for any delay in getting the required supply and no claim on this account will be acceptable by JDA.

3.5.5.2 Electric supply, charges and precautions

The electric connections shall be obtained by the contractor for use for the work under the contract subject to the following conditions:-

a) The charges pertaining to electric supply including installation of temporary connection including the cost of making electric sub-station if needed, laying cables wherever necessary upto the meter from the relevant electricity supply authority pole and from meter upto actual consumption point and the cost of electricity shall be borne by the Contractor. The Contractor shall also bear the entire cost of connection charges in case electric connection is discontinued by the electric supply authority.

b) It will be the responsibility of the Contractor to make necessary arrangements for the illumination to be provided on the main road in the work area. The Contractor shall make his own arrangement for any further requirements in respect of illumination at site of work. No claim whatsoever on this ground shall be entertained and the Contractor shall bear the full expenses in respect of the same.

c) The Contractor shall at all times observe the Indian Electricity Rules and any other rules/bye laws applicable at the time and any damage/penalty on account of violation of any of the rules/bye laws shall be responsibility of the Contractor.

d) The Employer shall in no way be responsible for any delay in getting the electric connection and no claim on this account whatsoever, shall be entertained. It should be clearly understood that the Contractor has to

make his own arrangement for use before the electric connection is made available and also to be used as a stand-by arrangement in case of power failure etc. or in the case of disconnection of electric supply by electric supply authority for any reason.

e) It shall be mandatory for contractor to provide safety light during night for safe movement of traffic and provide follow safety instruction provided in IRC code for safety in construction zone.

3.6 ACCESS ROADS AND HAUL ROADS

3.6.1 Existing public roads may be used by the Contractor to carry out construction activities with prior approval of the competent authority. The Contractor shall pay all statutory vehicle licenses and permit fees for the use of public roads.

3.6.2 The Contractor shall indemnify the Employer against all claims for damage to any road or bridge caused by movement of his traffic, including such claims as may be made directly against the Employer and shall negotiate and pay all claims arising out of such damage.

3.6.3 No extra payment will be made for construction and maintenance of any temporary haul roads including any special protection or strengthening required and all cost of such works shall be deemed to have been included in the cost quoted by the Contractor.

3.7.1 SAFETY, LIGHTING AND FIRE PREVENTION

Safety of Workers

3.7.1 The Safety Code annexed to the General Conditions of Contract supplemented by the other instructions by the EIC and Conditions of Contract for Safety, Health and Environment (SHE) as per Section7, shall be strictly followed. All the safety procedures as per law of the land shall be binding on the Contractor.

3.7.2 Over and above the provisions made in Safety Code included in GCC and Conditions of Contract for Safety, Health and Environment (SHE), the following will also be applicable.

3.7.3 In respect of all workmen directly employed on the work for the performance of the Contractor's part of this agreement, the Contractor shall at his expense arrange for the safety provisions as per Indian Standard Safety Codes given below and shall at his own expense provide for all facilities in connection therewith. In case the Contractor fails to make arrangements, and provide necessary facilities as aforesaid, he shall be liable to pay penalty prescribed under relevant clauses of these bid documents for each default and in addition the EIC shall be at liberty to make arrangement and provide facilities as aforesaid and recover the cost incurred on that account from the contractor and no claims whatsoever shall be entertained.

1. IS 3696 (Part I); Safety Code for Scaffolds and Ladders.
2. IS 3696 (Part II); Safety Code for Scaffolds and Ladders Part II.

3. IS 3764, Safety Code for excavation work.
4. IS 4081 , Safety Code for blasting and drilling operations
5. IS 4138, Safety Code for working in compressed air.
6. IS 5121; Safety Code for piling and other deep foundations.
7. IS 5121, Safety Code construction involving use of hot bituminous materials.
8. IS 7293, Safety Code for working with construction machinery.
9. IS 7969, Safety Code for storage and handling of building materials.
10. IRC safety code for construction zone IRC(SP) 55 2001
11. Any other code and/or as per directions of EIC.

12. The contractor shall be responsible for providing following services/ measures for which no extra payment shall be made as per directions of Engineer In charge.

(a) The contractor shall take all necessary precautions for excavation of required depth up to 6.0 m for construction and simultaneously to maintain the service road carriageway uninterrupted for all direction traffic throughout construction period. He should also give his methodology of carrying out the construction, list of equipment and procedure to be followed without delaying the project. The methodology shall only be adopted after approval from Engineer In charge. The contractor should cover all the expenses due to methodology adopted and construction difficulties in the quoted rates.

(b) Contractor has to divert and manage traffic by deploying marshals with reflective shirts, torch/reflective sticks. In the absence of marshals JDA shall deploy the marshals at market rate and recovery from the contractor will be done at double the rate paid from his running payments. The open excavation shall be done taking proper care for land sliding as per IS Code 3764 and other. Slope shall be limited to space available at site at least 2 lanes should be available for either side traffic such arrangement as approved by Engineer In charge shall be done by contractor at his own cost.

(c) In case of any lapse , if found in barricading the site of work then, agency will be liable for penalty @ Rs. 5000/-per day (Rs. Five Thousand per day) till the rectification of the same as per directions of Engineer In charge in construction area. The contractor shall enclose the area completely. The steel plates should have the Name of Agency, Name of Client and "Construction in Progress" duly written as approved by Engineer In charge.

(d) The contractor shall construct and maintain the 2 lane diversion road with bituminous surface road for bridge work for smooth movement of all traffic during construction period. No cost will be payable for this diversion work.

(e)The contractor shall be responsible for immediately removing the accident vehicle/ material by mobile crane for least hindrance to the traffic in

construction area and to arrange the ambulance as per requirement immediately.

(f) The contractor shall take all necessary measures for the safety of traffic and the workers during construction and provide, erect and maintain such barricades including signs, markings, flags, lights and flagmen as necessary, all around the excavation/construction area and at such intermediate points, as directed by the EIC including the proper identification of the construction areas. He shall be responsible for all damages and accidents on account of construction and other relevant activities. Nothing extra shall be paid on account of above.

The temporary warning signs/lamps shall be installed at all barricades during the hours of darkness and kept lit there at all times during these hours and nothing shall be paid extra on this account. However, traffic police signals shall not be the responsibility of the contractor.

(g)The contractor will be responsible for following all the norms, instructions mentioned in Safety Codes of IS/ BS or other for every construction activity, heavy machines including operator and technical staff. In case of any casualty JDA will not be responsible for negligence of contractor. He will appoint safety induction officer having minimum qualification, Diploma in such field with minimum 5 years experience in similar nature of works.

(h)Nothing extra will be paid on account of Dewatering.

3.7.4 a. NIGHT WORK

i. For completing the work in time, the Contractor might be required to work in two or more shifts (including night work) and no claim whatsoever shall be entertained onthis account, notwithstanding the fact that the Contractor will have to pay to thelabor and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and/or extraamounts for any other reason.

ii. Night working shall be resorted to only with prior approval of the EIC. Sufficient lighting and safety arrangements shall be made by the Contractor at no extra cost.

iii. The Contractor shall provide and maintain adequate firefighting equipment and takeadequate fire protection measures for the safety to all personnel and temporary and permanent workers and shall take action to prevent damage or destruction by fire of trees, shrubs and grass. All existing rules and laws of land in respect of fire prevention shall be binding on the Contractor.

iv. No extra payment shall be made for the provision of temporary lighting andire prevention measures and entire cost of all such works shall be deemed to have been included in cost tendered by the Contractor as accepted by JDA.

b. SECURITY MEASURES

Security arrangement for the work shall be adequate conforming to IS Codes, applicable rules and laws of the land. The contractor shall be held responsible for the action or inaction on the part of his staff and employees and also those of any approved sub-contractor. The Contractor shall also provide and maintain adequate security personnel on continuous basis for ensuring security of the works for duration of contract.

The requirement of security measures to be taken by the Contractor shall include, but not be limited to maintenance of law and order at site, provision of all lighting, guards, flagmen and all other measures necessary for protection of works within the colonies, camps and elsewhere at site, all materials delivered to the site and all persons employed in connection with the work continuously throughout working and non-working periods including nights, Sundays and holidays for the duration of the contract. In close proximity of traffic corridors where public are likely to come close to the work area, suitable barriers/fencing as directed by EIC shall be provided.

c. ANCILLARY AND TEMPORARY WORKS

i. The contractor's proposals for execution of all ancillary and temporary works shall be in conformity with the proposals submitted along with the Tender and modification thereto as approved by the EIC.

ii. The Contractor shall submit drawings, supporting design calculations when called for by the EIC and other relevant details of all such work to the EIC for approval well before he desires to commence such works. Approval by the EIC of any such proposal shall not relieve the Contractor of his responsibility.

iii. No extra payment shall be made for complying with the provisions of this clause. The cost of the same shall be deemed to be included in the Tendered Cost as accepted by the Employer.

d. ECOLOGICAL BALANCE

i. The Contractor shall maintain the ecological balance by preventing deforestation, water pollution and defacing of natural landscape. The Contractor shall so conduct his construction operations as to prevent any destruction, scarring or defacing of natural surroundings in the vicinity of work or damage to any tree, shrub or water course unless any of the same is specifically required to be cleared or removed for construction purposes. Such removal shall only be done with prior approval of EIC who may require the contractor to do compensatory plantation at his cost.

ii. No separate payment shall be made for complying with provisions of this clause and all costs shall be deemed to have been included in the Tendered Cost as accepted by the Employer.

iii. The Contractor shall make his own arrangement for the disposal of the spoils from the works to such place where the same shall not cause nuisance and shall be acceptable to the authorities concerned.

e. SERVICES

i. Underground and overhead services are likely to be met with during construction. These are to be protected against damage by the Contractor at his own cost.

ii. The contractor shall not have any claim in case of delay in shifting of services or removal of obstructions. However, suitable extension of time shall be granted by Engineer-in-charge for such delays proportionately. Shifting charges shall be met by the Employer.

iii. No extra payment will be made to the contractor for damage caused by rains, floods, earthquake, fire, accidents and other natural calamities during the execution of work.

f. PROGRESS & PROJECT MONITORING
(Amplification of clause 2 of GCC)

i. After the work order issued by JDA, the contractor shall submit within 7 days the complete detailed work programme mentioning Key Dates for the mile stones defined in section **3.12.2.2**. and got it approved by JDA, failing which JDA may fix key dates at its own which shall be binding to the contractor and shall be applicable for deduction of liquidated damages as mentioned in clause **3.12.2.2**. The contractor shall also submit monthly programmein the first week of every month to the EIC anup to date primavera/ MS project hard copy detail showing changes and covering backlog of previous month, if any, in planning or scheduling and reflecting the project status as at the end of previous month. If the contractor fails to submit the proper work program within first week of the month, penal deduction of Rs. 5,000.00 (Rupees Five Thousand)per day will be made.

ii. Whenever the contractor proposes to change the construction programme he shall immediately advise the EIC in writing and, if the EIC considers the change a major one, the contractor shall submit a revised programme for approval.

iii. If the contractor falls behind the approved construction programme, he shall, within fourteen days of the date of such default, submit for approval a revision of the construction programme showing the proposed measures, including augmentation of plant, labour and material resources to complete the works on time.

iv. Whenever required by the Engineer, the contractor shall also prepare and submit system-wise network in a similar manner after award of the work. These networks will be computerized to generate the following reports :-

- System-wise Activity List for the next two months.
- Criticality report.
- Hold up and Slippage Report.

a) i)**Master Control Network**

Master Control Network shall give details of broad scheduling, major milestones, and critical path and provide a control for the overall project

implementation. This network plan shall be used for joint monitoring of the project schedule by the EIC and the Contractor.

Detailed Network Plan shall be prepared by the Contractor for each and every activity within the same time frame and in the same sequence as indicated in themaster work plan.

b) If so required by the EIC, the Contractor shall select PC-based broad planning and control software on which the two networks shall be implemented. Software selected shall be such that it should be possible to monitor the project programme continuously and obtain periodical reports in the form of GANTT chart and/or PERT chart. The contractor shall supply one licensed copy of the software selected along with the Master Control Network and Detailed Network Plan free of cost and load it on the PC system of the EIC so that uniform monitoring of the project is done and any slippages are identified well in time and corrective action taken.

v. The following reports in agreed formats and frequency shall be submitted by the Contractor at his own cost.

- Progress Reports.
- Material Status Reports
- Equipment and Manpower Deployment Reports.
- Any other reports desired by the Employer or the Engineer

vi. The EIC's monitoring team will have access to all the data/information of the contractor, required for the assessment of the progress and monitoring. If necessary, the monitoring team will visit the Contractor's works in order to assess the details of critical activities.

vii. The Employer or the EIC will hold periodical Progress Status Review Meeting. The Contractor shall depute his Engineers/Managers at appropriate level as decided by the EIC to attend the Review Meeting.

viii. Progress photographs of the major events shall be submitted by the Contractor along with the Progress Reports. No extra payment will be made for supply of progress photographs. Video recording of the progress of works shall be maintained from beginning till completion of work as directly by the EIC and two copies of Video Cassettes shall be submitted at no extra cost to the Employer.

ix. Contractor shall provide additional inputs whenever the PERT-CPM diagram indicates a possible slippage in the completion schedule. Such additional inputs may require supplementing of equipment, personnel, work in excess of the normal work per day, work in excess of the normal work per week or other resources.

x. No separate payment shall be made for the requirement under this clause and the same shall be deemed to be included in the Tendered Cost as accepted by the Employer.

g. RIGHT OF WAY

i. Right of way to the work site will be provided to the contractor. The contractor shall prepare at his own cost approach road to the site of work. The Employer reserves the right to make use of the service road for themselves, all other connected agencies in the area as and when necessary without any payment to the contractor. If the contractor wishes to use the existing roads, he may do so after taking permission from competent authority and after due strengthening of such roads to take any anticipated heaviest traffic at their own cost as may be required by the authority.

ii. The contractor shall plan transportation of construction materials, components and equipment's over public roads in accordance with traffic regulations as applicable at the time and without causing any obstruction to other traffic or causing accident. No claim whatsoever will be entertained on this account.

iii. All arrangements for maintenance of traffic diversion including traffic signals/regulations during construction and maintenance period shall be considered as incidental to the work and contractor's responsibility and nothing extra shall be payable in this respect.

iv. The contractor shall take all necessary measures for the safety of traffic and the workers during construction and provide, erect and maintain such barricades including signs, markings, flags, lights and flagmen as necessary, all around the excavation/construction area and at such intermediate points, as directed by the EIC including the proper identification of the construction areas. He shall be responsible for all damages and accidents on account of construction and other relevant activities. Nothing extra shall be paid on account of above.

v. The temporary warning signs/lamps shall be installed at all barricades during the hours of darkness and kept lit there at all times during these hours and nothing shall be paid extra on this account. However, traffic police signals shall not be the responsibility of the contractor.

h. CORPORATE SOCIAL RESPONSIBILITY (CSR)

The contractor shall construct one toilet block including all civil, water supply, and sanitary works and electrical installation (covered area 15SqM approx.) duly finished in all respect in the nearby Government School or any other location at his own cost as per direction of Engineer-in charge. Cost to be incurred on this account will be deemed to be included in the cost of main work and no extra payment on this account will be made. However in the event of non execution of this work, an amount of Rs. 10 Lakhs will be deducted by Engineer in charge.

3.8TIME MANAGEMENT

3.8.1 Commencement of Work

The Contractor shall commence the Works on the date specified in the work order. Thereafter the Contractor shall proceed with due diligence, without delay, and in accordance with the programme or any revised or modified programme of the Works. Time will be the essence of Contract and time for Completion shall run from the date the Contractor is to commence the Works under this Clause.

3.8.2 Programmeof Work

For this, Clause 3.7.4.f may be referred.

3.8.3 Handing over, Possession and Use of Site

3.8.3.1 No land belonging to or in the possession of the Employer shall be occupied by the Contractor without the permission of the Engineer or the Employer. The Contractor shall not use, or allow the Site to be used for any purpose other than that of executing the Works.

3.8.3.2 The Employer shall give the Contractor, right to or right of access to or possession of all or parts of Site as the case may be from time to time as stated to in the Contract and as conforming with the requirement of the programme of the Work.

3.8.3.3 If the Contractor suffers delay or incur extra cost due to failure by the Employer to give such possession within such time, then the Contractor shall be entitled to extension of time if Completion will be delayed due to this. No extra payment shall be payable to the Contractor in this regard.

3.8.4 Access To Site of Work

3.8.4.1 Access for Engineer

The Contractor shall allow the Engineer or the Engineer's Representative, at all times 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 and to any place where Materials or plant are being manufactured, fabricated and/or assembled for the Works. The Contractor shall ensure that sub Contracts if any shall contain provisions entitling the Engineer or any person authorized by him to have such access.

3.8.4.2 Access Road and Way Leaves

Providing access roads/ way leaves to the Site will be Contractor's responsibility.

3.9 Time for Completion

Time is the essence of Contract and will remain so at all times during the pendency of the Contract including the extended period of Contract. The Contractor shall ensure defect free completion of the whole of the Works and/or parts thereof before the same is taken over by the Employer.

3.10 Delay

3.10.1 Failure or delay by the Employer or the Engineer, to hand over to the Contractor the Site necessary for execution of Works, or any part of the Works, or to give necessary notice to commence the Works, or to provide necessary Drawings or instructions or clarifications or to supply any material, plant or machinery, which under the Contract, is the responsibility of the Employer, shall in no way affect or vitiate the Contract or alter the character thereof; or entitle the Contractor to damages or compensation thereof but in any such case, the Engineer shall extend the time period for the completion of the Contract, as in his opinion is / are reasonable.

3.10.2 In case of delay on the part of the Contractor, the Contractor shall be liable to pay liquidated damages in addition to any other compensation for the damages suffered by the Employer. This is without prejudice to the right of the Employer to rescind the Contract.

3.11 Extension of Time for Completion not on Contractor's fault

The time within which, the Works or any phase or part of the work is to be completed, may be extended by the Engineer by such further period of time as may reasonably reflect delay in completion of Works notwithstanding due diligence and the taking of all reasonable steps by the Contractor to avoid or reduce such delay, caused by any of the following events

i. "Force Majeure" referred to in **Clause 46.0**
ii. The issue of any instruction or major Variation by the Engineer
iii. The Contractor not being given possession of or access to the Site or any part thereof in accordance with the Contract
iv. Instruction of the Engineer to suspend the Works and the Contractor not being in default as to reasons of suspension.
v. Acts or omissions of Other Contractors in executing work not forming part of this Contract and on whose performance, the performance of the Contractor necessarily depends.
vi. Any act of prevention or Breach of Contract by the Employer and not mentioned in this Clause
vii. Any order of Court restraining the performance of the Contract in full or in any part thereof
viii. Any other event or occurrence which, according to the Employer is not due to the Contractor's failure or fault, and is beyond his control

However, the Contractor shall not be entitled to any extension of time where the instructions or acts of the Employer or the Engineer are necessitated by or intended to cure any default of or breach of Contract by the Contractor. If the Contractor considers himself to be entitled to an extension of time for Completion, he shall give notice to the Engineer of such intention as soon as possible and in

any event within 28 days of the start of the event giving rise to the delay, together with any notice required by the Contract and relevant to such Clause.

3.12Extension of Time for Delay due to Contractor and Liquidated Damage

3.12.1 Extension of Time for Delays due to Contractor

If the delay in the completion of the whole Works or a portion of the Works, for which an earlier completion period is stipulated, is due to the Contractor's failure or fault, and the Engineer is of the view that the remaining Works or the portions of Works can be completed by the Contractor in a reasonable and acceptable short time, then, the Engineer may allow the Contractor extension or further extension of time at its discretion with or without liquidated damages, for completion, as he may decide.

3.12.2 Liquidated Damages

3.12.2.1 In case the Engineer decides to extend the Contract with liquidated damages for delays due to Contractor, in that case without prejudice to any other right or remedy available to the Employer, the liquidated damages shall be levied as per clause 3.12.2.2.

The decision of the Engineer as to the Liquidated Damages payable by the Contractor under this Clause shall be final and binding. For submission of detailed work programme, key dates etc, Clause 3.7.4.f. may be referred.

3.12.2.2 The intermediate mile stones are identified as below.

1. Clover Leaf
2. Vehicular Underpass
3. Monument
4. Road Work
5. Subway Work
6. Drain and Utility Diversion
7. Horticulture Work
8. Electric Work.

Liquidated damages for not achieving key dates, then the action will taken as per the prevailing rules.

These liquidated damages shall not relieve the contractor from his obligation to complete the works or from any other of his obligations and liabilities under this contract.

These liquidated damages levied shall be in addition to all other penalties/ compensations/ liquidated damages. The contractor shall coordinate his programme to the extent feasible with other activities engaged at site so that project may be completed in time as per programme.

3.13 Rate of Progress

If for any reason which does not entitle the Contractor to an extension of time, the rate of progress of the Works is at any time, in the opinion of the Engineer too slow to ensure timely completion of the Works or any part thereof, the Engineer may so notify the Contractor in writing. The Contractor shall thereupon take such steps as are necessary or in default of taking such steps, shall take such steps as the Engineer may reasonably instruct to expedite progress so as to complete the Works or any part thereof within date of Completion. The Contractor shall not be entitled to any additional payment for taking such steps.

If any step taken by the Contractor in meeting his obligations under this Sub clause cause the Employer to incur additional costs, such costs shall be recoverable from the Contractor and shall be deducted by the Employer from any monies due, or become to the Contractor.

3.14 Suspension

3.14 .1 Suspension of Work

The Engineer may at any time instruct the Contractor to suspend progress of part or all of the Works. During suspension, the Contractor will protect, store and secure such part or whole of the Works against any deterioration, loss or damage.The Contractor shall not be entitled to extra cost

3.14.2 Consequences of Suspension

The Contractor shall not be entitled to extra cost (if any), incurred by him, during the period of suspension of work, if such suspension is

a. provided for in the Contract, or
b. necessary for proper execution of Woks or by reasons of weather condition or by some default on the part of the Contractor, or
c. necessary for the safety of Works or any part thereof or
d. necessary for the safety of adjoining public or other property or safety of the public or workmen or those who have to be at the Site or
e. to ensure safety and to avoid disruption of traffic and utilities, as also to permit fast repairs and restoration of any damaged utilities,

3.15 TERMINATION OF CONTRACT

3.15.1 Termination for Employer's Convenience

(i) The Employer may terminate the Contract by giving notice to the Contractor with effect from the date stated in the notice, for its convenience and without need to give reasons.

(ii) The Contractor must comply with the instructions of the Employer to wind down and stop work and the Contractor must leave the Site by the date stated in the termination notice and remove all Temporary Works it has brought on to the Site

except for those items identified in the termination notice as to be retained on the Site.

(iii) The Contractor shall not be entitled to extra cost.

3.15.2 Termination for Default of Employer- Deleted

3.15.3 Rescission Of Contract Due To Death of Contractor / Partner

If the Contractor is an individual or a sole proprietary concern, and the Contractor dies, or if the Contractor is a partnership concern and one of the partners dies, in that case unless the Employer is satisfied that the legal representative of the individual Contractor or of the sole proprietor, , or in the case of a partnership firm, all surviving partners, are capable of carrying out and completing the Contract, the Employer shall be entitled to rescind the Contract as to its incomplete part. The Engineer's decision in this regard will be final and binding on the parties. In that event, the Employer shall not be liable to pay any compensation to the legal heirs of the deceased Contractor and / or to the surviving partners of the Contractor's firm, on account of such cancellation of Contract. Provided further that the legal representatives of the Deceased Contractor the surviving partners, shall also not be liable to pay any damages, to the Employer, in respect of incomplete part of the Contract. Any liability incurred by the deceased Contractor, or by the deceased partner of the Contracting firm, shall be recovered from the legal representatives of the deceased Contractor or from the surviving partners of the said Contracting firm as the case may be

3.15.4 Termination of Contract Due To Contractor's Default

3.15.4.1 Notice to Correct

If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and remedy it within a specified reasonable time as the Engineer may deem reasonable.

3.15.4.2 Conditions Leading To termination Of Contract.

The Employer shall be entitled to terminate the Contract if the Contractor or any one of its constituents,

a) fails to comply with a notice under Sub clause 3.15.4.1
b) abandons or repudiates the Contract
c) without reasonable excuse fails to commence the Works in accordance with the Contract
d) sub Contracts the whole of the Works or assigns the Contract without Approval of the Employer
e) becomes bankrupt or insolvent or goes into liquidation except voluntary liquidation for the purpose of amalgamation or reconstruction
f) persistently disregards instructions of the Engineer or contravenes any provisions of the Contract, or
g) fails to adhere to the agreed programme of work by margin of 10% of the stipulated period or 21 days, whichever is earlier, or fails to complete the Works

or parts of the Works within the stipulated or extended period of completion, or is unlikely to complete the whole Work or part thereof within time because of poor record of progress; or

h) fails to remove Materials from the Site, or pull down and replace work, after receiving notice from the Engineer to the effect that the said Materials or Works have been condemned or rejected, or

i) fails to take steps to employ competent and/or additional staff and labour, or

j) fails to afford the Engineer or his representative proper facilities for inspecting the Works or any part thereof, or

k) indulges in corrupt or fraudulent practices as explained in Clause 3.16.1 (a) (ii)

In any one these events or circumstances, the Employer may upon giving 14 days notice to the Contractor, terminate the Contract and expel the Contractor from the Site. The Employer shall give a 2 days notice to the Contractor towards the end of this 14 day period following which the Contractor shall remove all his plants and Machinery from the Site within these two days failing which Liquidated Damages shall be levied on the Contractor. However, in case of sub-paragraph (e) or (i), the Employer may by notice terminate the Contract immediately.

The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer under the Contract.

After termination, the Employer may complete the Works and/ arrange for any other entities to do so at the risk and cost of the Contractor. The Employer and his entities may then use, the roads, the Contractor's documents and his design document made by or on behalf of the Contractor.

On termination of Contract due to Contractor's default, the Employer shall be entitled to

a. forfeit the whole or such portion of the Performance Security amount as he may consider fit, and

b. recover from the Contractor the cost of carrying out the balance work in excess of the sum which he would have been paid according to the certificate of the Engineer, if the Works had been carried out and completed by the Contractor under the terms of Contract. Such certificate shall be final and binding upon the Contractor. The amount to be recovered may be deducted by the Employer from any monies then due or which, at any time thereafter, may become due to the Contractor alone or jointly under this or any other Contract or otherwise.

3.15.4.3 Non-exercise of power not to constitute waiver

Provided always that in case any of the powers conferred upon the Employer by **Sub-clause 3.15.4.1** and **Sub-clause 3.15.4.2** above, shall have become exercisable, and the same may not have been exercised, the non-exercise thereof shall not constitute waiver of any of the conditions thereof.

3.16 CORRUPT OR FRAUDULENT PRACTICES

3.16.1 The Employer requires that the Bidders/Contractors observe the highest standards of ethics during
Tendering and execution of this Contract.In pursuance with this policy, the Employer:

a. defines, for the purpose of these provisions, the terms set forth below as follows:

(ii) "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to Employer, Engineer or any of their employees, influence in the procurement process or in Contract execution; and

(iii) "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 prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.

b. Will reject the Tender for the work or rescinds the Contract if the Employer determines that the Bidder/Contractor has engaged in corrupt or fraudulent practices.

c. Will declare a Contractor ineligible, either indefinitely or for a stated period of time, to be awarded a Contract/s if he at any time determines that the Contractor has engaged in corrupt or fraudulent practices in competing for, or in executing the Contract.

SECTION – 4

TECHNICAL SPECIFICATIONS

PREAMBLE

TECHNICAL SPECIFICATIONS.

PREAMBLE

The Technical Specification (Appendix-"A") shall be read with the other volumes of the Bid Document (Volumes I & II)

1.1.1 General

The Technical specifications covering the materials and the workmanship aspects as well as method of measurements and payments are included in this section. These specifications cover the items of civil and non-civil works coming under scope of this document. All work shall be carried out in conformity with the same. These specifications are not intended to cover the minute details. The works shall be executed in accordance with good practices followed for achieving high standards of workmanship, thus ensuring safety and durability of the construction. All codes and standards referred to in these specifications shall be the latest thereof, unless otherwise stated.

1.1.2 Inclusive Documents

The provisions of special conditions of contract, those specified elsewhere in the bid document, as well as execution drawings and notes, or other specifications issued in writing by the Engineer shall form part of the technical specifications of this project.

The attention of the contractor is drawn to those clauses of codes which require supporting specification by the Engineer. In such cases, it is the responsibility of the bidder /contractor to seek clarification on any uncertainty and obtain prior approval of the Engineer before taking up the supply/construction. In absence of such prior clarification, the Engineer's choice/design will be final and binding on the contractor without involving separately any additional payment.

1.1.3 Measurement and Payment

The methods of measurement and payment shall be as described under various items and in the Bill of Quantities. Where specific definitions are not given, the methods described in B.I.S. Code/MoRTH/IRC will be followed. Should there be any detail of construction or materials which has not been referred to in the Specification or in the Bill of Quantities and Drawings but the necessity for which may be implied or inferred there from, or which is usual or essential to the completion of the work in the trades, the same shall be deemed to be included in the rates and prices entered by the contractor in the Bill of Quantities.

1.1.4 Defective Works

All defective works are liable to be demolished, rebuilt and defective materials replaced by the contractor at his own cost. In the event of such works being accepted by carrying out repairs etc., as specified by the Engineer, the cost of repairs will be borne by the contractor.

In the event of the work being accepted by a given 'Design Concession' arising out of but not limited by a given under sizing, under strength, shift in location and alignment etc., and accepting design stress in members which are higher than those provided for in the original design or by accepting materials not fully meeting the specifications etc., the bidder will be paid for the works actually carried out by him at suitably reduced rate of the bid rates for the portion of the work thus accepted.

2 Summary of Work

The work under construction package involves, "**Traffic Solution and Beautification Work at B2 Byepass Junction, Jaipur, Rajasthan"**including its approaches, and other ancillary works.

2.1 Scope of Work

The work under this contract shall be carried out in accordance with the document constituting the contract and shall consist of various salient items as described below.

2.1.1 Construction of Clover Leaf

The structure for Clover consists of Viaduct with cast in situ PSC Box Girders on viaduct followed by RE wall structure. The main activities in construction are as follows:

- Site clearance
- True and proper setting out and layout of the work, providing location marks, bench marks, preparation of reports and plans
- Pile foundation for Clover.
- Construction of bored pile by using hydraulic rigs in all type of strata.
- RCC Pile Cap, Pier and Pier cap for Clover.
- Pre stressed Superstructure for Clover
- Construction of Approach Roads.
- Construction of Service Roads.
- Construction of R.E. Walls for the Approaches.
- Providing Drainage Arrangement.
- ACP cladding.
- Casting of RCC Crash Barrier with Railings.
- Thermoplastic lane marking on road surface and painting of railings and crash barrier pipe etc.
- Road Furnitures, Signages, etc

2.1.2Construction of Underpass

- Site clearance
- True and proper setting out and layout of the work, providing location marks, bench marks, preparation of reports and plans
- Construction of bored pile by using hydraulic rigs in all type of strata for earth Retaining.
- Excavation up to the founding level of base slab.
- Construction of RCC curtain Walls for box and ramps.
- Construction of cycle track.
- Construction of R.C.C. Pile, Pilecap, Piercap for column in Box portion.
- Pre stressed Superstructure for underpass Box Portion.
- Construction of Concrete pavement of M-30 grade in Ramp and Box portion.
- Traditional concrete/ stone kerb stone.
- cadappa cobble stone for cycle track flooring.
- ACP cladding for ceiling of box portion.
- Thermoplastic lane marking on road surface and painting.
- Road Furnitures, Signages, etc.
-

Brief information included in contract Package is given below.

- The work shall be executed based on BOQ given in tender.
- Dewatering if any.
- Other Miscellaneous works as per site requirement.
- The contractor has to get necessary permission/ NOC from road and other concerned regulatory authorities for block and working in such locations.
- Day to day cleaning of worksite and adjacent roads throughout the execution period. Nothing extra shall be paid on this account.
- Clearing of site and handing over of all the works, as specified or as directed.
- All aspects of quality assurance, including testing of materials and other components of the work, as specified or as directed.
- Maintenance of the completed work during the period as specified.
- Any other item of work as may be required to be carried out for completing the works of specified length including all necessary interfaces works with system-wide Contractors in all respects in accordance with the provisions of the Contract and/or to ensure the structural stability and safety during and after construction.
- Works to be performed shall also include all general works preparatory to the construction and works of any kind necessary for the due and satisfactory construction, completion and maintenance of the works to the intent and meaning of the drawings adopted and technical specifications, to best Engineering standards and orders that may be issued by the Engineer from time to time.

- Compliance by the agency with all Conditions of Contract, supply of all materials, apparatus, plants, equipment, tools, fuel, water, strutting, timbering, transport, offices, stores, workshop, staff, labour and the provision of proper and sufficient protective works, diversion, temporary fencing, lighting and watching required for the safety of the public and protection of works on adjoining land; first-aid equipment, sanitary accommodation for the staff and workmen, effecting and maintenance of all insurances, the payment of all wages, salaries, fees, royalties, duties or the other charges arising out of the execution of works and the regular clearance of rubbish, clearing up, leaving the site perfect and tidy on completion.

Notes:-

1) Back filling of area to be done with proper compaction with earth/sand up to plinth level wherever required.
2) There is possibility of some of the items not getting mentioned in the above list of works. Contractors are requested to go through the tender drawings also in details as the works mentioned above as well as indicated in the tender drawings would be considered inclusive in the scope of work. Some of the major utilities cannot be diverted. Contractor shall take into consideration the existence of these utilities and work at these locations accordingly shall be planned.

3) The work is to be designed constructed and maintained as per relevant codes, specifications, Special Specifications and drawings and/or as directed by the Engineer In charge.

4) The work content shall also include but not limited to the following:

    - The construction of structures will have to be planned in such a manner that they do not obstruct or interfere with the existing roads and other utilities. Where work is required to be carried out at locations adjacent to such roads, utilities, structures, monuments etc. suitable safety and protection arrangements will have to be ensured for which nothing extra will be payable. It should be ensured that no damage is caused to any such element and Engineer/ Employer shall be indemnified against such damage at no extra cost.

    - The Contractor has to ensure cleanliness of the roads and footpaths by deploying man power for the same. The Contractor shall have to ensure proper booming, cleaning and washing of roads and walkways at regular interval or as and when required or directed throughout the entire stretch. Nothing extra shall be payable on this account.

- **Barricading:** The contractor shall have to provide temporary boundary wall/ barricading as per tender drawing at all the land to be used for Construction Subway, store, site office, casting yard etc. The barricading of same will be paid as per BOQ. Other requirements of Safety, Health & Environment as specified in condition of contract on SHE version is included in quoted price.

- Tree cutting & transplanting, after getting permission of forest department / nodal agencies. The payment of the same shall be made as per schedule.

2.1.3 MONUMENT, CHATTRI, RAILING AND BENCH:

- A miniature of the monument should be approved by the Architect/ Engineer –in-charge before execution at site.
- Earthwork including excavation and leveling
- Casting of R.C.C. foundations and Framed Structure including necessary formwork and scaffolding.
- Construction of Special Architectural Design elements.
- Procurement of first class export quality of stone for the work as per Drawing and specification. Furnishing necessary samples and getting their approval from the Engineer In-charge and Architect before executing the work.
- Carved & decorative stone for all the cladding works for the Monument including motifs, friezes, panels, brackets, sculptures, etc. all cut to shape & sizes as per the designs & drawings
- Polished and flame finished colored granite stones for flooring, cladding, copings, moldings, planters, bollards etc., all cut to shape & sizes as per the patterns, designs & drawings for landscaped/ external areas
- All the stone cladding works are to be executed with wet/ dry cladding system to be decided at site by the Engineer In-charge and Architect
- Providing necessary notches/ grooves/ holes/ keys etc. in stones for joints/ dowels/ clamps, as required for fixing the same at site.
- Carrying out treatment with deep penetration of approved water based waterproofing chemicals prior to packaging of the stones.
- Fixing will be done with proper chemical, fastener of make like lilti, fischer etc.
- Packing, loading, unloading, etc. of all the stones and any other

stone accessories and related equipment including transportation from mines to his factory/ workshop.

- Packing, crating, preparation of inventory & coding/ marking, loading, unloading and transportation of all the stones by rail, road, sea, etc. from his factory/ workshop upto the site. The Contractor shall ensure that all the items are packed suitably so that the same are not damaged during transportation.
- All the designs, shapes, sizes, patterns, depths of carvings etc. for the crafted items shall be as per the designs and directions given by the Engineer In-charge/ Architect. However, the Engineer In-charge/ Architect reserves the right to change/ vary the same before bulk production i.e. upto the sample approval stage, for which no extra cost shall be paid to the Contractor.

2.1.4 ELECTRICAL WORK

The work to be carried out under this contract comprises of internal and external electrical Installation of the project as called in the tender documents. The Electrical Contractor shall include for the supply of the whole of the materials in accordance with the Specifications and the whole of the work of fixing necessary for the complete installation as set out in these Specifications and with the accompanying schedule and drawings, commencing from the supply authority's terminals. This also include any material, appliances, equipment not specifically mentioned herein or noted on the drawings as being furnished or installed but which are necessary and customary to make the installation complete in all respects.In general the work to be performed under this contract shall comprise supply, installation, testing & commissioning of the following-

- All conduit works including junction boxes, outlet boxes, ceiling hook boxes, wiring &earthing for lighting & power.
- All conduit works including junction boxes, outlet boxes & wiring for Low current Services (LV services) such as Telephone, data, voice, fire alarm, Access control and any other I.T. related works, C.C.T.V works, P A System and Parking management system.
- Switches, plug sockets, cover plates and wiring accessories are all of modular type.
- Earthing System comprising of Earth pits & earth strip and SWG wire for earthling the body of the equipment's complete in all respect.
- External and Façade lighting works.
- All HV & MV cabling work.
- Distribution Boards, Panels, feeder pillars, meter boards &local DB's.
- Lightning protection works (if any).
- Installation, testing & commissioning of all above said work as per I.E rules

as framed by the governing agencies (PWD/CPWD/JVVNL/JDA).

- All internal wiring shall be of 1.1KV grade ISI marked and as per IS: 694 and also approved makes shall be used. As approved by the Engineer in charge.

2.1.5 PLUMBING WORK

- Proper provision has to be developed by the contractor for dewatering of subway. And ensure proper mechanism to stop flooding in subways during rain.
- New drainage system should be properly connected to the existing system
- High quality pumps and stand by pumps should be powered by generator in case of electric cut-out

2.1.6 HORTICULTURE WORK

- Horticultural operations shall be started on ground previously leveled and dressed to required formation levels and slopes. In case where unsuitable soil is met with, it shall be either removed or, replaced or it shall be covered over to a thickness decided by the Engineer-in-charge with good earth. In the course of excavation or trenching during horticultural operations, any walls, foundations, etc. met with shall not be dismantled without pre-measurement and prior to the written permission of the Engineer-in-charge.
- Trenching in ordinary soil.
- Supply and stacking of sludge and Manure.
- Spreading and mixing good earth, sludge and manure.
- Grassing with select grass no. 1 as per landscaping drawing.
- Excavation and trenching for preparation of beds for hedge, shrubbery and trees
- Supplying and Planting of hedge, shrubbery and trees as per drawing.

2.1.7 OTHERS - GENERAL

- All aspects of quality control and quality assurance of Works including documentation.
- Providing measures for prevention or mitigation of negative environmental impacts due to construction activities.
- Provision and maintenance of fully furnished and equipped site offices for Engineer; Employer and their staff as per provisions of Contract.
- Provision of laboratory for testing, including the supply of equipment and consumables;
- Supply of colour record photographs and video cassettes of important activities of the work;

- Handing over of the works on completion after due site clearance
- Submission of as built drawings and other related documents in six copies (hard and soft).
- Rectification of the defects in the completed works during the defect liability period;
- Execution of any other item of work for the construction and completion of the Works in accordance with the provisions of Contract including all incidental items as well as preparation and submittal of reports, plans as required.
- During the period of the contract the right of way and all existing roads shall be kept open for traffic and maintained in a safe and usable condition. Residents along and adjacent to the works are to be provided with safe convenient access to their properties at all times.
- Traffic control and traffic diversions shall be used as necessary to protect the works and maintenance will be carried out as directed by the Engineer and provided in the contract.
- Construction of service roads improvement junction, electrification and shifting of utilities, provision of signal and sign boards.
- Construction of diversion and its maintenance of the diversion as per the direction of the Engineer in Charge at the cost of the contractor.

2.2 Site Information

2.2.1 Location

The project site is located in the city of Jaipur, Rajasthan.The proposed **Traffic Solution and Beautification Work at B2 Bye pass junction, JDA, Jaipur,Rajasthan**

2.2.2Geotechnical Information

More detailed information can be referred in the offices of Engineer/Employer

2.2.3 Seismic Zone

Project area is in the seismic zone II as per IRC:6.

2.2.4 Climate

Maximum temperature is 47 degree centigrade in summer season while minimum temperature is around 8 degrees centigrade in winter season.

Site information given above and provided elsewhere is given in good faith by the employer. The contractor shall satisfy himself regarding all aspects of site conditions and collect all site information necessary for the construction and completion of the works.

2.3 Survey and Investigations

As part of the planning and design carried out in connection with production of these bid documents comprehensive topographical field surveys and geotechnical investigations were carried out.
The geotechnical investigations report will provide information about the existing soil conditions.
The topographic survey report and geotechnical report can be referred to in the office of the executive engineer.
Any additional survey and soil investigation required for any purpose shall be done without any extra cost.

2.4 Land for Contractor's facilities

The employer shall provide the right of way of the road works and other appurtenant works to the contractor. However, the contractor shall have to make his own arrangements for the land required by him for borrow areas, quarries, site offices, testing labs, labour camps, stores, plant and casting yards etc.

2.5 Safety of the existing structure and water supply/drainage work/ electric/ telephone line/ sewerage lines.

The contractor shall have the full responsibility to ensure the safety of the existing structures. Contractor shall be fully responsible and liable to repair any damaged caused to the existing structures during the execution of construction work at his own cost and no amount shall be paid extra. The rates quoted by the contractor shall be deemed included in the unit price of the respective items.

List of suppliers as submitted to the engineer shall be approved by the Engineer Incharge after award of work. However, the supplier may be liable to be changed if engineer feels necessary at any later stage.

The contractor shall submit the work methodology to the Engineer Incharge. Contractor shall not be allowed to change construction methodology as suggested in the contract drawing. However, if contractor feels or like to change the construction methodology, it shall be done by the contractor at his own cost.

3 GENERAL REQUIREMENTS

The specification for works shall be in two parts, Technical Specifications and Supplementary Technical Specifications, which shall be read together:
In the absence of any definite provision on any particular issue in the Specifications, the work shall be carried out in accordance with Special Specifications to be prepared by Contractor and approved by Engineer.

Such Special Specification shall be based on technical literature comprising national MoRTH/(IRC and IS) and international specifications and good engineering practice. In case of any dispute, the decision of the Engineer Inchargeshall be final and binding on the Contractor.

3.1 GENERAL TECHNICAL SPECIFICATIONS

This part shall comprise the "Specifications for Road and Bridge Works" (Fifth Revision), 2013 along with other addendum Corrigendum issued up to 28 days before the final dated of submission of the bid, issued by the Ministry of Road Transport & Highways, Government of India, and published by the Indian Road Congress (IRC), Jamnagar House, New Delhi - 110 011, with a cross reference to relevant Bureau of Indian Standards (BIS) for materials for other aspects not covered by the IRC, all deemed to be bound into this document.

Part II - Supplementary Technical Specifications

The Supplementary Technical Specifications shall comprise various Amendments/ Modification/ Additions to the "SPECIFICATION FOR ROAD AND BRIDGE WORKS" referred to in Part I above and additional specifications for particular items of work not already covered in Part I.

If a particular clause or a part thereof in "SPECIFICATION FOR ROAD AND BRIDGE WORKS" referred to under Part I above, is amended/modified/ substituted/added upon, and incorporated under Part II, referred to above, the Amendment/Modification/ Substitution/Addition to the relevant Clause or part of the Clause shall prevail.

When an amended/modified/substituted/added clause supersedes a Clause or part thereof in the said Specifications, then any reference to the Clause shall be deemed to refer to the amended/modified/substituted/added Clause or part thereof.

Insofar as amended/modified/substituted/added Clause may come in conflict or be inconsistent with any of the provisions of the said Specifications under reference, the amended/modified/ substituted/added Clause shall always prevail.

The Additional Specifications shall comprise specifications for particular item of works not already covered in Part I.

Amendments, modifications, substitutions, additions have been made to the following clauses of specifications for Road and Bridge Works (Fourth Revision).

3.2 Specifications for Road & Bridge Works by Ministry of Surface Transport (MOST), Govt. of India

Unless specifically mentioned otherwise hereafter or/and directed by the Engineer-in-charge to do so, all the civil engineering works shall be carried out in accordance with the provisions of the "Specifications for Road and Bridge Works (Fifth Revision), called MOST Specifications hereinafter published at New Delhi in 2013, or the latest version available, by Indian Roads Congress on behalf of MOST.

3.3.1 MATERIALS AND TEST STANDARDS

3.3.1 Testing

The Contractor shall set up a field laboratory with necessary equipment's for testing of water, aggregates, cement and concrete used in the construction as per requirements of the relevant specifications. The testing of all materials shall be carried out by the Engineer-in-charge or his representative for which the contractor shall make all the necessary arrangements and bear the entire cost.

Tests which cannot be carried out in the field laboratory shall be sent for testing by the contractor to any NABL accredited or recognized laboratory/testing establishment approved by the Engineer-in-charge.

The cost of making any and all the Tests shall be borne by the Contractor if such Test is clearly intended by or provided for in the Contract.

The following instruments / apparatus (but not the least), are required in the field laboratory.

1. Digital Compression testing Machine 2000 KN Capacity electrically operated.
2. Vicat Needle Apparatus with dashpot.
3. Concrete soundness test hammer.
4. Cement autoclave.
5. Cube Moulds (ISI Marked) of different sizes.
6. Aggregate Crushing Value.
7. Aggregate impact value test apparatus.
8. Sieve Shaker.
9. Sieves of different sizes (ISI Marked).
10. Flakiness index test apparatus.

11. Proctor Compaction Apparatus.
12. Bitumen extraction test.

However, as per the site requirement EIC may direct the contractor to arrange some additional testing apparatus required in the field laboratory which are not included in the above mentioned list, for which no extra payment will be made.

The contractor shall appoint separate engineer(Degree holder) of experience not less than 5 years for quality control and site laboratory who shall provide all assistance to JDA to conduct such tests. The salary/ waged of such engineer shall be deemed to be included in the cost of work and no extra payment shall be made on this account. In case of not appointing separate engineer by the contractor the JDA may appoint such engineer at its own and actual wages/ salary be deducted from the due payments of contractor

3.3.2 Sampling of Materials

Samples provided to the Engineer-in-charge for retention are to be in labeled boxes suitable for storage. Materials or workmanship not corresponding in character and quality with the approved samples will be rejected by the Engineer-in-charge or his representative and shall be removed from site as directed by the Engineer-in-charge or his representative at the contractor's cost.

Samples required for approval and testing must be supplied well in advance to allow for testing and approval. Delay to works arising from the late submission of samples will not be acceptable as a reason for delay in the completion of the work.

3.4 CONSTRUCTION EQUIPMENT

3.4.1 Tolerance

The contractor shall ensure that the major plant and equipment proposed to be deployed on the work shall meet the performance criteria specified herein. The contractor shall be required to give trial runs of these equipments for establishing their capabilities to achieve the laid down specification and tolerance to the satisfaction of the Engineer-in-charge before commencement of the work. All these equipments provided shall be of proven efficiency and shall be maintained at all time.

3.4.2 Batching Equipment

For individual batches the following tolerances shall apply based on the required weight of material.

		Percentage
Cement	:	± 1
Aggregate	:	± 2
Water	:	± 1

Notwithstanding above tolerances the construction and accuracy of equipment shall conform to IS: 2722, except that an accuracy off 0.4% over the entire range of equipment will be required.

3.4.3 Batch Type Concrete Mixer

The mixer shall be tested under normal working conditions in accordance with the method specified in IS: 4634 with a view to checking its ability to mix the ingredients to obtain a concrete of desired uniformity. The conformity of mixed concrete shall be evaluated by fixing the percentage variation in quantity of cement, fine aggregate and coarse aggregate in a freshly mixed batch of concrete.

The percentage variation between the quantities of cement, fine aggregate and coarse aggregates (as found by weighing in water) in the two halves of a batch and the average of the two halves of the batch shall not be more than the following limits:

Cement	:	8%
Fine Aggregate	:	6%
Coarse aggregate	:	5%

3.4.4 Concrete Transit Mixers

The mixer shall conform to IS: 5892 and be tested under normal working condition in accordance with the method specified in IS:4634. The tolerance limits for the variation between quantities of cement, fine aggregate and coarse aggregates shall be same as for batch type concrete mixer.

Competent authority shall have the right to determine whether all or any of the materials offered or delivered for use in the works are suitable for the purpose.

3.5 SETTING OUT

The works unless otherwise specified, shall be set symmetrical to the centre line of the bridge as shown on the drawings and design.

Reference pillars shall be established by the contractor at his own cost after carrying out the necessary survey with reference to the said drawings.

The centre line of the subway shall be extended on both ends to at least 60.0 m and the centre line pillars located not less than 3.0 m from the two ends of the

bridge. These shall be so located that they are in no way disturbed during flood or during the period of construction.

The reference pillars shall be connected with some permanent features on the site that they can be correctly relocated in case they get disturbed during the construction period.

For the layout work and establishing the centre line of the subway, only steel tape shall be utilized throughout the work and where work is done by traversing, the traverse shall be closed. In case of minor errors these shall be corrected by interpolation of the layout and the centre line pillars got approved by the Engineer-in-charge.

3.6 MATERIALS FOR STRUCTURE

General

All the basic construction materials viz. cement, aggregates (coarse and fine both), reinforcement and water to be used in works shall be procured from sources approved by the Engineer-in-charge. Unless otherwise mentioned in these specifications the contractor shall identify the sources of basic materials and propose the same for approval after satisfying himself about the quality and quantity required for the work.

3.6.2Cement

Ordinary Portland Cement (OPC) 43 grade conforming to IS: 8112 shall be used throughout construction. Cement shall be procured from reputed manufacturers who have requisite infrastructure for conducting various tests for the conformance to chemical and physical requirements specified in IS: 269. The frequency of such tests in manufacturer's laboratory shall be as per IS: 3535. Since a very good degree of quality control is desired at works, fresh cement from a single source shall be procured unless alternative source is approved by the Engineer-in-charge in writing. The make and quality of cement to be used in the work shall be subject to the approval of Engineer-in-Charge. Along with each lot of cement delivered to site a certificate from the manufacturer shall be forwarded, to the effect that the cement was tested and analyzed in accordance with the methods given in IS:4031 and IS:4032. The test results shall be included in the manufacturer's certificate.

Notwithstanding manufacturer's certificate the Engineer-in-charge if so desired may ask for retesting of cement at site or through any other recognized and approved laboratory. The cost of additional tests and samples shall be borne by the contractor.

3.6.3Coarse Aggregate

Coarse aggregates shall consist of naturally occurring crushed stones. The aggregates shall be hard, strong, dense, durable, clear and free from veins and adherent coating, and free from injurious amounts of disintegrated pieces, alkali, vegetable matter and other deleterious substances. The presence of flaky, scoriaceous and elongated pieces shall be avoided. The coarse aggregates which conform to the following requirement may only be considered for approval by the Engineer-in-charge:

Deleterious materials	Refer to Table 1 of IS:383
Aggregate Crushing Value	30%
Aggregate Abrasion Value	30%

Aggregate shall be supplied in single sizes. The nominal maximum size of aggregate to be used in work shall be 20mm. The other requirements for coarse aggregates shall be as per IS:383.

While submitting samples of aggregates for approval the contractor shall furnish following information pertaining to the aggregates:

Source of supply, that is, precise location of source from where the materials were procured.

Trade group of principal rock type present.

Presence of reactive minerals.

Physical characteristics.

Specific gravity.

Moisture content

Absorption value.

Aggregate crushing value.

Abrasion value

Presence of deleterious materials.

Potential reactivity of aggregate.

The tests carried out for the above shall be done in accordance with the methods specified in IS:2386.

The contractor shall satisfy himself that the material complies with the requirement of IS:383 and shall furnish a certificate to this effect to the Engineer-in-charge whenever asked for. In case the aggregates tested do not comply with any requirement of the IS standards the source for the same shall be rejected. No further samples from the rejected source shall be considered for approval. The Engineer-in-charge shall have full liberty of getting the material tested independently through recognized agency. The Contractor shall supply free of charge the material required for tests and bear all expenses for such tests.

3.6.4Fine Aggregate

The quality, tests and acceptance criteria for fine aggregates shall be same as mentioned for the coarse aggregates. The fine aggregates shall conform to Zone II of Table 4 of IS:383.

3.7 STEEL

3.7.1 Steel reinforcement

Steel shall be procured from primary manufacturers only.
High strength deformed steel barsof TMT500Dgrade shall be used and shall comply with the provisions of IS: 1786(Latest revision) For each batch of steel delivered to site the contractor shall supply the Engineer-in-charge with manufacturer's certificate stating the process of manufacture and also the test sheets signed by the manufacturer giving the result of each mechanical test and the chemical composition.

3.8 WATER

Water to be used for mixing and curing shall be clear and free from injurious amounts of oils, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete or steel. Potable water is generally considered satisfactory for mixing concrete. The maximum permissible limits for solids shall be as given below:

- Organic : 300 mg/1
- Inorganic : 3000 mg/1
- Sulphates (as SO_4) : 500 mg/1
- Chlorides (as C1) : 1000 mg/1 for reinforced concrete
  250 mg/1 for prestressed concrete
- Suspended matter : 2000 mg/1
- pH : < 6

3.9 STORAGE OF MATERIALS

All materials shall be placed at site in a proper way so as to prevent their deterioration or intrusion of foreign matter and to ensure their satisfactory quality and fitness for the work. The storage space must also permit easy inspection, removal and re-storage of the materials. Materials though stored in approved godown must be subjected to acceptance test prior to their immediate use.

The cement shall be stored in a suitable weather-tight building to protect it from dampness and minimize warehouse deterioration. Each consignment of cement shall be stored separately so that it may be readily identified and inspected. Cement shall be used in the sequence in which it is delivered at site.

The contractor shall prepare and maintain proper records on site in respect of the delivery, handling, storage and use of cement and shall be made available for inspection by Engineer-in-charge at any time.

The cement more than 3 to 4 months old shall invariably be tested at contractor's cost to ascertain that it satisfies the acceptability requirements.

3.10 FORMWORK AND SURFACE FINISH FOR STRUCTURES

3.10.1 Construction Operation

Only rigid steel forms shall be used unless otherwise approved by the Engineer-in-charge. Formwork shall include all temporary or permanent forms of moulds required for forming the concrete which is cast-in-situ, together with all temporary construction required for their support.

The chamfers, beveled edges and mouldings shall be made in the formwork itself. Opening for fixtures and other fittings connected with services shall be provided in the shuttering as directed by the Engineer-in-charge.

3.10.2 Formed surfaces and finish

The formwork shall be made as to produce a finished concrete true to shape, lines, levels, plumb and dimensions as shown on the drawings, subject to the following tolerances unless otherwise specified in these documents or drawings or as directed by the Engineer-in-charge.

a)	Sectional dimension	+ 5 mm
b)	Plumb	+ 1 in 1000 of height
c)	Levels	+ 3 mm before any deflection has taken place.

Tolerances given above are specified for local aberrations in the finished concrete surface and should not be taken as tolerance for the entire structure taken as a whole or for the setting and alignment of formwork, which should be as accurate as possible to the entire satisfaction of the Engineer-in-charge. Errors if noticed in any lift/tilt of the structure after stripping of forms, shall be corrected in the subsequent work to bring back the surface of the structure to its true alignment.

3.11PREPARATION OF FORMWORK BEFORE CONCRETING

3.11.1 Special Provisions

Wherever the concreting in narrow members is required to be carried out within shutters of considerable depth, temporary openings in the sides of the shutters shall, if so directed by the Engineer-in-charge, be provided to facilitate the pouring and consolidation of the concrete. Small temporary openings shall be

provided as necessary at the bottom of shutters of walls and deep beams to permit the expulsion of rubbish etc.

Formation of blotches and stains due to detachment of formwork panel from the concrete when adjacent portion in the same lift is still adhering, shall not be allowed to occur, and for this purpose, all shutters shall be struck off at the same time.

3.12STEEL REINFORCEMENT FOR STRUCTURE

3.12.1 General

Steel reinforcement shall be stored in such a way as to avoid distortion and to prevent deterioration by corrosion. When directed by the Engineer-in-charge, the reinforcing bars shall be given a cement wash before stacking to prevent scales and rust.

The reinforcement bars bent and fixed in position shall be free from rust or scales, chloride contamination and other corrosion products. Effective methods of cleaning such as sand blasting will have to be used so that the steel is free from rust, scales and contamination.

3.12.2Bending of Reinforcement

Bending of reinforcement shall be done as per Bar Bending Schedule to be prepared and got approved by the contractor prior to commencement of work.

3.12.3 Placing of reinforcement

Reinforcement left projecting from newly placed concrete shall be supported in such a way that there is no sag or risk or damage to the newly placed concrete. The projecting bars which are likely to be exposed for a long time shall be protected by a thick coat of neat cement grout. These shall be thoroughly cleaned and wire brushed before depositing fresh concrete around it.

3.13CEMENT CONCRETE FOR STRUCTURES

3.13.1Grade of concrete

Only design mix concrete shall be used in the work. The design mix concrete shall have the minimum compressive strength of 150 mm cubes at 28 days according to the denomination of the grade the concrete e.g. M 35 grade concrete shall have the minimum characteristic compressive strength of 35 Mpa.

3.13.2Design mix concrete

The determination of the cement, aggregates and water to attain the strength specified in clause 5.11.1 above shall be made by designing the concrete mix in accordance with IS: 10262. The trial mixes for mix design shall be prepared with approved aggregates, cement and water.

Coarse aggregates of different sizes shall be combined in suitable proportion so as to result in an overall grading conforming to IS : 383.

Minimum six cubes shall be prepared from each trial mix for testing compressive strength at 28 days. Based upon the successful preliminary crushing and workability tests, the contractor shall submit mix proposals to the Engineer-in-charge who will have the right to accept any trial mix. The strength tests for concrete shall be done in accordance with IS : 516. All preliminary tests, approval, etc. shall be got done in advance by the contractor prior to commencement of actual work at site. Failure on the part of the contractor to do so and consequent delay in completion of the works will not entitle him for any compensation whatsoever, either financially or by way of extension of time.

3.13.3General

In proportioning concrete the quantity of both cement and aggregates shall be determined by weight. The cement shall be weighed separately from the aggregates. Water shall either be measured by volume in calibrated tanks or weighed. All measuring equipment shall be maintained in a clean and serviceable condition. The amount of mixing water shall be adjusted to compensate for moisture content in both coarse and fine aggregates. The moisture content in both coarse and fine aggregates shall be determined in accordance with IS : 2386(Part-III). Suitable adjustments shall also be made in the weights of aggregates to allow for the variation in weight of aggregates due to variation in moisture content.

3.13.4Production of concrete

The concrete shall be produced in a central batching and mixing plant producing at least 30 cum mixed concrete per hour. The batching plant shall be either fully or semi-automatic type. A semi-automatic batcher shall be charged by devices which are separately actuated manually to allow the material to be weighed but which are actuated automatically when the designated weight of each material has been reached. Automatic batcher shall be charged by devices which, when actuated by a single starter switch will automatically started when the designated weight of each material has been reached inter locked. A batching plant essentially consists of the following components.

- Storage bins for different sizes of aggregates and cement.
- Batching equipment
- Mixers
- Central panels
- Material feeding and elevating arrangements.

The compartments of storage bins shall be approximately of equal size. The cement compartment shall be centrally located in the batching plant. It shall be water-tight and provided with necessary air vent, aeration fittings for proper flow of cement, emergency cement cut off gate. The aggregate and sand shall be

charged by power operated centrally revolving chute. The entire plant from mixer floor upward shall be enclosed and insulated. The batch bins shall be constructed so as to be self cleansing during drawdown. The batch bins shall be general conform to the requirement of clause 4.0 of IS:4925.

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

3.13.5Mixing concrete

The concrete shall be mixed in power driven free fall tilting type mixer fitted with abrasion resistant replaceable liners and blades. The concrete shall be mixed for 1½ to 2½ minutes in the mixer depending upon the capacity of mixer. These mixing periods are based on standard speed of rotation of mixer and of the introduction of materials including water into the mixer. Mixing time shall be increased if and when charging and mixing operations fail to produce a concrete batch of uniform composition and consistency. The mixer in the batching plant shall be so arranged that mixing action in the mixers can be observed from the operator's station. The mixer shall be equipped with a mechanically or electrically operated timing, signaling and metering device which will indicate and assure completion of the required mixing period. The mixer shall have all other components as specified in IS:4925.

3.13.6Transportation, placing and compaction of concrete

Mixed concrete from the batching plant shall be transported to the point of placement by transit mixers or through concrete pumps. In case the concrete is proposed to be transported by transit mixer it shall not be less than 4 rev/min of the drum or greater than a speed resulting in a peripheral velocity of the drum 70 m/min at its largest diameter. The agitating speed of the agitator shall be not less than 2 rev/min nor more than 6 rev/min of the drum. The number of revolution of the mixing drum or blades at mixing speed shall be between 70 to 100 revolutions for a uniform mix, after all ingredients, have been charged into the drum. Unless tempering water is added, all rotation after 100 revolutions shall be at agitating speed of 2 to 6 rev/min and the number of such rotations shall not exceed 250. The general construction of transit mixer and other requirement shall conform to IS:5892.

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

Except where otherwise agreed to by the Engineer-in-charge, concrete shall be deposited in horizontal layers to a compacted depth of not more than 450 mm.

Unless agreed to by the Engineer, concrete shall not be dropped into place from a height exceeding 2 m. In order to avoid such situations chutes shall be used. The chutes shall be kept clean and used in such a way as to avoid segregation. Slope of the chute shall be so adjusted that concrete flows without the use of excessive quantity of water. The delivery end of chute shall be as close as possible to the point of deposit. The chute shall be thoroughly flushed with water before and after each working period and the water used for this purpose shall be discharged outside the formwork. The concrete shall be compacted by using immersion type vibrators. When the concrete is being continuously deposited to a uniform depth along a member, vibrator shall not be operated within one meter of free end of the advancing concrete. Every effort shall be made to keep the surface of the previously placed layer of concrete alive so that the succeeding layer can be amalgamated with it by the vibration process. In case the concrete in underlying layer has hardened to such an extent that it cannot be penetrated by the vibrator but is still fresh (that is, just after initial set), unimposed bond shall be achieved between the top and underlying layer by first satisfying the lower layer before the new concrete is placed by systematically and thoroughly vibrating the new concrete. The points of insertion of vibrator in the concrete shall be so spaced that the range of action overlap to some extent and the freshly filled concrete is sufficiently consolidated at all locations. The spacing between the dipping positions of vibrator shall be maintained uniformly throughout the surface of concrete so that concrete is uniformly vibrated. The vibrating head shall be regularly and uniformly inserted in the concrete so that it penetrates of its own accord and shall be withdrawn slowly whilst running so as to allow redistribution of concrete in its way and allow the concrete to flow back into the hole behind the vibrator. The vibrator head shall be kept in one position till the concrete within its influence is completely consolidated. Vibration shall be continued until the coarse aggregate particles have blended into the surface but have not disappeared. The contractor shall keep one additional vibrator in serviceable condition to be used in the event of breakdowns.

The vibrator head shall not be brought more than 200 mm near to the formwork as this may cause formation of water stagnations. The formwork shall be strong and great care shall be exercised in its assembly. It shall be designed to take up increased pressure of concrete and pressure variations caused in the neighbourhood of vibrating head which may result in excessive local stress on the formwork. The joints of the formwork shall be made and maintained tight and close enough to prevent the squeezing out of grout or sucking in of air during vibration. The formwork to receive concrete shall be cleaned and made free from standing water, dust, etc.

In case the reinforcement has mild scales or dirt the same shall be cleaned by wire brushes. No concrete shall be placed in any part of the structure until the approval of Engineer-in-charge has been obtained. If concreting is not started within 24

hours of the approval being given, it shall have to be obtained again from the Engineer-in-charge. Concreting shall be done continuously over the area between construction joints. Fresh concrete shall not be placed against concrete which has been in position for more than 30 minutes unless a proper construction joint is formed. When concreting has to be resumed on a surface which has hardened, it shall be roughened, swept, clean, thoroughly wetted and covered with a 13 mm thick layer of mortar composed of cement and sand in same ratio as in the concrete mix itself. This 13 mm layer of mortar shall be freshly mixed and placed immediately before placing of new concrete.

Where concrete has not fully hardened, all laitance shall be removed by scrubbing the net surface with wire or bristle brushes. Care shall be taken to avoid dislodgement of particles of coarse aggregate. The surface shall then be thoroughly wetted, all free water removed and then coated with neat cement grout. The first layer of concrete to be placed on this surface shall not exceed 150 mm in thickness and shall be well rammed against old work. Particular attention shall be given to corners and close spots.

3.14 : VARIOUSCLAUSES OF MoRTH

Sl. Nr.	Section Nr.	Section Title	Clause (Morth VTH Revision)
1.	100	General	102, 105, 106, 107, 108, 111, 112, 114, 115, 121, and 126
2.	200	Site Clearance	201 and 202
3.	300	Earthwork, Erosion Control and drainage.	301, 305, 306 and 309
4.	400	Granular Sub-Bases	401
5.	600	Concrete Pavement	601,602and 603.
6.	800	Traffic Signs, Markings and other Road Appurtenances	801, 803 and 804
7.	900	Quality Control for Road works	901, 903
8.	1000	Materials for	1002, 1006, 1007, 1008, 1009,

Sl. Nr.	Section Nr.	Section Title	Clause (Morth VTH Revision)
		Structures	1012, 1013, 1014 and 1015
9.	1100	Pile Foundations	1101, 1103, 1104, 1107, 1113, 1115, 1118 & 1119
10.	1500	Form work	1501, 1502, 1503, 1504, 1506, 1508, 1509, 1510 & 1513
11.	1600	SteelReinforcement (untensioned)	1602, 1604, 1605, 1606 & 1607
12.	1700	Structural Concrete	1703, 1704, 1705, 1707, 1709, 1710, 1712, 1713 & 1715
13.	2200	Substructure	2204, 2210
14.	2300	Superstructure	2305, 2306
15.	2600	Expansion Joints	2601, 2606 and 2609
16.	2700	Wearing Coat & Appurtenances	2702, 2703,2706 and 2709
17.	3000	Maintenance of roads	3001,3002, 3004 and 3005
18.	2000	Bearings	2005
19.	1800	Prestressing	1801,1802, 1803,18041805, 18061807, 1808

Additional Specifications_____

The Clauses A-1 to A-7 have been added to the ”SPECIFICATIONS FOR ROAD AND BRIDGE WORKS” -2013.

CLAUSE A-1 PLANTATION OF TREES AND HEDGES

CLAUSE A-2 LEVELLING AND GRADING ROAD SIDE LAND

CLAUSE A-3 UTILITY DUCTS

CLAUSE A-4 SPECIFICATIONS FOR SCARIFICATION OF EXISTING PAVEMENT AND PROVIDING OVERLAY WITH RANULAR BASE/DBM.

CLAUSE A-5 REFLECTIVE PAVEMENT MARKERS (ROAD STUDS)

CLAUSE A-6 CURING USING LIQUID MEMBRANE FORMING COMPOUND

CLAUSE A-7 PAVEMENT QUALITY CONCRETE

In the absence of any definite provisions on any particular issue in the aforesaid Specifications, reference may be made to the latest codes and specifications of IRC and BIS in that order. Where even these are silent, the construction and completion of the works shall conform to sound engineering practice as approved by the Engineer and in case of any dispute arising out of the interpretation of the above, the decision of the Engineer shall be final and binding on the Contractor.

However, work shall be executed ads per latest edition of MoRTH. Where any specification of MORTH/ IRC/ BIS are silent then best international practice shall be followed including BRITISH / AASTHO Standards.

SECTION – 5

(FORM OF AGREEMENT)

SECTION -5

FORM OF AGREEMENT

This AGREEMENT is made on …… day of …….. 2021 between (Name of Employer ……..) (Mailing Address of Employer …….) hereinafter called "the Employer", of the one part (Name of Contractor …….. …… (hereinafter called "the Contractor) of the other part.

Whereas the Employer is desirous that certain works should be executed viz. (brief description work)……... and has by Letter of Acceptance dated (Date of letter of acceptance) …… accepted Bid by the Contractor for the execution completion and maintenance of such works. NOW THIS AGREEMENT WITNESSED AS FALLOWS.

In this Agreement words and expressions shall have the same meaning as are respectively assigned to them in the conditions of contract hereinafter referred to.

The following documents shall be deemed to form and be read and construed as parts of the agreement viz:.

a) The Letter of Acceptance.
b) NIT, Technical Bid, Bid declaration form, other information, Special Conditions, RTPP Annexures.
c) Instructions to Bidders (Section -1).
d) General Conditions of Contract (Section – 2).
e) Other Conditions of Contract (Section - 3).
f) Technical Specification (Appendix-A) (Section – 4).
g) Form of Agreement (Section – 5)
h) Bank Guarantee (Section – 6)
i) G-Schedule (Section – 7)
j) Drawings (Section – 8)

3. The aforesaid documents shall be taken as complementary and mutually explanatory of one another.
4. In consideration of the payment to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute, complete and maintain the works in conformity in all respects with the provisions of the Contract.
5. The employer thereby covenants to pay the Contractor in consideration of the execution, completion and maintenance of the work of Contract Price at the time and in the manner prescribed by the Contract.

IN WITNESS whereof the parties have caused their respective Common Seals to be hereunto affixed (or have hereunto set their respective hands and seals) the day and year first above written, SIGNED SEALED AND DELIVERED by the.

Said …….	Said ……..
(Name ……..)	(Name ……..)
on behalf of the Contractor	on behalf of the Contractor
In the presence of :	In the presence of :
Name:	Name:
Address	Address

This form is included in the bid documents only for the information of the bidders. Only the successful bids will in due course be required to complete the form.

SECTION – 6

(Form of Bank Guarantee)

Section - 6

Form of (Bank Guarantee) -En cashable at branch of the bank in Jaipur City.

To
Secretary,
Jaipur Development Authority,
Jaipur

Sub:
Bank Guarantee No. _____ dated _____ for [amount of Security in figures] [in words] on behalf of _____ [Name of the Bidder] against the Bid Security for Bid for **Traffic Improvement and Beautification work at B2 Byepass Junction, Jaipur, Rajasthan**.

WHEREAS, _____ [name of Bidder with address] **(hereinafter called "the Bidder")** has submitted his Bid dated .....for the work of**Traffic Improvement and Beautification work at B2 Byepass Junction, Jaipur, Rajasthan**. **(Name of Work)** (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that we _____ _____ (Name of Bank) of having our registered office at _____[name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto Secretary, Jaipur Development Authority. (Hereinafter called "the Employer") in the sum of Rupees _____ **[Amount of Security in figures]** _____ (in words) only for which payment will and truly to be made to the said Employer, the Bank binds itself, its successors, and assigns by these presents.
That on demand of JDA, this Bank Guarantee is encashable at following branch in Jaipur City.
1. Name of Bank:
2. Name of the branch with branch code:
3. Address:
4. E-Mail Id:
5. Telephone No.
6. Fax No.:

SEALED with the Common Seal of the said Bank this _____ day of _____ of 20____.

THE CONDITIONS of this obligation are:

(1) If the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid;
(2) If the Bidder refuses to accept the correction of errors in his bid;
(3) If the Bidder, having been notified of the acceptance of his Bid by the Employer during the period of Bid validity;
   (a) Fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, or
   (b) Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders;

We undertake to pay to the Employer upto the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or more of the above conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date 30 days after the date of expiration of the Bid Validity, as stated in the Instructions to Bidders, or any such extension thereto as may be agreed by the Bidder, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

The amount covered under the above Bank Guarantee shall be automatically be credited in the accounts of JDA in ICICI Bank, JDA Campus, Jaipur through **ISFC code No ICICI 006754. Bank Account No. 675401700518**on the date of expiry or its validity, unless the agencies get it re-validated well before its expiry date or produce NOC from JDA in written for its release.

Date _____ Signature of the Bank_____

Witness_____ Seal _____
[Signature, Name and Address]

[Note: To be furnished on appropriate non-judicial stamps.]

SECTION – 7

(SAFETY, HEALTH and ENVIRONMENT MANAGEMENT CLAUSE)

LABOURSAFETYPROVISIONS

1.0 Suitable scaffolds should beprovided forworkmen for allworks that cannot safelybe done from the ground, or from solid constructionexcept such short periodworkas can be done safelyfrom ladders.Whena ladderis used an extra mazdoorshall be engaged forholding theladder andif the ladder is used for carrying materials as well, suitable footholds and hand holds shall be provided on the ladder and the ladder shall be given an inclinationnotsteeperthan¼to1 (1/4horizontaland1vertical).

2.0 Scaffoldingor staging morethan 3.6m(12feet) abovethe groundorfloor, swungor suspended froman overhead support or erected with stationery support shall have a guard rail properly attached or bolted, braced and otherwisesecuredatleast90cm.(3feet)highabove the flooror platform of such scaffolding or staging andextending along theentire length of the outsideandends thereofwith only such openingas maybenecessaryfor the deliveryof materials.Such scaffoldingor stagingshallbe so fastened astopreventitfromswayingfromthebuildingorstructure.

3.0 Workingplatforms, gangways,and stairways should be so constructedthat theyshouldnotsagundulyorunequally,andif theheightof theplatformor thegangwayorthestairwayismorethat3.6m(12feet)abovegroundlevelor floor level, they should beclosely boarded, should haveadequate width &shouldbesuitablefastenedasdescribedin(2.0)above.

4.0 Everyopening in the floor of a building or in a working platform shall be provided with suitable meanstopreventthefall of persons ormaterials by providingsuitablefencingor railing whose minimumheightshallbe 90cm (3feet).

5.0 Safe means of accessshall beprovided to all working platforms andother working places. Every ladder shall besecurely fixed. No portable single laddershallbe over9m. (30 feet)in lengthwhile the widthbetween side railsin rungladdershallin no casebelessthan 29cm.(11.5")forladder up to and including 3m (10 feet) in length. Forlongerladders this widthshould beincreased atleast 1/4" foreachadditional 30cm (1ft.) of length. Uniform stepspacing shall not exceed 30 cm (12"). Adequate precautions shallbetaken toprevent dangerfromelectricalequipment.No materialson anyof thesitesof theworkshallbesostackedorplacedastocausedanger orinconveniencetoanypersonorthepublic.Thecontractor shall provideall necessaryfencingandlightstoprotect the publicfromaccident,andshallbe bound to bear the expenses of defense of every suit, action or other proceeding at law that may be brought by any person forinjury sustained owingtoneglect of theaboveprecautionsandtopayanydamagesandcost whichmay be awarded in anysuchsuit, action orproceedings toanysuch person or which may, with the consent of the Contractor, be paid to compensateanyclaimby anysuchperson.

6.0 **EXCAVATIONAND TRENCHING**

Alltrenches,1.2mts.(fourfeet)ormoreindepth,shallatalltimesbesupplied withatleastoneladderfor each30m.(100feet)in lengthorfractionthereof, laddershallbeextendedfrombottomof thetrenchtoatleast90cm(3feet) abovethesurfaceof the ground. Theside of thetrenches,whichare 1.5 m. (5feet) or more in depth shall be stepped backto give suitable slope or securely held by timber bracing, so as to avoid the danger or sides to collapsing.Theexcavatedmaterialsshallnotbeplacedwithin 1.5m (5 feet) oftheedgesofthetrench orhalfofthedepthofthetrench whicheverismore. Cuttingshallbedonefromtoptobottom.Underno circumstancesundermining orundercuttingshallbedone.

7.0 Demolition - Before any demolition work is commencedandalso during the progressoftheworkfollowingprecautionsshallbeobserved:

7.1 All roadsandopenareas adjacenttotheworksite shall either beclosed or suitablyprotected.

7.2 No electriccableorapparatus whichislikelyto be a source of dangerora cableorapparatususedby theoperatorshallremainelectricallycharged.

7.3 All practical steps shall be taken to prevent danger to persons employed fromrisk orfireor explosion orflooding. No floor, rooforother part of the buildingshallbeoverloadedwithdebrisormaterialsastorenderitunsafe.

8.0 All necessary personal safety equipmentsas considered adequate by the Engineer-in-chargeshouldbekeptavailablefortheuseof personsemployed on thesiteandmaintainedin aconditionsuitablefor immediateuse,and thecontractorshouldtakeadequatesteptoensureproperuseof equipment by those concerned. The following safety equipment shall be invariablyprovided.

8.1Workersemployed on mixing asphaltic materials, cement andlime mortars shallbeprovidedwithprotectivefootwearandprotectivegoggles.

8.2 Thoseengaged in whitewashingand mixingor stackingof cementbagsor any materials which are injurious to the eye shall be provided with protectivegoggles.

8.3 Those engagedinweldingworksshallbeprovidedwithweldersprotective eye shields.

8.4 Stonebreakers shall be providedwith protective goggles and protective clothingandseatedatsufficientlysafeinterval.

8.5 Whenworkersareemployedforworksin sewersandmanholes,whichare in activeuse, theContractorsshallensurethatthemanholecoversareopened andventilatedat-leastforanhourbeforetheworkersareallowedto getinto themanholes,andthemanholessoopenedshallbecordoned off withsuitable railing and provided with warning signals orboards toprevent accident the public. In addition, the contractor shall ensure that the following safety measuresareadheredto:

a. Entryforworkersintothe sewer lineshall notbeallowed exceptunder supervisionoftheJEoranyotherhigherofficer.

b. Atleast5to6manholesupstreamanddownstreamshouldbekeptopen forat least 2 to 3 hours before any man is allowed toenter into the manholesforworkinginside.

c. Beforeentry, presenceof Toxic gasesshouldbetested by insertingwet leadacetatepaperwhichchangescolorinthepresenceof suchgasesand givesindicationoftheirpresence.

d. PresenceofOxygenshouldbeverifiedbyloweringadetectorlampintothe manhole.In case,no Oxygenisfoundinsidethesewerline,workersshould besentonlywithOxygenkit.

e. Safetybelt with rope should beprovided to the workers. Whileworking inside themanholes suchropeshould behandled by twomen standing outsidetoenablehimtobepulledoutduringemergency.

f. Thearea shouldbebarricadedorcordonedoff by suitablemeanstoavoid mishaps of any kind. Proper warning signs should bedisplayed for the safetyof the publicwhenever cleaningworksareundertakenduringnight orday.

g. No smokingor open flames shall beallowed neartheblocked manhole beingcleaned.

h. Themalbaobtainedon accountof cleaningof blockedmanholesandsewer lines should be immediately removed to avoid accidents on account of slipperynatureofthemalba.

i.Workersshouldnotbeallowedtoworkinsidethemanholecontinuously. Heshouldbegivenrestintermittently.TheEngineer-In-chargemaydecide thetimeup towhichaworkermaybeallowedtoworkcontinuouslyinside the manhole.

j. Gas maskswith Oxygen Cylinder should be kept at site for use in emergency.

k. Air-blowersshouldbe used forflow of freshairthroughthemanholes. Whenevercalledfor,portableair-blowersarerecommendedforventilating themanholes.TheMotorsforthese shallbevapourproofandof totally enclosedtype. Non sparkinggas enginesalsocouldbe used but they shouldbeplacedat-least2 metresawayfromthe openingand on the leewardsideprotected from wind so that they will not be a sourceof frictionon anyinflammablegasthatmightbepresent.

l. The workersengaged for cleaning the manholes / sewersshould be properlytrainedbeforeallowingtoworkinthemanhole.

m. The workers shall be provided with Gumboots or non-sparking shoes, bumphelmetsandglovesnonsparkingtools,safetylightsandgasmasks andportable air blowers (whennecessary). Theymust besupplied with barriercreamforanointingthelimbsbeforeworkinginsidethesewerlines.

n. Workmendescendingamanholeshalltryeachladdersteporrungcarefully beforeputtinghisfull weighton ittoguardagainstinsecurefasteningdue tocorrosionoftherungfixedtomanholewell.

o. If amanhasreceivedaphysicalinjury,heshouldbebroughtoutof the sewerimmediatelyandadequatemedicalaidshouldbeprovidedtohim.

p. Theextent towhichtheseprecautionsaretobetakendependon individual situationbutthedecisionof theEngineer-In-chargeregardingthestepsto betakeninthisregardinanindividualcasewillbefinal.

8.6 TheContractorshallnotemploymenandwomenbelowtheageof 18years on the workof paintingwithproducts containingleadin anyformwherever menabovethe age of 18are employed on the workof lead painting the followingprecautionsshouldbetaken.

8.6.1 No paintcontainingleadorleadproductsshallbeusedexceptin theformof pasteorreadymadepaint.

8.6.2 Suitablefacemasksshouldbesuppliedforuseby theworkerswhen paintis appliedin theformof sprayorasurfacehavingleadpaintisdryrubbedand scrapped.

8.6.3 Overallsshall be supplied by the Contractor to the workmen and adequatefacilitiesshall beprovided toenable the working painters towash duringthecessationofwork.

8.6.4.1a)Whitelead,sulphateorleadworkproductscontainingthose pigmentsshall notbeusedin paintingoperationexceptin theformof pasteorof paints readyforuse.

b) Measuresshallbetaken wheneverrequiredin ordertopreventdanger arisingfromtheapplicationofpaintintheformofspray.

c) Measuresshallbetaken,wheneverpracticabletopreventdangerarisingout ofdustcausedby dryrubbingdownandscrapping.

8.6.4.2a) adequatefacilities shall be provided to enable working painter to wash duringandon cessationofwork.

b)Suitablearrangementsshallbemadetopreventclothingputoff during workinghoursbeingspoiledby paintingmaterials.

8.6.4.3a) Casesof leadpoisoningandof suspectedleadpoisoningshallbenotified and shall be subsequently verified by a medical man appointed by the competentauthoritiesofJ.D.A.

b)TheJ.D.Amayrequirewhennecessaryamedicalexaminationofworkers.

c)Instructionswithregard tothe specialhygienicprecautionstobetakenin the paintingtradeshallbedistributedtoworkingpainters.

9.0 Whenthe workis donenear anyplace wherethere is risk of drowning, all necessary equipmentsshould be provided and kept ready foruse and all necessary steps taken for prompt rescue of any person in danger and adequate provisions should be made forprompt first aid treatment forall injurieslikelytobesustainedduringthecourseofthework.

10.0 Use of hoistingmachinesand tackleincluding theirattachment encourage and supportsshallconformtothefollowingstandardofconditions.

10.1 a)theseshallbeof goodmechanicalconstruction,soundmaterialandadequate strength andfreefrompatent, defectsandshallbekeptin good working order.
b)Everyropeusedin hoistingorloweringmaterialsorasameansof suspension shall be of durable quality and adequate strength, and free from patent defects.

10.2 Everycrane driveror hoistingappliance operatorshallbeproperlyqualified andno personundertheageof 21yearsshouldbein-chargeof anyhoisting machineincludinganyscaffolding,winchorgivingsignalstooperator.

10.3 In case of every hoisting machine and of every chain ring hook, shackle swiveland pulley blockused in hoisting orasmeansof suspension thesafe workingloadshallbeascertainedby adequate means. Everyhoistingmachineand allgear referredtoaboveshallbe plainlymarked withthe safeworking load.In caseof ahoistingmachinehavingavariablesafeworkingload,each

safe working load andthe conditions under which it is applicable shall be clearlyindicated.No partof anymachineoranygearreferredtoabovein this clauseshallbeloadedbeyondthesafeworkingloadexceptfor thepurposeof testing.

10.4 In caseof J.D.Amachines, thesafe working load shall be notified by the Engineer-in-Charge. As regardsContractor's machines the Contractorshall notify the safe working load of the machine to the Engineer-in-charge wheneverhe brings anymachinery tosite of workand get verified by the Engineer-in-Charge.

11.0 Motors gearing, transmission electricwiring and other dangerousparts of hoisting appliances should be provided with efficient safeguard. Hoisting appliances should beprovided with such means as will reducetothe minimum therisk of accidental descentof theload. Adequateprecautions shouldbetakentoreducetheminimumtherisk of anypartof asuspended load becoming accidentally displaced. When workers are employed on electrical installations, whichare already energized, insulating mats,wearing apparel,suchasglovessleevesandbootsasmaybenecessarybeprovided. The worker should not wear any rings, watches and carry keys or other materials,whicharegoodconductors ofelectricity.

12.0 Allscaffold, ladders, andothersafety devices mentioned ordescribed herein shall be maintained in safe condition and no scaffold ladder or equipment shall be altered or removed while it is in use. Adequatewashingfacilities shouldbeprovidedatornearplacesofwork.

13.0 These safety provisions should bebroughttothenotice of allconcerned by display on anotice boardat a prominent place of work spot. Theperson responsibleforcomplianceof thesafetycodesshall benamedthereinby the contractor.

14.0 To ensure effective enforcement of the rulesand regulations relating to safetyprecautionsthearrangementsmadeby the Contractorshallbeopen toinspectionby J.D.AOfficialortheirrepresentatives.

15.0 NotwithstandingtheaboveClausesfrom(i)to(xiv)thereisnothingin these to exempt the contractor fromthe operations of any other Act or Rule in forceintheRepublicofIndia.

MODELRULESFORTHE PROTECTIONOF HEALTHAND SANITARYARRANGEMENTSFORWORKERS

1.0 APPLICATION

These rules shall apply to all building and construction works in which 20 (twenty) or more workersare ordinarily employed or are proposed to be employedin anydayduringtheperiodduringwhich the contractor workis inprogress.

2.0 DEFINITION

Work placemeans a placewhere twenty or more workers are ordinarily employedorare proposedto be employedin connectionwith construction work on any day duringthe periodduringwhich the contract work isin progress.

3.0 FIRST-AIDFACILITIES

3.1 Atevery workplacefirstaidfacilitiesshallbeprovidedandmaintained,so astobeeasilyaccessibleduringworkinghours, First-Aidboxesattherate of notlessthan oneboxper150 contract labourorpart thereofordinarily employed.

3.2 The First-Aidboxes shallbe distinctlymarked with a red cross on white backgroundandshallcontainthefollowingequipments:

3.2.1 a)Forworkplacesinwhichnumberofcontractlabouremployeddoes not exceed50,EachFirst-Aidboxshallcontainthefollowingequipments:

i.Smallsterilizeddressings.

ii.Mediumsizesterilizeddressings.

iii.Largesizesterilizeddressings.

iv.Largesterilizedburndressings.

v. 1(30ml)bottlecontainingatwopercentalcoholicsolutionofiodine.

vi.1(30ml)bottlecontainingsalvolatilehavingthe doseandmodeof administrationindicatedon the label.

vii.1snakebitelancet.

viii.1(30gms)bottleofpotassiumpermanganatecrystals.

ix.1pairofscissors.

x. 1copyof theFirst-Aidleaf-letissuedby theDirectorGeneral,Factory AdviseService&LabourInstitute,GovernmentofIndia.

xi.1bottlecontaining100tablets(eachof5grams)ofaspirin.

xii.Ointmentforburns.

xiii.Abottleofsuitablesurgicalantisepticsolution.

3.2.2 Forworkplacesin whichthe number of contractlabourexceed50.EachFirst-Aidboxshallcontainthefollowingequipments:

i)12smallsterilizeddressings.

ii) 6mediumsizesterilizeddressings. iii)

6largesizesterilizeddressings.

iv) 6largesizesterilizedburndressings.

v) 6(15gms)packetsterilizedcottonwool.

vi) 1(60ml.)bottlecontainingatwopercentiodinealcoholicsolution.

vii)1 (60 ml.)bottlecontainingsalvolatilehavingthe dose and mode of administrationindicatedon the label.

viii)1-rollofadhesiveplaster. ix)

1snake-bitelancet.

x) 1(30gms.)Bottleofpotassiumpermanganate crystals.xi)

1pairofscissors.

xii)1 copyof theFirst-Aidleaf-letissuedby theDirectorGeneral,Factory AdviceServiceandLabourInstitutes,GovernmentofIndia. xiii)

Abottlecontaining100tablets(eachof5grams)ofaspirin.

xiv)Ointmentforburns.

xv)Abottleofsuitablesurgicalantisepticsolution.

3.3 Adequate arrangements shallbe made for immediate recoupment of the equipmentwhennecessary.

3.4 Nothingexceptthepresribedcontentsshallbekeptinthe FirstAidbox.

3.5 TheFirstAidboxshallbekeptin chargeof aresponsibleperson whoshall alwaysbereadilyavailableduringtheworkinghoursoftheworkplace.

3.6 Apersonin chargeof theFirst-Aidboxshall beapersontrained in First-Aid treatment in work places wherethe number of labouremployed is 150 or more.

3.7 In work places wherethe numberof labouremployed is 500 or more and hospitalfacilities are not availablewithin easy distanceof the works,first- Aid Posts shall be established and run by a trained Compounder. The Compounder shall beon dutyand shall beavailable at all hours when the workersareatwork.

3.8 Whereworkplaces aresituated in places, which are not towns of cities, a suitable motor transport shall be kept readily available to carry injured personorpersonssuddenlytakenilltothenearesthospital.

4.0 DRINKINGWATER

4.1 In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

4.2 Wheredrinking water is obtained froman intermittent public water supply, each workplaceshallbeprovidedwith storage wheresuch drinkingwater shallbestored.

4.3 Everywatersupplyof storageshallbeatadistanceof notlessthan50feet fromany latrinesdrainorother sourceof pollution,wherewaterhastobe drawnfroman existingwellwhich iswithin such proximityof latrine,drain oranyothersourceof pollution,the wellshallbeproperlychlorinatedbefore waterisdrawn fromitfordrinking.Allsuch wellsshallbeentirelyclosedin andbeprovidedwithatrap-doorwhichshallbedustandwater-proof.

4.4 A reliable pumpshall befitted to each covered well,trap-doorshall bekept locked and opened only for cleaning or inspection which shall be done at leastonceamonth.

5.0WASHINGFACILITIES

5.1 In every work place adequate and suitable facilities for washing shall be providedandmaintainedfortheuseoflabouremployedherein.

5.2 Separate andadequate screeningfacilities shallbe provided forthe use of maleandfemaleworkers.

5.3 Such facilities shall be conveniently accessible and shall be kept clean and hygieniccondition.

6.0 LATRINESAND URINALS

6.1 Latrinesshallbeprovidedineveryworkplaceon thefollowingscale,namely:

a) Wherefemalesareemployedthereshallbeatleastonelatrineforevery 25females.

b) Wheremalesareemployed,thereshallbe atleastonelatrineforevery25 males.

Providedthatwhere thenumberof malesorfemalesexceeds100,itshallbe sufficientifthereisonelatrinefor25malesorfemales,asthecasemaybe, uptothefirst100,andoneforevery50thereafter.

6.2 Everylatrineshallbeundercoverandsopartitionedoff astosecureprivacy, andshallhaveaproperdoorandfastenings.

6.3 Constructionof Latrines: Theinside wallsshall beconstructedof masonryor some suitable heat resisting non-absorbent materials and shall be cement washed inside and outside at least once a year. Latrine shall not bea standardlowerthanbore-holesystem.

6.4 (a)Where workers of both sexes are employed, there shall be displayed outsideeach blockof latrineandurinal,anoticein thelanguageunderstood by themajority of the workers"For Men only" or "For Women only" as the casemaybe.

(b)Thenoticeshallalsobearthefigureof manorof awoman,asthecase maybe.

6.5 There shall be at least one urinal for male workersupto 50 and one for femaleworkersupto50employedatatime.Providedthatwherethenumber of male or female workmen,as the casemaybe, exceeds500, it shall be sufficientifthereisoneurinalforevery50malesorfemalesuptothefirst500 andoneforevery100orpartthereof,thereafter.

6.6a) Thelatrines and urinals shall be adequately lighted and shall be maintainedinacleanandsanitaryconditionatalltimes.

b) Latrinesandurinalsother thanthose connectedwith a flushsewerage systemshallcomplywiththerequirementsofthePublicHealthAuthorities.

6.7 Water shall be provided by means of a tap or otherwise so as to be convenientlyaccessibleinornearthelatrinesandurinals.

6.8 DisposalofExcreta

Unlessotherwisearranged forby the local sanitaryauthorityarrangements for proper disposalof excreta by incinerationat the workplaceshallbe made by means of a suitable incinerator. Alternatively, excreta may be disposed offby putting alayer of night soilat the bottom of apuccatank prepared forthepurposeandcoveringitwitha15cm layerof wasteorfor refuseandthencoveringitwith a layerof earth forfortnight(whenitwill turnintomanure).

6.9 TheContractor shall,athisownexpense, carryout all instructionissuedto him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the Contractor's workmen or employeeson thesite.The Contractor shallbe responsibleforpayment of anychargeswhichmay be levied by Municipal orCantonment Authority for executionofsuchworkon hisbehalf.

7.0 PROVISIONOF SHELTERDURINGREST

Ateveryplace,thereshallbeprovided,freeof cost,foursuitablesheds,two formalesandtheothertwoforrestseparatelyforthewomen labour.Theheightofeachsheltershallnotbelessthan3metersfromthefloor levelto thelowestpartoftheroof. Theseshallbekeptcleanandthe space providedshallbeon thebasisof0.6sqm.perhead.

Provided that the Engineer-in-Charges may permit, subject to his satisfaction, aportionof the buildingunder constructionorother alternative accommodationtobeusedforthepurpose.

8.0 CRECHES

8.1 A every work place,at which 20 or more women workers are ordinarily employed,thereshallbeprovidedtworooms of reasonabledimensionsfor theuseoftheirchildrenundertheageofsixyears.Oneroomshallbeused as aplayroomforthechildrenandtheotherastheirbedrooms.

Theroomsshallbeconstructedon standardnotlowerthan thefollowing:
i)Thatchedroof

ii) Mud floorandwalls.

iii) Planksspreadoverthemudfloorandcoveredwithmatting

8.2 The rooms shallbe providedwithsuitableand sufficientopeningsforlight andventilation. Thereshall beadequate provision of sweeperstokeepthe placesclean.

8.3 The Contractor shall supply adequate number of toys and games in the playroomandsufficientnumberofcotsandbeddingsinthe bed-room.

8.4 TheContractorshallprovideoneAyaatolook afterthechildrenin thecrèche whenthenumberof womenworkersdoesnotexceed50;andtwowhen,the numberofwomenworkersexceed50.

8.5 Theuse oftherooms/earmarkedas crechesshallberestrictedtochildren, theirattendantandmotherofthechildren.

9.0 CANTEENS

9.1 In every workplacewherethe workregardingtheemploymentof contract labourislikely to continuefor six months and whereincontract labournumberingone hundred or more are ordinarilyemployed,an adequate canteenshallbeprovidedby theContractorfortheuseofsuchlabour.

9.2 Thecanteenshallbemaintainedby theContractorinanefficientmanner.

9.3 Thecanteen shallconsistof atleastadininghall,kitchen,andstoreroom, pantryandwashingplacesseparatelyforworkersandutensils.

9.4 The canteen shall be sufficiently lighted at all times whenany person has accesstoit.

9.5 Thefloorshallbemadeof smoothandimperviousmaterialandinsidewalls shallbelimewashedorcolourwashedatleastonceineachyear.

Providedthattheinsidewallsof thekitchenshallbelime-washedeveryfour months.

9.6 The premises of the canteen shall be maintained in a clean and sanitary condition.

9.7 WasteWatershallbecarriedawayin suitablecovereddrainsandshallnot beallowedtoaccumulatesoastocauseanuisance.

9.8 Suitable arrangements shallbe made for the collection and disposal of garbage.

9.9 Thedininghallshallaccommodateatatime30personsofthelabourworkingat time.

9.10 Thefloorarea of thedining hall, excludingtheareaoccupied by theservice counterandanyfurniture exceptables andchair shall notbeless thanone squaremetreperdinnertobeaccommodated.

9.11 a)A portionof thedininghall,andservicecountershallbepartitionedoff andreservedforwomenworkersinproportiontotheirnumber.

b) Washingplacesfor women shallbe separateand screened to secure privacy.

9.12 Sufficienttables,stool,chairsorbenches shallbeavailableforthe number ofdinnerstobeaccommodated.

9.13.1a) Thereshallbe providedand maintainedsufficientutensils,crockery, furniture andanyotherequipment necessary forthe efficient running of the canteen.

b)Thefurniture,utensilsandotherequipmentshallbemaintainedin aclean andhygienicccondition.

9.13.2a)Suitablecleanclothesforthe employeesservingin thecanteenshallbe providedandmaintained.
b)A servicecounter,if provided,shallhavetopof smoothandimpervious material.

c) Suitablefacilities includingan adequate supplyof hot water shallbe providedforthecleaningofutensilsandequipment.

9.14 The food stuffs and other items to be served in the canteen shall be in conformitywiththenormalhabitsofthelabour.

9.15 The charge for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit' No loss' and shall be conspicuously displayedinthe canteen.

9.16 In arrivingatpriceof foodstuffs,andotherarticlesservedin thecanteen, the following items shall not be taken into consideration as expenditure, namely:

a) The rentoflandbuilding;

b) Thedepreciationandmaintenancechargesforthebuildingandequipment providedforthecanteen;

c) The costof purchase, repairand replacementof equipmentincluding furniture,crockery,cutleryandutensils;

d) Thewaterchargesandotherchargesincurredforlightingandventilation;

e) Theinterestandamountsspenton theprovisionandmaintenanceand equipmentprovidedforinthecanteen;

9.17 Theaccountspertainingtothecanteenshallbeauditedonceevery12 months by registeredaccountants andauditors.

10.0 ANTIMALARIALPRECAUTIONS

The Contractor shallat hisown expense, conform to all anti-malarial instructionsgiventohimby theEngineer-in-Chargeincluding the filling up ofanyborrowspitswhichmayhavebeendugby him.

11.0 AMENDMENTS

J.D.Amay fromtime totime, addtooramendthese rules andissue such directions as it may consider necessary for the purpose of removingany difficultywhichmayariseinthe administrationhereof.

CONTRACTOR'SLABOURREGULATIONS

1.0 SHORTTITLE

Theseregulationsmaybecalledthe Contractor"LabourRegulations".

2.0 Definitions

2.1 "Workman"means any person employedby theJ.D.A or itsContractor directlyor indirectlythrough a sub-contractor, with or withoutthe knowledge,of theJ.D.Atodo anyskilled,semi-skilled,un-skilled,manual, supervisory,technicalorclericalworkforhireorreward,whether,theterms ofemploymentareexpressedorimpliedbutdoesnotincludeanyperson-

a)	Who isemployedmainlyin a managerialor administrative capacity;or
b)	Who being employed in a supervisory capacity draws wages exceeding Rupees Two Thousand Five hundred per person or exerciseseitherby thenatureof thedutiesattachedtotheoffice or by reason of powers vested to him, functions mainly of managerialnature.
c)	Who is an out worker, that is to say, a person to whom any articles or materials are given out by or on behalf of the principal employer to be made up cleaned, washed, altered, ornamental finished, repaired, adopted or otherwise processed for sale for the purpose of the trade or business of the principal employer and the process is to be carried out either in the home of the out worker or in some other premises, not being premises under the control and management of the principal employer.

2.2"FairWages"means wages whether fortimeorpieceworkfixedandnotified undertheprovisionsofthe minimumWagesActfromtimetotime.

2.3 "Contractor"shall include everypersonwhoundertaketoproducea given resultotherthanameresupplyof goodsorarticlesof manufacturethrough labourorwhosupplieslabourforanyworkandincludesasub-contractor.

2.4 "Wages"shallhavethesamemeaningasdefinedin thePaymentof Wages Act.

2.4.1 Normallyworkinghours ofanadultemployeeshouldnotexceed9hoursa day.Theworkingdayshallbesoarrangedthatinclusiveof intervalforrest, ifany,itshallnotspreadovermore than12hourson anyday.

2.4.2 Whenanadultworkerismadetoworkformorethan9hourson anydayor formorethan48hoursin anyweekheshallbepaidovertimefortheextra hours putinby himatdoubletheordinaryrateofwages.

2.4.3.1 Everyworkershallbegivenaweeklyholidayon aSunday,in accordance withtheprovisionsoftheMinimumWages(Central)Rules1960 asamended fromtimetotime,irrespectiveof whethersuchworker isgovernedby the MinimumWagesActornot.

2.4.3.2 Whether the Minimum Wages prescribed by the Governmentunder the MinimumWagesActarenotinclusiveof the wagesfortheweeklydayof rest,theworkershallbeentitledtorestdaywagesattherateapplicableto thenextprecedingday,providedhehasworkedunderthesamecontractor foracontinuousperiodofnotlessthan6days.

2.4.3.3 Whereacontractorispermittedby theEngineer-in-Chargetoallowaworker toworkon anormalweeklyholiday,heshallgrantasubstituteholidayto himforthewholedayon oneof the fivedays immediatelybeforeorafter thenormal weekly holidays and paywages to such workerforthe work performed on thenormalweeklyholidayatovertimerate.

3.0DISPLAYOF NOTICEREGARDING-WAGES,ETC.

Thecontractor shall beforehecommenceshis workon contract,display and correctlymaintainandcontinuetodisplayandcorrectlymaintainina cleanand legibleconditionin conspicuousplaceson thework,noticesin Englishand in the localIndian languages spokenby themajority of the workers, givingthe minimumratesofwagesfixedundertheMinimumWagesAct,the actualwages beingpaid,thehoursofworkforwhichsuchwages are earned, wage period, dates ofpaymentofwagesandotherrelevantinformationasperAppendix'A'.

4.0 PAYMENTOF WAGES

4.1 The contractorshall fix wage periods in respect of which wages shall be payable.

4.2 Nowageperiodshallexceedonemonth.

4.3 Thewages of everypersonemployed aslabourin anestablishment orby a contractor where lessthan onethousand, suchpersonsare employedshall bepaidbeforethe expiryof theseventhdayandin other cases beforethe expiryof tenthdayafterthelastdayof thewageperiodin respectof which thewagesarepayable.

4.4 Wherethe employment of any workeris terminated by oron behalf of the contractorthewagesearned by him shall bepaid beforethe expiry of the secondworkingdayfromthedateon whichhisemploymentisterminated.

4.5 Allpaymentsof wagesshallbemadeon aworkingdayat the workpremises andduringthe workingtimeandon adatenotifiedin advanceandin case the workiscompletedbeforethe expiryof thewageperiod,final payment shallbemadewithin48hoursofthelastworkingday.

4.6 Wagesdue toeveryworkershall bepaid tohim direct orto other person authorizedby himinthisbehalf.

4.7 Allwagesshallbepaidincurrentcoin orcurrencyorinboth.

4.8 Wages shallbe paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalforpermissibleunder thePaymentofWagesAct1956.

4.9 Anoticeshowingthewageperiodandtheplaceandtimeof disbursementof wages shall be displayed at the place of workand a copy sent by the contractortotheEngineer-in-Chargeunderacknowledgment.

4.10 Itshallbethedutyof thecontractortoensurethedisbursementof wagesin thepresenceof theEngineer oranyother authorized representatives of the Engineer-in-Chargewhowill berequiredtobepresentattheplaceandtime ofdisbursementofwagesby thecontractortoworkmen.

4.11 The contractor shall obtain from the Engineer or any other authorized representative of the Engineer-in-Charge as the casemaybe, a certificate underhissignatureattheendof theentriesin the"Registerof Wages" or the "Wage-cum-MusterRoll"asthecasemaybeinthefollowingform:

"Certifiedthattheamount shownincolumnNo.14(netAmountpaid)hasbeen paidtotheworkmenconcernedinmy presenceon.....at.....".

5.0 FINESAND DEDUCTIONS,WHICHMAYBE MADE FROMWAGES

5.1 Thewages ofa workershallbepaidtohimwithoutanydeductionof any kindexceptthefollowing–

a)	Fines
b)	Deductions forabsence from duty i.e. from the place or the places whereby thetermsof his employment heis requiredto work. Theamount ofdeduction shall bein proportion tothe periodforwhichhewasabsent.
c)	Deductionfordamagetoorlossof goodsexpresslyentrustedto theemployedpersonsforcustody,orfromlossof moneyorany other deduction which he is required to account where such damageorlossisdirectlyattributabletohisneglectordefault.
d)	Deduction for recovery of advances orforadjustment of over payment of wages, advances granted shall be entered in a register.
e)	Any otherdeduction,whichthe CentralGovernmentmayfrom timetotimeallow.

5.2 No finesshould beimposed on anyworkersavein respectof suchactsand omissions on his part as have been approved by the Chief LabourCommissioner.

NOTE:AnapprovedlistofActsandOmissionsforwhichfinescanbeimposedis enclosedatAppendix-I.

5.3 No fineshallbeimposedon aworkerandno deductionfordamage orloss shall be made from his wages until the worker has been given an opportunityofshowingcauseagainstsuchfinesordeductions.

5.4 Thetotalamountof finewhichmay be imposedin anyonewageperiodon a workershallnotexceedan amountequaltothreepaisain a Rupeeof the totalwages,payabletohiminrespectofthatwageperiod.

5.5 No fineimposedon anyworkershallberecoveredfromhimin installment, oraftertheexpiryofsixtydaysfromthedateon whichitwasimposed.

5.6 Everyfineshall bedeemedtohavebeenimposed on thedayof theactor omissioninrespectofwhichitwasimposed.

6.0 LABOURRECORDS

6.1 Thecontractor shallmaintain a"Register of personsemployed" on work on contractinformXIII ofthe CL(R&A)CentralRules1971(Appendix-B).

6.2 The contractor shall maintain a "Muster Roll" register in respect of all workmenemployedby himon theworkundercontractin fromXVIof theCL (R&A)Rules1971(Appendix-C).

6.3 The contractor shall maintain a "WageRegister" in respect of all workmen employedby himon theworkinform(Appendix-D).

6.4 Registerof accidents- Thecontractor shallmaintainaregisterof accidents in such formas may be convenient at the workplace butthe sameshall includethefollowingparticulars:

a) Fullparticularsofthelabourerswhometwithaccident. b)

Rateofwages

c) Sex

d) Age

e) Natureofaccidentandcauseofaccident. f)

Timeanddateofaccident.

g) Dateandtimewhenhe/sheadmittedinHospital h)

DateofdischargefromtheHospital

i)Periodoftreatmentandresultoftreatment

j) Percentageof lossof earningcapacityand disabilityas assessed by MedicalOfficer.

k) ClaimrequiredtobepaidunderWorkmen'sCompensationAct.

l)Dateofpaymentofcompensation.

m) Amountpaidwithdetailsofthepersontowhomthesamewaspaid. n)

Authorityby whomthecompensationwasassessed.

o) Remarks.

6.5 Register of Fines - Thecontractor shall maintain a"Register of Fines"in the form(Appendix-H).

Thecontractor shalldisplayin a goodconditionandin aconspicuousplace ofworktheapprovedlistofActsandOmissionforwhichfinescanbe imposed (Appendix-I).

6.6 Registerof Deductions– The contractorshallmaintain a "Registerof Deductions"fordamageorlossinform(Appendix-J).

6.7 Registerof Advances– The contractor shallmaintain a "Registerof Advances"inform(Appendix-K).

6.8 Register of Overtime- The contractor shallmaintaina "Registerof Overtime"inform(Appendix-L).

7.0 ATTENDANCE CARD-CUMWAGESLIP:

7.1 The contractor shall issue an attendance card-cum-wage slipto each workmanemployedby himinthespecimenformat(Appendix-E).

7.2 Thecardshallbevalidforeachwageperiod.

7.3 The contractor shall mark the attendance of each workman on the card twiceeachday,onceatthecommencementof thedayandagainafterthe restinterval,before heactuallystartswork.

7.4 Thecard shall remain inpossession of the workerduring the wageperiod underreference.

7.5 The contractor shallcompletethe wage slip portionon the reverseof the cardat least a dayprior to the disbursement of wages in respect of the wageperiodunderreference.

7.6 Thecontractor shallobtainthesignatureorthumpimpressionof theworker on the wage slipat the timeof disbursementof wagesandretainthecard withhimself.

8.0 EMPLOYMENTCARD

The contractor shallissuean EmploymentCard in form to each worker withinthree daysoftheemploymentoftheworker(Appendix-F).

9.0 SERVICECERTIFICATE

On terminationof employmentfor any reason whatsoever the contractor shallissuetotheworkmanwhoseserviceshavebeenterminated,aservice certificateinfromAppendix-G.

10.0 PRESERVATIONOF LABOURRECORDS

All recordsrequiredtobemaintainedunderRegulationsNos.6 and 7 shall be preserved in original fora period of three years fromthe date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge,LabourOfficer.

11.0 POWEROF LABOUROFFICERSTO MAKE INVESTIGATIONSINQUIRY

The LabourOfficeror any other person authorizedby J.D.Aon itsbehalf shallhavepowertomakeinquirewitha viewto ascertainingandenforcing dueandproperobservanceof the FairWage ClausesandtheProvisionsof Regulations.He shallinvestigateintoany complaintregardingthe default madeby thecontractororsub-contractorinregardtosuchprovision.

12.0 INSPECTIONOF BOOKAND SLIPS

Thecontractor shallallow inspectionof allthe prescribedlabourrecordsto anyof hisworkersortohisagentataconvenienttimeandplaceafterdue noticeisreceivedortotheLabourofficeroranyotherperson,authorizedby the CentralGovernment on hisbehalf.

13.0 SUBMISSIONOF RETURNS

Thecontractor shallsubmitperiodicalreturnsasmaybespecifiedfromtime totime.

14.0 AMENDMENTS

The J.D.Amayfrom to time,add or amend the regulationsand on any questionas totheapplication,interpretationor effect of theseregulations the decisionofthe ZonalChiefconcerned shallbefinal.

PENALTY

1.0 Charges to be recovered from contractor for unsafe act or condition

1.1 JDA has built an image of safety conscious organisation meticulously over a period of many years. Any reportable accident (fatality / injury) results in loss of life and/or property damage. These accidents not only result in loss of life but also damage the reputation of JDA. Most of the accidents are avoidable and caused preliminary due to contractors' negligence. Hence JDA shall recover the cost of damages from the contractors for every reportable incident (fatality / injury).

1.2 In addition every JDA work site is exposed to public scrutiny as the work is executed just on the right-of-way. Any unsafe act / unsafe condition observed by public further damage our reputation. Because of the non-voluntary compliance of contractors to the condition of contract on SHE and project SHE manual, JDA has been forced to establish safety-enforcing organization. The cost of established such organization is to be recovered from contractors for all observed safety violations at sites.

1.3 The following table indicates the Safety, Health and Environment violation (unsafe act / unsafe condition) and charges to be recovered from contractors subject to a maximum limit @ 0.1% of the contract value in addition to all other penalties / compensation./ liquidated damages.

S.N.	TOPIC	UNSAFE ACT/UNSAFE CONDITION	DEDUCTABLE AMOUNT
1.	Injury and Incidence reporting	i) Fatal accidents ii) Injury accident iii) Abnormal delay in reporting accidents or will full suppression of information about any accidents / dangerous occurrence	i. Rs.1,00,000 for every fatality ii. Rs.15,000 for first grievously injured person and Rs.25,000 for every subsequent grievously injured person iii. Rs.75,000 for first violation and Rs.1,00,000 for subsequent violations
2.	Housekeeping	i) Housekeeping maintenance register not properly maintained up to date ii) Surrounding areas of drinking water tanks / taps not hygienically cleaned / maintained iii) Office, stores, toilet / urinals not properly cleaned and maintained. iv) Required dustbins at appropriate places not provided / not cleaned. v) Stairways, gangways, passageways blocked. vi) Lumber with protruding nails left as such vii) Openings unprotected viii) Excavated earth not removed within a reasonable time. ix) Truck carrying excavated earth not	Rs.2,000 per single violation.

		covered / tyres not cleaned. x) Vehicles / equipments parked / placed on roads obstructing free flow of traffic xi) Unused surplus cables / steel scraps lying scattered xii) Wooden scraps, empty wooden cable drums lying scattered xiii) Water stagnation leading to mosquito breeding	
3.	Working at Height / Ladders and Scaffolds	i) Not using or anchoring Safety Belt ii) Not using Safety Net iii) Absence of life line or anchorage point to anchor safety belt iv) Using Bamboo ladders v) Painting of ladders vi) Improper usage (less than 1m extension above landing point, not maintaining 1:4 ratio) vii) Aluminium ladders without base rubber bush viii) Usage of broken / week ladders ix) Usage of re-bar welded ladders x) Improper guardrail, toe board, barriers and other means of collective protection xi) Improper working platform xii) Working at unprotected fragile surface xiii) Working at unprotected edges	Rs.5,000 per single violation.
4.	Lifting appliances and gear	i) Non availability of fitness certificate. ii) Documents not displayed on the machine or not available with the operator. iii) Maximum Safe Working Load not written on the machine. iv) Automatic safe load indicator not provided or not in working condition. v) Age of the operator less than 21 years or without any license. vi) Person riding on crane. vii) Creating more noise and smoke viii) Absence of portable fire extinguisher in driver cabin ix) Fail to guard hoist platform x) No fencing of hoist rope movement area. xi) Hoist platform not in the horizontal position.	Rs.5,000 per single violation.

5.	Site Electrical safety	i) Exposed electric lines (fermentative damage) and circuits in the workplace. ii) Inserting of bare wires into the socket iii) Improper grounding for the electrical appliances iv) Electrical cables running on the ground	Rs.5,000 per single violation.
6.	Gas Cutting	i) Wrong colour coding of cylinder. ii) Cylinders not stored in upright position. iii) Fail to put cylinders in a cylinder trolley. iv) Damaged hose. v) Using domestic LPG cylinders vi) Fail to store cylinder 6.6m away from fire prone materials vii) Fail to use hose clamps viii) Fire extinguisher not placed in the vicinity during operation	Rs.5,000 per single violation.
7.	Welding	i) Voltmeter and Ammeter not working ii) Improper grounding and return path. iii) Damaged welding cable iv) Bare openings in the cable. v) Non-availability of separate switch in the transformer vi) Non-availability of main switch control to switch off power to the welding unit. vii) Usage of reinforcement rod as return conductor viii) Damaged holder ix) Fire extinguisher not placed in the vicinity during operation	Rs.5,000 per single violation.
8.	Fire precaution	i) Smoking and open flames in fire prone area ii) Using more than 24V portable electrical appliances in the fire prone area iii) Not proper ventilation in cylinder storage area. iv) Absence of fire extinguishers v) Fire extinguishers not refilled once in a year. vi) Fire extinguisher placed in a not easily accessible location	Rs.2,000 per single violation.

9.	Traffic Management	a) Barricades i) Not Cleaned ii) Not in alignment iii) Not numbered iv) Not painted v) Red lights / reflectors not working vi) Damages not repaired vii) Not secured properly viii) Barricade inspector not employed ix) Protruding parts / portions repaired x) Barricades maintaining register not properly maintained up to date	Rs.2,000 per single violation.
		b) Contractor Vehicles i) Over loading of vehicles ii) Unfit drivers or operators iii) Unlicensed vehicles iv) Absence of traffic marshals v) Absence of reversing alarm vi) Absence of fog light (at winter) vii) Power / hand brakes not in working condition.	Rs.2000 per single violation.
10.	PPE	i) Not having ii) Not wearing (or) using and kept it elsewhere iii) Using damaged one iv) Using wrong type v) Using wrong color helmet or helmet without logo vi) Using for other operation (e.g. Using safety helmet for storing materials or carrying water from one place to other)	Rs.500 per single violation
11.	Occupational Health	i) Fail to conduct Medical examination to workers ii) Workers not having ID card iii) Inadequate number of toilets iv) Toilets not cleaned properly v) Absence of water facilities for toilets and washing places vi) Absence of drinking water vii) Absence of first-aid person in work site. viii) Absence or inadequacy of first-aid box. ix) Smoking inside the construction site x) Drink and drive or work xi) Excessive noise and vibration	Rs.1,000 per single violation.

Appendix-'A'

LABOURBOARD

Nameofwork

NameofContractor

AddressofContractor

NameandAddressofUnit

NameofLabourEnforcementOfficer

AddressofLabourEnforcementOfficer

Date:

S. No.	Category	Minimum wagefixed	Actualwages paid	Numberpresent	Remarks

WeeklyHoliday

WagePeriod

DateofPaymentofwages

Workinghours

Restinterval

Appendix-'B'

FORM13

Seerule75

REGISTEROF WORKMENEMPLOYEDBYCONTRACTOR

NameandAddressofContractor

NameandAddressofEstablishmentin underwhichcontract iscarriedon

Natureandlocationofwork

Name&AddressofPrincipalEmployer

Sl.No.	Nameand surname of workman	Age &sex	Father's Husbands Name	Natureof employment/ designation	Permanenthome addressofthe workman(village andTehsilTalukan dDistrict)	Local address
1.	2.	3.	4.	5.	6.	7.

Dateof commencementof Employment	Signatureor thumb impression ofthe workman	Dateof terminationof employment	Reasonsfor termination	Remarks
1.	2.	3.	4.	5.

FORMXVI

(SeeRule78(2) (193)

MUSTERROLL

Nameandaddressofcontractor

Nameandaddressofestablishmentin/under
whichcontract iscarriedon

Natureandlocationofwork

NameandAddressofPrincipalEmployer

Forthemonth/fortnight

Appendix-'C'

S.No.	Nameoftheworkman	Sex	Father's/ Husband'sName	Dates					Remarks
1.	2.	3.	4.	5.					6.
				1	2	3	4	5	

Appendix-'D'

FORMXVII(SeeRule)

78(2)(03)REGISTEROF

WAGES

Nameandaddressofcontractor

Nameandaddressofestablishmentin/under whichcontract iscarriedon

Natureandlocationofwork

NameandAddressofPrincipalEmployer

Wageperiod:permonth/fortnightly

S.No.	Nameof Workman	SerialNo. inthe register of workman	Designation natureof workdone	Nos.of days worked	Unitsof work done	Daily rateof wages/ piece rate	Basic Wages
1.	2.	3.	4.	5.	6.	7.	8.

Dearness allowance	Overtime	Othercash payments (Natureof payments tobe indicated)	Total	Deduction ifany (indicate nature)	Net Amt paid	Signature thumb impression ofthe workman	Initial contractoror his representative
9.	10.	11.	12.	13.	14.	15.	16.

Appendix-'E'

FORMXIX

[SEERULE 78(2)(B)]

W AGE SLIP

Nameandaddressofcontractor

NameandFather's/Husband/sNameofworkman

Natureandlocationofwork

FortheWeek/Fortnight/Monthending

1.No.ofdaysworked

2.No.ofUnitsworkedincaseofpiecerateworkers

3.Rateofdailywags/piecerate

4.Amountofovertimewages

5.Grosswagespayable

6.Deductionsifany

7.Netamountofwagespaid

SignoftheContractor

Appendix-'F'

WAGECARD

Wage CardNo.

NameandaddressofContractor DateofIssue

NatureofworkwithlocationDesignation Nameofworkman

Month/Fortnight RateofWages

1234567891011121314151617181920212223242 5

262728293031

MorningRate EveningAmount Initial

Receivedfrom thesumofRs.On account ofmy wagon.

Signature

Thewagecardisvalidforonemonthfromthedateofissue.

Appendix'F'

FORMXIV

(SeeRule76)

EMPLOYMENTCARD

Nameandaddressofcontractor

Nameandaddressofestablishmentunderwhich
Thecontractiscarriedout

Natureandlocationofwork

NameandaddressofPrincipalEmployer

1. Nameofthe workman
2. S.Nameintheregisterofworkmanemployed
3. NatureofEmployment/Designation
4. Wagerate(with particularsofunitin caseofpiecework)
5. WagePeriod
6. Tenureofemployment
7. Remarks

SignatureofContractor

Appendix-'G'

FormXV

(SeeRule77)

(SERVICECERTIFICATE**)**

NameandaddressofcontractorNatureand

locationofworkNameandaddressof

workmanAgeordateofbirthIdentification

MarksFather's/HusbandsName

Nameandaddressofestablishmentinunderwhichcontract iscarriedon

NameandaddressofPrincipalEmployer

	Totalperiodofwhich employed				
S.No.	From	To	Natureof work	Rateofwages(with particularsofunitIn caseofpiecework)	Remarks
1.	2.	3.	4.	5.	6.

Signature

Appendix'H

FormXII

[SeeRule78(2)(d)]

REGISTEROF FINES

Nameandaddressofcontractor

Nameandaddressofestablishmentin/underwhich contractiscarriedon

Natureandlocationofwork

Nameandaddressofworkman

NameandaddressofPrincipalEmployer

S.No.	Nameof workman	Father's/Husband Name	Designation/nature ofemployment	Act/Omission forwhich fineimposed	Dateof offence
1.	2.	3.	4.	5.	6.

Whether workman showed cause againstfine	Nameofperson inwhose presence employees explanationwas heard	Wageperiod andwages payable	Amountof fineImposed	Dateon whichfine realized	Remarks
7.	8.	9.	10.	11.	12.

APPENDIX-'I'

LISTOF ACTSAND OMISSIONSFORWHICHFINESCANBE IMPOSED

Inaccordancewithruleof LabourRegulations,tobedisplayedprominentlyatthesite ofworkbothinEnglishandlocallanguage.

1. Willful insubordinationor disobedience,whether aloneor in combinationwith other.

2 Theft,fraudordishonestlyinconnectionwithcontractorsbesideabusinessorpropertyofJ.D.A

3 Takingorgivingbribesoranyillegalgratifications

4 Habituallateattendance.

5 Drunk-nessfightingriotousordisorderlyorindifferentbehaviour.

6 Habitualnegligence.

7 Smokingnear oraroundthe area wherecombustibleor other materialsare locked.

8 Habitualindiscipline.

9 Causingdamagetoworkintheprogressortopropertyof theJ.D.Aorof the contractor.

10 Sleepingonduty.

11 Malingeringorslowingdownwork.

12 Givingthefalseinformationregardingname,age,fathersnameetc.

13 Habituallossofwagecardssuppliedby theemployer.

14 Unauthorizeduse of employersproperlyof manufacturingor makingof unauthorizedarticlesattheworkplace.

15 Badworkmanshipinconstructionandmaintenanceby skilledworkers, whichis notapprovedby theJ.D.A forwhichthecontractorsarecompelledtoundertake rectifications.

16 Makingfalsecomplaintsand/ormisleadingstatements.

17 Engagingontrade withinthepremisesoftheestablishment.

18 Anyunauthorizeddivulgenceofbusinessaffairsoftheemployees.

19 Collectionorcanvassingforthecollectionof any money withinthe premisesof anestablishmentunlessauthorizedby theemployer.

20. Holdingmeetinginsidethepremiseswithoutprevioussanctionoftheemployers.

21 Threateningorintimidatinganyworkmanoremployeeduringtheworkinghours withinthepremises

REGESTER OF DEDUCTION FOR

SignofContractor J.D.A

Appendix-'J'

Form
XX

**[SeeRule78(2)
(d)]**

REGISTEROF DEDUCTIONFORDAMAGESORLOSS

Nameandaddressofcontractor

Nameandaddressofestablishmentin/under
whichcontract iscarriedon

Natureandlocationofwork

NameandaddressofPrincipalEmployer

S. No.	Nameof workman	Father's/Husband Name	Designation/ natureof employment	Particularsof damageof loss	Dateof damage/loss
1.	2.	3.	4.	5.	6.

				Dateofrecovery		
Whether workman showed cause against deductions	Nameofperson inwhose presence employees explanationwas heard	Amountof deduction Imposed	No.of installment	First insta-llment	Last Insta-llment	Remarks
7.	8.	9.	10.	11.	12.	13.

Appendix-'K'

FormXXII

(SeeRule 78(2))

REGISTEROF ADVANCES

Nameandaddressofcontractor

Nameandaddressofestablishmentin/underwhich contractiscarriedon

Natureandlocationofwork

NameandaddressofPrincipalEmployer

S.No.	Nameof workman	Father's/ Husband's Name	Designation/ natureof employment	Wagesperiod andwages payable	Dateand amountof advance given
1.	2.	3.	4.	5.	6.

Purpose/for whichadvance made	No.of installmentsby whichadvance is tobepaid	Dateand amountofeach installment repaid	Dateon which lastinstallment wasrepaid	Remarks
7.	8.	9.	10.	11.

Appendix-'L'

FormXXIII[SeeRule 78(2)

(e)]REGISTEROF

OVERTIME

Nameandaddressofcontractor

Nameandaddressofestablishmentin/underwhich contractiscarriedon

Natureandlocationofwork

NameandaddressofPrincipalEmployer

S.No.	Nameof workman	Father's/ Husband's Name	Sex	Designation/ natureof employment	Dateon which overtime worked
1.	2.	3.	4.	5.	6.

Totalovertime workedor productionin caseofpiece rated	Normalrate ofwages	Overtime rateof wages	Overtime earning	Rate on which overtime wages paid	Remarks
7	8	9	10	11	12

Annexure - 1

The following are the technical parameters for the Bullet camera for Traffic Analysis:

S. No.	Features	Description
1	Camera Type	Bullet camera
2	Edge Storage	MicroSD/microSDHC/microSDXC slot supporting memory card for min. 128GB (Min. Class 6 or higher, Card to be included).
3	Coverage	Up to 3 lanes
4	Built In Smart Analysis	Support Lane Flow, Average Vehicle Speed, Time Headway, Space Headway, Time Occupancy, Space Occupancy, Lane Queue Length, Vehicle Type, Lane Traffic Status, Congestion Level
5	Image Sensor	1/1.8 inch Progressive Scan CMOS Sensor
6	Resolution	2 MP (1920 x 1080) at 50/60 FPS
7	Video Compression	H.265 or better
8	Supplement Light	3 LED supplement lights, 850 nm(white light optional), angle: 40°
9	Focal Length	8mm to 32mm
10	Alarm Interface	2-ch inputs, 2-ch outputs
11	Communication Interface	1 RJ45 10M/100M/1000M self-adaptive Ethernet interfaces
12	Standard Protocols	TCP/IP, HTTP, HTTPS, FTP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, IPv6, UDP
13	Serial Port	2 RS-485 ports, 1 RS-232 port
14	Operating Temperature & Humidity	-30°C to 70°C, humidity 5% to 95% (non-condensing)
15	Programming Interface	ONVIF , ISAPI
16	Operating System	Linux
17	Power Source	Suitable adaptor shall be supplied to make the equipment work on 12 DC to 24DC±20%, and Power Consumption Max.15W
18	Protection Level	IP66
19	Certification	CE, FCC, RoHS

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Supplement Light		
S. No.	**Features**	**Description**
1	Light type	IR light
2	Wave Length	≥850 nm(Infrared)
3	LED lamp beads	28
4	Angle Of Light	40°
5	Effective Distance	16-25 m
6	Response time	≤20us
7	Day and night function	Support ambient brightness detection, automatic start-up at low illumination
8	Brightness Control	Two grades of brightness control
9	Supplement light Exception detection	the fault output port output high voltage (typically 5V) [optional], when the light is turned on and the supplement light output current is too large or too small
10	Housing	IP65
11	Power Supply	AC220V, Max.60W
12	Operating Temperature	-40℃ ~ +70℃ (10%~90%)

Annexure-2

Sr. No	SYSTEM PARAMETER	Functional requirement
1	**General**	
a	The Speed Violations should be automatically detected by the system by using radar technology.	
b	The system should be capable of capturing multiple infracting vehicles simultaneously in defined lanes at any point of time simultaneously with relevant infraction data like:	
	a) Type of Violation	
	b) Speed of violating vehicle	
	c) Notified speed limit	
	d) Date, time, Site Name and Location of the Infraction	
	e) Registration Number of the vehicle through ANPR Camera system for each vehicle identified for infraction	
c	The system should be based on edge based technology in consideration of saving bandwitdh and improve real	
d	The system should be equipped with a camera system to record a digitized image or video frames of the violation, covering the violating vehicle with its surrounding	
e	The system shall provide the No. of vehicles infracting simultaneously in each lane. The vehicles will be clearly identifiable and demarcated in the image produced by the camera system	
f	The system shall be equipped with IR Illuminator to ensure clear images including illumination of the Number Plate and capture the violation image under low light conditions and night time.	
2	**Speed**	
a	Speed measurement may be made by using non-intrusive technology such as radar/camera or any other appropriate certified technology.	
3	**On site-out station processing unit Communication & Electrical Interface**	
a	The system should automatically reset in the event of a program hang up and restart after power failure.	
b	The system should have secure access mechanism for validation of authorized personnel	
c	Deletion or addition and transfer of data should only be permitted to authorized users.	
d	A log of all user activities should be maintained in the system	
e	Roles and rights of users should be defined in the system	
4	**Mounting structure**	
a	Should be cantilever mounted and shall have minimum 6 Mtrs. height , 7 Mtrs. Width, with appropriate vertical clearance under the system from the road surface to ensure no obstruction to vehicular traffic.	
b	It should be capable to withstand high wind speeds and for structural safety, the successful bidder has to provide structural safety certificate from qualified structural engineers approved/ certified by Govt. Agency.	
c	Rugged locking mechanism should be provided for the onsite enclosures and cabinets	
5	**Speed Violation Application**	
a	It should be capable of importing violation data for the Operator for viewing and retrieving the violation images and data for further processing. The programme should provide for sort, transfer & print command.	
b	It should generate the photograph of violations captured by the outstation system which include a wider view covering the violating vehicle with its surrounding and a closer view indicating readable registration number plate patch of the violating vehicle or its web link on notices for court evidence.	
c	All outstation units should be configurable using the software at the Central Location	
d	Violation retrieval could be sorted by date, time, location and vehicle registration number and data structure should be compatible	
e	The automatic number plate recognition Software may be part of the supplied system, or can be provided separately as add on module to be integrated with violation detection. a.) Success rate of ANPR will be taken as 90% or better during the day time and 80% or better during the night time on standard number plates.	
f	Image zoom function for number plate and images should be provided. Any updates of the software available, shall be updated free of cost during the contract period by the vendor and will integrate the same with existing application and database	
h	Various users should be access the system using single sign on and should be role based. Different roles which could be defined (to be finalized at the stage if SRS) could be Administrator, Supervisor, Officer, Operator, etc.	
i	Apart from role based access, the system should also be able to define access based on location.	
j	Rights to different modules / Sub-Modules / Functionalities should be role based and proper log report should be maintained by the system for such access	

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k	The system shall also support horizontal scalability so that depending on changing requirements from time to time, the system may be scaled horizontally.
l	User should be provided with means of listing the invalid violations along with the reason(s) of invalidation without deleting the record(s).
m	Basic image manipulation tools (zoom etc.) should be provided for the displayed image but the actual recorded image should never change.
n	Log of user actions be maintained in read only mode. User should be provided with the password and ID to access the system along with user type (admin, user).
o	Image should have a header and footer depicting the information about the site IP and violation details like viz. date, time, equipment ID, location ID, Unique ID of each violation, lane number, Regn. Number of violating vehicle and actual violation of violating vehicle etc. so that the complete lane wise junction behaviour is recorded viz. (Speed of violating vehicle, notified speed limit, Speed Violation with Registration Number Plate Recognition facility. Number plate of cars, buses/HTVs should be readable automatically by the software/interface. There should be user interface for simultaneous manual authentication / correction and saving as well
	Number plate of cars, buses/HTVs should be readable automatically by the cameras. There should be user interface for simultaneous manual authentication / correction and saving as well.
l	Interface for taking prints of the violations (including image and above details).
	Technical requirements of Speed Violation Detection System
1	**General**
	The system should be capable of generating a video & minimum 3 snapshot in any of the standard industry formats (MJPEG, JPG, avi, mp4, mov, etc) with at least 10 frames per second. The video shall be from t-5 to t+5 sec of the violation and should also be recorded

The following are the technical parameters for the ANPR Capture Unit:		
S. No.	**Features**	**Description**
1	IR range	Up to 30 m
2	Coverage	Up to 2 lanes
3	Detection Sensitivity	90%
4	LPR Accuracy	> 90%
5	Supplement Light	Strobe light/Xenon flash light
6	Frame rate	50/60fps
7	Vehicle Type	Car/Van/Bus/Truck/Light Truck/SUV_MPV/Pickup/Pedestrian/Motorcycle/Tricycle
8	Vehicle Color	Red, yellow, green, blue, pink, purple, cyan, brown, white, grey, black Recognizable at daytime only
9	Capture Speed Range	5 to 250 km/h
10	Video Compression	H.265/H.264/MJPEG
11	Standard Protocols	TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP, RTCP, NTP, IPv6, UDP
12	Serial Port	3 RS-485 ports, 1 RS-232 port
13	API	ONVIF (Version 2.1, PROFILE S, PROFILE G), ISAPI, SDK
14	Trigger Mode	External I/O trigger/Radar trigger/Video trigger
15	By External Interfaces	I/O, RS-485
16	ANPR Camera	Min 5MP resolutiom
17	Programming Interface	ONVIF (Version 2.1, PROFILE S, PROFILE G), ISAPI, SDK
18	Lens	15-50mm with F1.4, CS mount
19	Operating System	Linux
20	Digital I/O	2-ch inputs, 7-ch outputs
21	Connector	Waterproof circular connector
22	Protection Level	IP67
23	Communication Interface	2 RJ45 10M/100M/1000M self-adaptive Ethernet interfaces
24	Security Measures	Password protection, HTTPS encryption, digest authentication for HTTP/HTTPS, digest authentication for ONVIF
25	Storage	TF card, up to 128 GB
26	Operating & Storage Temperature	-40 °C to 60 °C (-40 °F to 140 °F)
27	Operating & Storage Humidity	95% or less (non-condensing)
28	Protection Level	IP66

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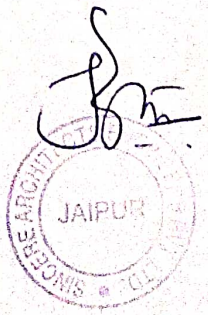
S. No.	Features	Description
29	Heater	Supported
30	Power Supply	24 VDC ± 20%/100 to 240 VAC
31	Power Consumption	< 30 W
Supplement Light		
38	Light type	Imported high-power infrared LED
39	LED lamp beads	28
40	Coverage	single lane
41	Effective Distance	16-25 m
42	Trigger	TTL level, 4V ~ 6V Trigger Level, Trigger Duty Ratio ≥ 40%
43	Day and night function	Support ambient brightness detection, automatic start-up at low illumination (optional)
44	RS485	1-Ch
45	Synchronous Interface	1-ch flicker trigger input, 1-ch capture trigger input
46	Parameter configuration	Supports internal parameter settings, such as turn-on threshold of day and night function, flash and ultra-high frequency flash delay settin
47	Service Life	≥50000H
48	Power Supply	AC220V or AC110V
49	Operating Temperature	-40°C～+70°C, 10%～90% Operating Humidity
50	Protection level	IP65
Radar		
1	Type	Radar
2	Main features	High performance radar operates in 24GHz ISM Band;
3		Special microstrip antenna design effectively avoids interference from adjacent channel target
4		Accurate speed and distance measurement for multiple targets;
5		High dynamic speed measurement range with very high capture rate;
6		Advanced DSP technology, highly accurate speed measurement & very low false alarm rate
7		Simple installation and convenient in maintenance;
8		Sensor performance unaffected by harsh weather conditions
9	Central Frequency	24.15GHz, Central Frequency Deviation:≤±45MHZ
10	Capture distance	single lane18～28m
11	Velocity range:	10km/h～250km/h
12	Communication Interface	RS485
13	Temperature range	-40°C～+70°C, 5%RH～95%RH Humidity range
14	Power Supply	9 V ~12V DC



Annexure-3

The following are the technical parameters for the Terminal Server or Local Processing Unit:		
S. No.	**Features**	**Description**
1	Product Type	Terminal Server or Local Processing Unit
2	Processor	High-performance ARM A17 processor or better
3	Operating System	Operating System
4	Key Feature	Up to 16 cameras can be connected for video/audio storage, picture saving and uploading
5	Network Interface	16 x 1000 M Ethernet interface, 1 x internal 10/100/1000 M self-adaptive Ethernet interface, 1 x external 10/100/1000 M self-adaptive Ethernet interface, 1 x internal 1000 M fiber interface, 1 x external 1000 M fiber interface
6	Audio Interface	1 Input & 1 Output
7	Alarm Interface	2 Input & 2 Output
8	Serial Interface	2 x RS-232, 2 x RS-485
9	USB Interface	1
10	Storage Interface	4 x SATA (Each SATA interface supports up to 6TB HDD)
11	Function	Vehicle information (passing records and pictures) storage
12	Data Uploading	ANR and manual uploading
13	Video Recording	Video recording function. Recording duration is determined by the stream size and the HDD capacity
14	Working Temperature	-40 °C to +70 °C , Working Humidity 10% to 90%
15	Power Supply	12 VDC

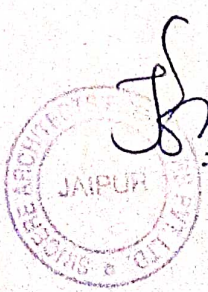
Annexure-4

The following are the technical parameters for the 5MP VF Bullet Camera:		
S. No.	**Features**	**Description**
1.	Camera Type	Varifocal Bullet Camera
2.	Edge Storage	MicroSD/microSDHC/microSDXC slot supporting memory card for min. 256 GB (Min. Class 6 or higher, Card to be included). In the event of failure of connectivity to the network storage the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the network storage recording such that no manual intervention is required to transfer the SD card based recordings to network storage.
3.	API	Open Network Video Interface (PROFILE S, PROFILE G)
4.	Image Sensor	1/2.8 inch CMOS or better
5.	Resolution	Min. 2592 × 1944 at 20 FPS or better,2688 × 1520 , 1920 × 1080 at 25fps
6.	Video Compression	H.264,H.265
7.	Audio Compression	G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/MP3, should support Environment Noise Filtering
8.	Streaming	Min. three compressed stream (Individually Configurable), should support Smooth Streaming
9.	ID/Password	Multi-level user ID/Password
10.	Encryption	HTTP(SSL/TLS)/HTTPS
11.	Video Authentication	For video authentication, classic watermarks/digital signature must be embedded in Video Stream along with name, time, date stamped which cannot be tampered
12.	Simultaneous Live View	Up to 6 channels
13.	Physical Layer	10/100 base Tx Ethernet
14.	Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.2, memory card encryption, SFTP encryption, SRTP encryption
15.	Protocol	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SFTP, ARP
16.	Lens Type	2.7 to 13.5 mm, Varifocal, with Auto-Iris
17.	Alarm	2 inputs, 2 outputs
18.	Audio	1 inputs, 1 output
19.	Image Enhancement	BLC, HLC, 3D DNR, EIS, Defog,AGC
20.	Image Parameters Switch	Yes
21.	Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser
22.	Target Cropping	Yes
23.	Illumination	Color: 0.003 Lux @ (F1.4, AGC ON), 0 Lux with IR on Inbuilt IR (60 mtrs. or better)
24.	Signal Process	Digital Signal Process
25.	Privacy Mask	Yes
26.	Electronic Shutter	1/3 s to 1/100,000 s with slow shutter support
27.	Wide Dynamic Range	120dB
28.	Day and Night	Day, Night, Auto, Schedule
29.	Operating Temperature	-30 °C to +60 °C Humidity 95% or less (non-condensing)
30.	Internet protocol Support	IPv4 and IPv6
31.	Housing	IP67, IK 10
32.	Edge based video content Analytics	Line crossing detection, Intrusion detection, Motion Detection, Video tampering, Scene change detection, Audio exception detection, Face Capture, Region entrance detection, region exiting detection
33.	Power Source	12 VDC, PoE: 802.3at/af
34.	Certification	UL,CE,FCC,BIS

Annexure - 5

The following are the technical parameters for the 4MP PTZ Camera 32x:

S. No.	Features	Description
1	Camera Type	PTZ Camera
2	Edge Storage	MicroSD/microSDHC/microSDXC slot supporting memory card for min. 256 GB. In the event of failure of connectivity to the network storage the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically pulled by the network storage recorder such that no manual intervention is required to transfer the SD card based recordings to network storage.
3	API	Open Network Video Interface (PROFILE S, PROFILE G)
4	Image Sensor	1/2.8 inch CMOS or better
5	Resolution	4 MP (2560 × 1440) at 25 FPS or better
6	Video Compression	H.265 or H.264 better
7	Audio Compression	G.711alaw, G.711ulaw, G.722.1, G.726, MP2L2, PCM
8	Streaming	Min. Three compressed stream (Individually Configurable) & each stream support Min. 25fps
9	Security	User Authentication, IP Address filtering, HTTPS encryption
10	Network Interface	1 RJ45 10 M/100 M Ethernet
11	Protocol	IPv4/IPv6, HTTP, HTTPS, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP/IP, DHCP, PPPoE, Bonjour
12	Remote Administration	Remote configuration and status using web based tool
13	System Update	Remote system update over Network using web client
14	Simultaneous Live View	Up to 20 channels
15	User	Up to 32 users
16	Optical Zoom	32 × Optical
17	Focus	Auto
18	Digital Zoom	16x
19	Pan & Tilt Range	360° endless, -15° ~ 90°(auto-flip)
20	Pan & Tilt Speed	Pan Manual Speed: 0.1° - 160°/s,
		Pan Preset Speed: 240°/s
		Tilt Manual Speed: 0.1° ~ 120°/s
		Tilt Preset Speed: 200°/s
21	Scan	8 patrols[Min. 32 Presets in each patrol] & 4 pattern
22	Number of Preset	Min. 300
23	Dynamic Noise Reduction	3D DNR



24	Defog	Support
25	Illumination	Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0.001 Lux @(F1.6, AGC ON), 0 Lux with IR
26	IR Range	Smart IR 200m or better
27	Signal Process	Digital Signal Process
28	Auto Gain Control	Support
29	Back Light Compensation	Support
30	High Light Compensation	Support
31	Region Of Interest	Support
32	Electronic Shutter	1/1 sec ~1/30,000 sec slow shutter
33	White Balance	Auto
34	Wide Dynamic Range	120 dB Support
35	S/N Ratio	>52dB
36	Electronic Image Stablizer	Support
37	Privacy Mask	24 privacy masks programmable
38	Edge based video content Analytics	Line crossing detection, Intrusion detection, Unattended baggage detection, Object removal detection, Face Capture, Audio exception detection, region entrance detection,
39	Tracking	Event tracking, Auto-tracking
40	Day and Night	Support ICR
41	Audio Interface	1 input, 1 output
42	Alarm Interface	2 input, 1 output
43	Ethernet Interface	1 RJ45 10M/100M self-adaptive Ethernet port
44	Protection Level	IP66, TVS 4000V Lightning Protection, Surge Protection and Voltage Transient Protection
45	Mounting Bracket	Wall/Pole Mount
46	Operating Temperature & Humidity	-30°C to 65°C Humidity 90% or less
47	Power Supply	Hi-PoE & 24 V AC
48	Certification	UL,CE,FCC,BIS

Annexure-6

The following are the technical parameters for the Surveillance SD Card:

S. No.	Features	Description
1.	Type	Video Surveillance Micro SD Card
2.	Speed	Class 10
3.	Total capacity	128GB
4.	Max. read speed	95 MB/s
5.	Max.write speed	24 MB/s
6.	File System	FAT32/exFAT
7.	Storing temperature	-25°C to +85°C
8.	Format	microSDHC, microSDXC
9.	NAND Flash Memory	TLC (triple-Level cell)
10.	Operating temperature	0°C to +70°C
11.	Should be Waterproof, X-ray proof, shock proof and wide temperature range.	

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Annexure - 7

The following are the technical parameters for the Panic Alarm Station

S. No.	Features	Description
1.	General	The emergency box (or panic button) will enable citizens to establish a two way audio (microphone and speaker) & camera communication link with Police (or / and with Authority's Disaster Management Cell or Command and Communications Center) through a press of a button.
2.	CCTV Camera	Shall have built in camera with 2 MP resolution, 25fps recording and able to view person who is using emergency call box Compression Ratio: H.264,H.265 with IR of 10m
3.	Speaker and Microphone	Shall have built in high sensitive omnidirectional audio i/p which is capable of sensing audio built in speaker & 3.5 mm audio interface for external audio output
		Shall have G.711U/G.726 audio compression with intelligent noise suppression technique and echo cancellation technique
4.	Call Button	Shall have one panic button
5.	Alarm	Shall have tampering alarm function, which allows to generate alarm to central VMS whenever the device is tampered from its installed area or the mount
6.	Siren	110dB
7.	Interface	Shall have one touched alarm & tampering alarm, alarm 2 I/O, Shall have inbuilt SD card slot supporting min 128 GB. Should support RS-485 Half duplex, PSTN
8.	Connectivity	2 10M/100M self-adaptive Ethernet interface, TCP/IP, SNMP, RTSP, SIP and ONVIF protocol should be supported
9.	Lock	Electronic Controlled Cabinet Lock/Normal Cabinet Lock
10.	Alarm lamp	1 Red and Blue Alarm Lamp, Light Can be Configured Separatel
11.	Power supply and operating temperature	Shall work on 110-220VAC supply consuming not more than 75W, operating temprature -40deg C to 60deg C.
12.	Mount type	Shall be a wall mount device
13.	License	SI has to provide required software licenses

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Annexure - 8

The following are the technical parameters for the Network Storage Device		
S. No.	**Features**	**Description**
1.	Product Type	Storage device
2.	No single point failure	Highly reliable, redundancy at each level i.e. controller, power module rendering no single point failure
3.	Certification	UL,CE,FCC,BIS
4.	Mounting	19" Rack Mounted
5.	Controller	Dual controller with 64-bit multi-core processor
6.	Host interface Type	FC or iSCSI or SAS or Ethernet
7.	No of Host interface	4, 1000M Ethernet interface Data network interface per controller 1, 1000M Ethernet interface/Controller Management network interface
8.	MiniSAS interface	Supports
9.	USB per controller	3
10.	Cache	8 GB per controller, should be able to expand up to 32GB
11.	HDD slot	24
12.	Interface/capacity	SAS/Up to 12 TB
13.	Capacity	As per the solution design, all camera recording with 2MP at 25fps for 30 days
14.	FAN	Auto fan tuning.
15.	Power Supply	Redundant
16.	RAID configuration	RAID 5/ 6
17.	Hot Spare Disk	It shall provide at least one hot spare disk per 24 HDDs
18.	Redundant Failover function	N+1 redundancy support, storage device shall also pull the missed data during network disconnection between the camera and storage device, when network resumes
19.	Power requirement	Suitable adaptor shall be supplied to make the equipment work on 230V +10% or shall directly work with 230VAC power supply
20.	Environment temperature	• Working: +5 °C to +35 °C (41 °F to 95 °F) • Storing: -20 °C to +70 °C (-4 °F to 158 °F)
21.	Environment humidity	• Working: 20% to 80%RH (non-condensing/frozen); • Storing: 5% to 90%RH (non-condensing/frozen)
22	Functions	Should support Synchronous backup of key information in system disk and HDD
		Should support RAID-based tamper-proof data technology
		Should support Auto data synchronization between devices
		Should support CPU load balance and Auto fan tuning
		Should support Direct storage for video stream and picture stream
		Support direct IP camera/DVR/NVR streaming and recording
		Support camera access through RTSP, ONVIF, and PSIA protocol.
		Should support Automatic network replenishment (ANR), timely uploading, and video loss alarm
		Should support Lock key videos,Search, play, and download videos by video type or video time

Annexure 9

Video Management Software:	
Video Surveillance Management shall support following functions:	
	Video Surveillance
1	Supports video live view and video query based on technologies such as video patrol and E-map.
2	Provides video surveillance on the map and video parsing.
	Integration Search
1	Supports quick search of persons and vehicles based on big data technologies such as integration search, face search, vehicle search, and human body search.
2	Helps users quickly know the information of target persons and vehicles.
3	Supports viewing history traffic data and real-time traffic data on a dashboard.
	Violation Management
1	Supports violation verification (including overspeed, red light running, wrong-way driving, parking violation, etc.).
2	Supports generating violation tickets.
3	Forms closed-loop service which combines violation management and violation verification.
	Traffic Event Monitoring
1	Supports real-time analysis of the detected videos.
2	Supports monitoring traffic status.
3	Supports detecting multiple traffic events such as traffic accidents, parking violation, and wrong-way driving.
4	Supports detecting and reporting traffic congestion.
	Alarm Center
1	It contains two applications including target arming and alarm search.
2	Supports vehicle arming and face arming.
3	Supports configuring alarm rules of corresponding devices and linkage rules.
	Statistics Center
1	Supports graphical display of multi-dimensional data based on data analysis technologies such as face data statistics, vehicle data statistics, and behavior statistics.
	Video Maintenance
1	Supports real-time intelligent management of camera running status based on technologies such as online detection, video quality diagnosis, and recording check.
	Operation and Management Center
1	Integrates multiple components including configuration, log search, and integration.
2	Supports single sign-on services (SSO).
	Intelligent Platform Management
1	Supports on-stop installation, parameter configuration, server monitoring, and log analysis.
2	Supports data backup, cluster management and license management.
	Intelligent Applications
1	With the integration of multiple functionality and application software, the platform extends its applications from video surveillance to the ones based on artificial intelligence algorithms, such as Automatic Number-Plate Recognition (ANPR) and facial recognition. This makes the platform applicable to the application scenarios such as city surveillance system and intelligent transportation system.
	Comprehensive Security Mechanism
1	Provides security mechanism for device, network, host computer, data, and applications, and supports multiple security control schemes.

Video Surveillance Management shall support following functions:	
	Extensibility and Scalability
1	Supports expanding the capacity of the services such as the maximum added device amount, stream distribution, stream storage, events, and data library.
2	Increases capacity and stability by distributed deployment.
3	Supports cluster deployment for some key services such as streaming gateway.
4	Supports techniques such as clustered proxy, distributed cache, and load balancing to improve the response speed, and decrease performance losses caused by the interaction among different components and modules, therefore improving the fluency of the platform.
	Multiple Application Scenarios
1	Supports assembling different modules into different platforms based on different application scenarios. The platforms can be compatible with each other and cooperate with each other.
2	Supports data backup, cluster management and license management.
	Intelligent Applications
1	With the integration of multiple functionality and application software, the platform extends its applications from video surveillance to the ones based on artificial intelligence algorithms, such as Automatic Number-Plate Recognition (ANPR) and facial recognition. This makes the platform applicable to the application scenarios such as city surveillance system and intelligent transportation system.
	Comprehensive Security Mechanism
1	Provides security mechanism for device, network, host computer, data, and applications, and supports multiple security control schemes.
	Extensibility and Scalability
1	Supports expanding the capacity of the services such as the maximum added device amount, stream distribution, stream storage, events, and data library.
2	Increases capacity and stability by distributed deployment.
3	Supports cluster deployment for some key services such as streaming gateway.
4	Supports techniques such as clustered proxy, distributed cache, and load balancing to improve the response speed, and decrease performance losses caused by the interaction among different components and modules, therefore improving the fluency of the platform.

Annexure - 10

Server Specification	
Processer	Intel® Xeon™ Silver 4110*2 (2.1G, 8C/16T, 9.6GT/s)
Operating System	CentOS Linux release 7.6.1810 (Core)
Memory	64G RDIMM, 2666MT/s RDIMMS
Storage	1T SATA × 4, 3.5" Enterprise SATA 7.2k HDDs Including: • System Disk: 1T SATA × 2 with RAID • Data Disk: 1T SATA × 2 with RAID
NIC	1GbE × 4

Annexure - 11

The following are the technical parameters for the 8-Port Gigabit Unmanaged PoE Switch:		
S. No.	**Features**	**Description**
1	Port number	8 × Gigabit PoE ports, 1 × Gigabit RJ45 port, 1 × Gigabit SFP fiber optical port
2	Port type	RJ45 port, full duplex, MDI/MDI-X adaptive
3	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z
4	Forwarding mode	Store-and-forward switching
5	MAC address table	4 K
6	Switching capacity	20 Gbps
7	Packet forwarding rate	14.88 Mpps
8	Internal cache	1.5 Mbits
9	PoE standard	IEEE 802.3af, IEEE 802.3at
10	PoE power pin	Ethernet cable 1/2/3/6 provide power supply.
11	PoE port	Ports 1 to 8
12	Max. port power	30 W
13	PoE power budget	58 W
14	Max. power consumption	65 W
15	Shell	Metal material, no fan equipped.
16	Operating temperature	-10 °C to 55 °C (14 °F to 131 °F)
17	Storage temperature	-40 °C to 85 °C (-40 °F to 185 °F)
18	Operating humidity	5% to 95% (no condensation)
19	Storage humidity	5% to 95% (no condensation)
20	Power supply	48 VDC, 1.35 A
21	Power consumption in idle	7 W

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Annexure - 12

The following are the technical parameters for the 64 Channel NVR:

S. No.	Features	Description
1.	IP video input	64 ch upto 12MP resolution supported
2.	Incoming bandwidth	Min. 300 Mbps
3.	Outgoing bandwidth	Min. 200 Mbps
4.	Recording resolution	Upto 12MP
5.	Video o/p interfaces	2 HDMI port;atleast 1 supporting 4K resolution, 2 VGA port; atleast 1 supporting 2K resolution
6.	Audio o/p	1 ch
7.	Compression technique	H.265,H.264
8.	Live view/Playback resolution	Upto 12MP resolution
9.	Synchronous playback	Up to 16 channel
10.	Smart Playback function	Should support Smart search for the selected area in the video and smart playback to improve the playback efficiency
11.	VCA storage	Should support saving the captured VCA Pictures for smart IPC's VCA detection
12.	SATA interfaces	Hot swappable 8 sata interfaces with each supporting 10TB, should support ANR technology
13.	Power supply	Should Supports redundant power supply to improve the system stability
14.	RAID arrays	RAID0, RAID1, RAID5, RAID 6, RAID10
15.	Hot spare function	Should support N+1 hotspare function
16.	Network interfaces	2, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface
17.	Serial inetrfaces	RS-232, RS-485; Keyboard
18.	USB interface	3 × USB connectors, with atleast 1 USB 3.0
19.	Alarm i/o	16 i/p and 4 o/p
20.	Power supply	100 to 240 VAC, 50 to 60 Hz (Dual Power, Redundant)
21.	Consumption (without hard disk)	≤ 30 W
22.	Working temperature	-10 to +55º C (+14 to +131º F)
23.	Working humidity	10 to 90 %
24.	Certfication	UL, CE, FCC, BIS

Annexure - 13

The following are the technical parameters for the 55" Monitor:		
S. No.	**Features**	**Description**
1	Backlight	D-LED
2	Pixel Pitch	0.315mm (H) * 0.315mm(W)
3	Max Resolution	3840 * 2160
4	Brightness	400 cd/m^2 (Typ.)
5	Contrast	1200:1
6	Response Time	8ms
7	Color	1.07billion
8	Active Area	1209.6mm(H) * 680.4 mm(V)
9	Viewing Angle	Horizontal 178°, Vertical 178°
10	Interfaces	2 x HDMI, 1 x VGA, 1 x LAN, 1 x Audio out, 1 x Audio in 1, 2 USB , 1 x RS232
11	Power Supply	AC 100~240V, 50/60 Hz
12	Power Consumption	≤180W
13	Standby Power Consumption	0.5W
14	Loudspeaker	8W*2
15	Working Temperature	0°C ~ 40°C
16	Working Humidity	20% - 80%RH(No Condensation)
17	Storage Temperature	-20°C ~ +60°C
18	Storage Humidity	10% - 90%RH(No Condensation)
19	VESA	400mm*200mm/400mm*400mm

Annexure - 14

The following are the technical parameters for the 8-Port Gigabit Managed PoE Switch:		
S. No.	**Features**	**Description**
1	Port number	8 × gigabit PoE ports, and 2 × gigabit fiber optical ports
2	Port type	RJ45 port, full duplex, MDI/MDI-X adaptive
3	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, and IEEE 802.3z
4	Forwarding mode	Store-and-forward switching
6	MAC address table	8 K
7	Switching capacity	20 Gbps
8	Packet forwarding rate	14.88 Mpps
9	Internal cache	4.1 Mbits
10	PoE standard	IEEE 802.3af, IEEE 802.3at
12	PoE port Ports	1 to 8
13	Max. port power	30 W
14	PoE power budget	110 W
17	Operating temperature	-10 °C to 55 °C (14 °F to 131 °F)
18	Storage temperature	-40 °C to 85 °C (-40 °F to 185 °F)
19	Operating humidity	5% to 95% (no condensation)
20	Relative humidity	5% to 95% (no condensation)
21	Power supply	48 VDC, 2.5 A
22	Power source	120 W
23	Max. power consumption	120 W
24	Power consumption in idle	7 W
25	Device maintenance	Support remote upgrade, recovering default parameters, viewing logs, configuring basic network parameters, import and export configuration, time sync.
26	Port configuration	Support the configuration of port rate and slow control, and ports enabling
27	Long range	Support up to 300 m transmission.
28	PoE watchdog	Ports 1 to 8: auto detect and restart the cameras that do not respond
29	Port rate-limiting	Support rate-limiting for ingress and egress ports.
30	Storm control	Support the storm control of unknown unicast, multicast and broadcast.
31	Port mirroring	Support port mirroring function.
32	QoS Support	WRR and SP scheduling and port priority.
33	VLAN Support	128 VLANs.
34	PoE Support	IEEE 802.3at/af power supply.

Annexure - 15

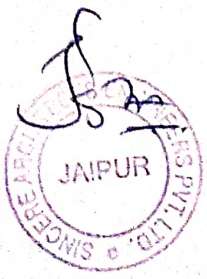
The following are the technical parameters for the Boom Barrier :		
S. No.	**Features**	**Description**
1	Barrier Type	Digital barrier gate, medium speed, non telescopic straight boom pole, 4 m , 3 s
2	Function	Supports hand wheel on motor design. When power fails, rotate the hand wheel to raise or lower the pole.
3		Should support three buttons to control the boom pole to rise, fall, or stop.
4		Should support contactless monitoring with more accurate control and more stable running.
5		Should support multiple interfaces, connectable to IR cable (low level signal input), induction, and toll connection system.
6		Should support wireless remote control via 430.5 MHz remote controller.
7		Should support strong environment adaptability. It can be used safely in 30 °C environment
8	Barrier Housing Material	CRS (Cold Rolled Steel)
9	Pole Material	6063
10	Length	4m
11	Shape	Octagonal boom pole
12	Max. Daily Cycles	14400
13	Working Temperature	-30 C to 70 C
14	Ingress Protection	IP54
15	Remote Control Frequency	430.5MHz
16	Power Supply	220 VAC ±15%
17	Consumption	60 W
18	Rising Speed	3 s
19	Falling Speed	3 s
20	Max. Boom Pole Length	4 m
21	Electric Current	1 Ampere

Annexure - 16

The following are the technical specifications for Anti-Fall Radar		
S. No.	**Parameters**	**Description**
1	Function	Should support advanced microwave and high-speed digital signal processing technology, features in high precision, free debugging, high reliability
2		Should be applied entrance and exit of underground garage to effectively prevent the boom pole of the barrier gate from falling down when there is vehicle or pedestrian passing
3		Should support 79 GHz MMIC with higher resolution and more stable detection
4		Should able to recognize the target moving direction, applicable to mixed entrance and exit scenes.
5		Should adjustable detection distance and width with convenient operation and strong universality
6		Communication via RS-485 or Wi-Fi. Wi-Fi version is equipped with mobile phone application, with which you can debug and upgrade the radar with convenient operation.
7		Should able to record the configuration parameters of radar automatically. The working status can be restored after the power of the radar is cut off and the radar is rebooted.
8		Should support strong environmental adaptability without influence of the electromagnetic interference, illumination, dust, rain, snow, etc. towards the detection performance.
9	Transmitting Frequency	79 GHz
10	Transmitting Power	≤ 10 mW or better
11	Beamwidth	Vertical: ±10°, Horizontal: ±38°
12	Response Time	Minimum 50 ms or better
13	Trigger Distance	0.3 to 6 m (adjustable)
14	Detection Area	Horizontal width: 0 to 2 m (adjustable)
15	Detection Target	Vehicle
16	Area Vehicle Following	Distinguishable vehicle distance: 0.5 to 2 m (adjustable)
17	Online Debug	Should have Serial port/Wi-Fi
18	Online Upgrade	Should have Serial port
19	Working Voltage	9 to 12 VDC
20	Working Current	< 0.25 A
21	Consumption	< 3 W
22	Working Temperature	-40 °C to 85 °C (-40 °F to 185 °F)

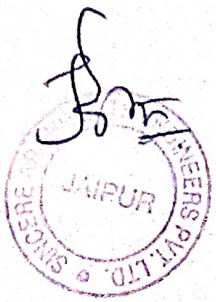
Annexure - 17

The following are the technical specifications for Triger Radar		
S. No.	**Parameters**	**Description**
1	Function	Should support advanced microwave and high-speed digital signal processing technology, features in high precision, free debugging, high reliability
2		Should be applied entrance and exit of underground garage to control the camera to capture pictures of the license plate at appropriate distance.
3		Should support 79 GHz MMIC with higher resolution and more stable detection
4		Should able to recognize the target moving direction, applicable to mixed entrance and exit scenes.
5		Should adjustable detection distance and width with convenient operation and strong universality
6		Communication via RS-485 or Wi-Fi. Wi-Fi version is equipped with mobile phone application, with which you can debug and upgrade the radar with convenient operation.
7		Should able to record the configuration parameters of radar automatically. The working status can be restored after the power of the radar is cut off and the radar is rebooted.
8		Should support strong environmental adaptability without influence of the electromagnetic interference, illumination, dust, rain, snow, etc. towards the detection performance.
9	Transmitting Frequency	79 GHz
10	Transmitting Power	≤ 10 mW or better
11	Beamwidth	Vertical: ±10°, Horizontal: ±38°
12	Response Time	Minimum 50 ms or better
13	Anti-Fall Width	Horizontal width: 0 to 2 m (adjustable)
14	Lane Width	Minimum 0.3 to 6 m (adjustable) or better
15	Detection Target	Pedestrian/vehicle (selectable)
16	Online Debug	Should have Serial port/Wi-Fi
17	Online Upgrade	Should have Serial port
18	Working Voltage	9 to 12 VDC
19	Working Current	< 0.25 A
20	Consumption	< 3 W
21	Working Temperature	-40 °C to 85 °C (-40 °F to 185 °F)



Annexure - 18

The following are the technical parameters for the 2MP ANPR Camera:		
S. No.	**Features**	**Description**
1	Camera Type	ANPR Bullet Camera
2	Edge Storage	MicroSD/microSDHC/microSDXC slot supporting memory card for min. 128 GB In the event of failure of connectivity to the network storage the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically pulled by the network storage recorder such that no manual intervention is required to transfer the SD card based recordings to network storage.
3	OCR	Built-in ANPR engine, equipped with Intelligent AI algorithm
4	LPR Accuracy	License Plate capture rate should be > 98%
5	Built In Smart Analysis	Support Vehicle type classification, color identification, no-plate vehicle capture, vehicle driving direction detection, No License Plate Detection
6	Image Sensor	1/1.8 inch Progressive Scan CMOS Sensor
7	Resolution	2 MP (1920 x 1080) at 60 FPS
8	Vehicle Type	Car/Van/Bus/Truck
9	Illumination	Color:0.001Lux @ (F1.2, AGC ON)
10	Video Compression	H.265 or better
11	Audio Compression	G.722.1 or better
12	High Light Compensation	Support
13	Back Light Compensation	Support
14	Wide Dynamic Range	120dB
15	Auto-iris	DC drive
16	Standard Protocols	TCP/IP, HTTP, HTTPS, FTP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, IPv6, UDP
17	Serial Port	1 RS-485 ports & 1 RS-232 port
18	Simultaneous Live View	Up to 20 channels
19	IR Distance	Upto 50m or better
20	User	32 users
21	Security	User Authentication, IP Address filtering, Watermark, HTTPS encryption, digest authentication for HTTP/HTTPS
22	Streaming	Min. Three compressed stream (Individually Configurable)
23	Shutter Speed	1/50to 1/1,00,000s which support slow shutter
24	Lens	6 to 13mm Motorized Vari-focal lens or better
25	Alarm Interface	2-ch inputs, 2-ch outputs
26	Housing	IP67
27	Anti-Vandalism rating	IK10
28	Communication Interface	1 RJ45 10M/100M/1000MEthernet port
29	Operating Temperature & Humidity	-30°C to 70°C, humidity 95% or less (non-condensing)
30	Power Source	Suitable adaptor shall be supplied to make the equipment work on 12 DC to 24DC±20%, and Power Consumption Max.15W
31	Certification	UL,CE,FCC,BIS



Annexure - 19

The following are the technical parameters for the Unmanaged Switch:		
S. No.	**Features**	**Description**
1	Switch Type	Unmanaged
2	Port number	5 x 1000M Ethernet port
3	Port type	RJ45 port, Full duplex, MDI/MDI-X adaptive
4	Forwarding mode	Store-and-forward switching
5	Standard	IEEE 802.3, IEEE 802.3u, IEEE 802.3x
6	Exchange capacity	10 Gbps
7	Internal cache	1 Mbits
8	Packet forwarding rate	7.44 Mpps
9	MAC Address Table	2 K
10	Power Supply	5 VDC, 1 A
11	Working Temperature	0 °C to 40 °C, humidity 5% to 95% (no condensation)
12	Storage Temperature	-40°C to 85°C, humidity 5% to 95% (no condensation)

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Annexure - 20

The following are the technical parameters for the 8 Channel NVR:

S. No.	Features	Description
1	IP video input	8 ch upto 12MP resolution supported
2	Incoming bandwidth	Min. 80 Mbps
3	Outgoing bandwidth	Min. 250 Mbps
4	Recording resolution	Upto 12MP
5	Video o/p interfaces	1 HDMI port; both supporting 4K resolution, 1 VGA port; at least supporting 1080p resolution
6	Audio o/p	1 ch
7	Compression technique	H.265 or better
8	Live view/Playback resolution	Upto 12MP resolution
9	Synchronous playback	Up to 8 channel
10	Smart Playback function	Should support Smart search for the selected area in the video and smart playback to improve the playback efficiency
11	VCA storage	Should support saving the captured VCA Pictures for smart IPC's VCA detection
12	SATA interfaces	2 sata interfaces with each supporting 8TB, should support ANR technology
13	Network interfaces	1, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface
14	USB interface	2× USB connectors with atleast 1 USB 3.0
15	Alarm i/o	4 i/p and 1 o/p
16	Power supply	12 VDC
17	Consumption (without hard disk)	≤15 W
18	Working temperature	0 to +50°C (32 to 122°F)
19	Working humidity	10 to 90 %
20	Certification	UL,CE,FCC,BIS

Video Management Software for boom barrier:	
General Requirement	
1	The VMS shall support client applications including System client, Web client, Video wall management client and mobile client
2	The VMS shall support login by user name and password. It shall also manage all user information, permissions, license, operation information and system information.
3	The VMS shall support unified time synchronization among all devices in the system and daily user and maintenance information management.
4	The video recording management shall support several types of storage device such as DAS, NAS, IPSAN, direct storage etc. It shall enable centrally management of NVR, storage devices offering video searching, playback, manageing and downloading
5	Shall have Network management server which regularly acquires the status of video devices such as NVR, Network camera, storage boxes and running status of servers of system.
6	Shall have an Alarm management server which provides alarm events and maintains the logs of alarm management. It shall also receive I/O alarms triggred by alarm host such as recorder, camera and so on. IT shall also be responsible to trigger linked actions like push alarm notification to clients, sending e mail, calling presents in PTZ, video wall linkages etc.
The VMS shall support 3 types of authentication method viz.	
a	Username and password: User name (login name) must be exclusive and cannot be modified once set. After login, all the operations shall be monitored and saved into the system record (log) for internal review.
b	Binding IP Address Authentication In order to prevent the operator from logging in illegally, the IP address of the computer is bound. The operator can only log in from the designated computer; or else he or she may not be able to enter the system normally.
c	Access Permission Precise permission settings shall be supported. Any user or any video resources shall be set precisely. For example, each user can be assigned the permissions including real-time monitoring, playback, PTZ control and so on to each camera.
Video Surveillance Management shall support following functions:	
	Live view
1	The real-time live view shall be displayed in 1/4/6/9/13/16 windows through the C/S or B/S clients.
2	The user is able to set the video to show in original size or extent to the whole screen.
3	The system is able to remotely control the PTZ functions, including rotation, auto scan, zoom in, zoom out, preset settings, patrol settings, and so on. Set the speed dome's preset, and then the speed dome will automatically go to the preset to perform monitoring.
4	Auto-switch shall allow displaying the videos according to the rules set by the user, which can be set as auto-switch in one group, auto-switch among groups, or combined auto-switch or scheduled auto switch.
5	The system shall be able to receive real-time sound through the two-way audio function
6	Instant Play back the recorded video files of a specific camera in the live view mode.
	Playback
1	The recorded video file by file type, date, and camera, with many additional functions, including playback in 1/4 window divisions, fast forward (×1, ×2, ×4, ×8), clipping,image capture, multi-camera simultaneous playback, etc
2	The system shall be able to play back the video in different time segments.
3	Supports multiple playback types:scheduled recordings, motion recordings, manual recordings and alarm recordings

	Video Management Software for boom barrier:
4	Picture Playback - Shall Support searching vehicle pictures by multiple types, such as normal, illegal and armed, shall support Supports auto play and auto play delay duration
	Comprehensive search
1	Picture search of passing vehicles - Search by license plate no.
2	Export - Shall support export searched result in customized way i.e Picture or data or picture and data
	E-Map
1	E-Map shall be of 2 types - is developed based on the third party map engine that already exists to realize GIS map function or When users need to manage the resource in E-map without original data and the third party map engine, the E-map server can load JPEG E-map
2	Shall allow to visually display the spatial position of video resources. All camera points, checkpoints, and E-police actual positons shall be displayed in E-map. Users can search the camera points, checkpoints, and E-police actual positons and quickly locate to the positions to check the surrounding geographic information
3	Shall supports searching by License plates number and time period, and displaying history playback of vehicles
4	Shall support displaying information and pictures of passing vehicles
	Alarm Management
1	Shall support editing alarm schedule templates, customizing alarm time, alarm level-Low, medium, high, multiple alarm linkage viz., cient linkage, recording linkage, message linkage etc.
2	Shall support camera alrams, device alarms, IO alarms, server alarms,
3	Shall allow to generate the alarm report
	Recording management
1	Shall support setting recording, shall have different type of templates viz all day template, work day template, weekend template, customized template
2	Shall allow to select the storage types whether device storage, storage server
3	Shall support pre and post recording time
	Task scheduler
1	Shall support to generate task of server time synchronization, device time synchronization, data and record backups, device reboots, device status inspection etc.
	Maintainance management
1	Shall allow checking the server information and status of the server including type of server, total no. of server, normal server, exceptional server, offline server etc.
2	Checking status and information of devices working under certain organization unit including type of device, total no. of device, normal device, exceptional device, offline device etc.
3	Checking the status of users including user name, organization name, login time, login type, online time, IP address, toatl online users etc.
	Should support ANPR ,entry and exit management

Annexure - 22

Recommended Specifications for VMS Server	
CPU	Intel® Xeon® E3-1220 V5 @ 3.00 GHz
RAM	16 GB
NIC	GbE Network Interface Card
HDD for OS	SATA-II 7200 RPM Enterprise Class HDD 1)For a contiguous memory block of 128 KB, it should support 20 MB/s writing and 20 MB/s reading. 2)For a random memory block of 4 KB, it should support 1.5 MB/s writing
HDD for Picture Storage	Enterprise-class HDD or high performance network HDD It should support 20 MB/s writing and 20 MB/s reading
HDD Capacity	At least 650 GB for the HDD where VSM service is installed

Recommended Specifications for Client	
CPU	Intel ® CoreTM i7-6700k @ 4 GHz
RAM	16GB
NIC	GbE Network Interface Card
Graphics Card	NVIDIA GeForce GTX 1070
HDD Type	SATA II Hard Drive or Better
HDD Capacity	240 GB for OS and VMS Control Client
Operating System	Microsoft ® Windows 7 (64-bit)

SINCERE AROMA SPECIALITIES PVT. LTD. JAIPUR

Annexure A 48F OFC

48 F SM Armoured OFC

S. No	CHARACTERISTICS		UOM	G652 D		Compliance
				BEFORE CABLE	AFTER CABLE	
1	Attenuation	@ 1310 nm	dB/km	≤ 0.34	≤ 0.36	
		@ 1285-1380 nm		≤ 0.37	--	
		@ 1390-1525 nm		≤ Value at 1310 nm	--	
		@ 1550 nm		≤ 0.21	≤ 0.23	
		@ 1625 nm		≤ 0.24	≤ 0.26	
2	Water Peak Attenuation		dB/km	≤ Value at 1310 nm (Between 1380 - 1390 nm)	≤ Value at 1310 nm (At 1383 ± 3 nm)	
3	Total Dispersion	@1285-1330 nm	ps/nm.km	≤ 3.50	--	
		@ 1270-1340 nm		≤ 5.30	--	
		@ 1550 nm		≤ 18.0	--	
		@ 1625 nm		≤ 22.0	--	
4	Zero Dispersion Wavelength		nm	1300 to 1324	--	
5	Zero Dispersion Slope		$ps/nm^2.km$	≤ 0.092	--	
6	Polarised Mode Dispersion @ 1310 & 1550 nm	Fibre	ps/√ km	≤ 0.20	--	
		Cabled Fibre		≤ 0.30	--	
7	Fibre Cut-off Wavelength		nm	≤ 1320	--	
8	Cable Cut-off Wavelength		nm	≤ 1260	--	
9	Mode Field Diameter at 1310 nm		µm	8.8 – 9.8	--	
10	Cladding Diameter		µm	125 ± 1.0	--	
11	Cladding Non-Circularity		%	≤ 1.0	--	
12	Core clad concentricity Error		µm	≤ 0.6	--	
13	Coating Diameter (Natural Fibre)		µm	245 ± 10	--	
14	Coating/Cladding concentricity		µm	≤ 12	--	

PHYSICAL & DIMENSIONS PROPERTIES

S.	CHARACTERISTICS	VALUE	
1	FIBRE TYPE	ITU-T SM G652D	
2	NO. OF FIBRE	48F	
3	LOOSE TUBE / DUMMY	6 / 0	
4	LOOSE TUBE DIAMETER	PBT LOOSE TUBE	
5	STRENGTH MEMBERS	F.R.P ROD, GLASS YARN & ELECTROLYTICALLY CROME COATED STEEL TAPE ARMOURING	
6	COLOR OF FIBRE	BLUE, ORANGE, GREEN, BROWN, SLATE, WHITE, RED & NATURAL	
7	COLOR OF LOOSE TUBE / DUMMY	BLUE, ORANGE, GREEN, BROWN, SLATE & WHITE	
10	OUTER SHEATH MATERIAL	HDPE - BLACK	
11	OUTER SHEATH THICKNESS	1.80 mm MINIMUM	
12	OUTER CABLE DIAMETER	11.20 ± 0.50 mm	
13	CABLE WEIGHT	125 Kg/Km Nominal	
14	PRINTING ON CABLE	AS PER CUSTOMER SPECIFICATIONS	
15	STANDARD LENGTH	2, 4, 8, 10 ± 10 % KMS	

MECHANICAL & ENVIRONMENTAL PROPERTIES

S. No	CHARACTERISTICS	VALUE	
1	MAX. TENSION OPERATIONAL / INSTALL	9.81*2.5*W or 2700 N	
2	CRUSH RESISTANCE	2000 N/100*100 mm	
3	Minimum Bending Radius	20 x D mm	
4	Max. Operating/ Installation Temperature	-20°C to +70°C	
5	Preferred make	AKSH/HFCL/Sterlite	

Annexure A HDPE Duct			
40/33 mm HDPE Telecom Duct			
S.No	**Description**	**Parameter**	**Complaince**
1	Dimension of Duct	40 mm /33mm	
2	a) Outside diameter	40 mm + 0.4 mm – 0.0 mm	
3	b) Wall thickness	3.5 mm ± 0.2 mm	
4	c) Thickness of the Inner Layer	Minimum: 0.28 mm, Maximum:0.42 mm	
5	d) Standard length	1000 ± 100 meters	
6	e) Maximum outer dia-meter of OF cable that can be installed by blowing technique	16 mm	
7	f) Rest all parameters as per TEC/GR/FA/CDS008/04/AUG-1		
8	With all accessories as required		

Annexure-B		
Single Mode 6 Port (Duplex connector) LIU/Fibre Patch Panel/Fibre Distribution (6F) Frame		
S.No	Description	Compliance
Make & Model Offered:		
1.	6 port duplex connector Fibre management rack mount/wall-mount enclosures loaded with required Adapters, adapter Plates, splice trays & labels	
2.	Height: 2U/1U	
3.	Cable Management rings: Management rings within the system to accommodate excess fibre cordage behind the through adapters and maintain fibre bend radius	
4.	Drawer/Sliding style: The LIU must be of Drawer/Sliding style for easy maintenance and troubleshooting	
5.	LIU/Fibre Patch Panel/Fibre Distribution Frame enclosures for outdoor usage shall be as per IP-67 Standard	
6	Preffered Brand : AKSH/ Dlink/ Molex/ Syrotech/Digisol	

Annexure-C		
Single Mode 96 Port (Duplex connector) LIU/Fibre Patch Panel/Fibre Distribution		
S.No	Description	Compliance
Make & Model Offered:		
1.	96 port duplex connector Fibre management rack mount/wall-mount enclosures loaded with required Adapters, adapter Plates, splice trays & labels	
2	Cable Management rings: Management rings within the system to accommodate excess fibre cordage behind the through adapters and maintain fibre bend radius	
3	Drawer/Sliding Style: The LIU must be of Drawer/Sliding style for easy maintenance and troubleshooting	
4	LIU/Fibre Patch Panel/Fibre Distribution Frame enclosures for outdoor usage shall be as per IP-67 Standard	
5	Brand : AKSH/Dlink/ Molex/Syrotech/Digisol	

Annexure-D		
6U Pole/Tower Mount Outdoor Rack		
S. No.	**Particulars**	**Minimum Specifications**
1	**Make Offered**	
2	**Model Offered**	
3	**Height**	6U usable Space
4	**Type**	Pole / Tower mountable rack
5	**Power distribution**	Strip Type Rack mountable (19 inch), ISI Marked
6		(minimum 3 points – 5Amp sockets and 1 points – 15Amps sockets) power distribution Indian round pin
7		Spike Suppressor PDU strip with Circuit breaker, MOV and fuse.
8	**Door**	Rack with front metal door with Knob lock & key
9	**Fan For Heat dissipation**	Fan with minimum IP 55 category to eliminate cabinet hot air.
10	**Metal**	Galvanized Steel of not less then 1.2 MM Thickness
11		Weight bearing components and mounting angles should be of thickness not less than 1.5 mm, 19" equipment mounting angle should be of thickness not less than 1.5 mm.
12		Powder coated color meeting Standards of Outdoor & IP55 Requirement or higher.
13	**Load Bearing Capacity (Kg**	40 kilogram or more
14	**Side panels**	Rack should be fully welded frame with integrated side panel
15	**Width x Depth**	550 mm * 500 mm or higher
16	**Certifications**	Rack should be from ISO 9001:2008 Certified Company.
17	**Standards**	Rack should conform, IP 55 certified by NABL accredited lab.
18	**Warranty**	Rack and other items supplied with rack should carry 3 year warranty.
19	**Make**	Product should be Make in India
20	**Brand**	Hulasi/Netrack/WQ/Comrack

Annexure-E		
UPS Line Interactive 1KVA		
S.No.	**Technical Specifications**	
Make:		
Model:		
	Parameters	**Values**
INPUT		
1	Voltage (VAC)	120~300VAC
2	Frequency (Hz)	50 / 60Hz ± 10Hz Auto Sensing
OUTPUT		
3	Voltage AVR Mode	200~245V
4	Voltage Battery Mode	230VAC ±10%
5	Frequency (Hz) on Battery	50/60Hz ± 0.1Hz
6	Waveform	Simulated Sine Wave
7	Transfer Time (ms)	4-8 ms Typical
BATTERY		
8	Voltage	24V DC
9	Internal Battery Standard Optional	 2x12V/7AH 2x12V/9AH
10	Type	Sealed Maintenance Free Lead Acid VRLA
11	Recharge Time	6-8 Hours to 90% After Complete Discharge
SYSTEM FEATURES		
12	Audible Alarms	Low Battery, Overload, Short Circuit and Fault Conditions
13	LED Display	AC Mode : Green Lighting, Battery Backup Mode : Orange Lighting, Fault Mode : Red
14	Protection	Battery Low, Overload, Short Circuit, AC Input Low/ High & Fault conditions
15	Degree of Protection	IP 20
16	Cold Start	Yes
17	Type of Enclosure	ABS
PHYSICAL		
18	Dimensions (WxDxH) mm	147x351x163
19	Net Weight Standard Model (Kg)	7.96
20	Nos. of Power Outlet	3
STANDARD		
21	Quality	ISO 9000, ISO 14001, OHSAS 18001, ISO 27001, BIS and RoHS
22	Safety	IEC/EN62040-1
23	EMC / Performance	IEC/EN62040-2, IEC/EN62040-3, Complying to C
ENVIRONMENT		
24	Temperature	Operating: 0~45°C, Storage: -10ºC ~ 55ºC
25	Humidity / Altitude	0~95% RH Non-condersing / <1500 M
26	Noise	Low Audible Noise Level
27	Preffered Make	Numeric/APC/R S Power/Emerson

Annexure-F

Smart Rack 42 U		
S.No	**Description**	**Compliance**
1	**42U, 800w x 1000D Smart Rack with Cooling Unit** Rack based Air Cooling unit in Rack should be of 7kW/2TR capacity, mounted on the 19” Angles within the rack. • Cooling System should be DX type. • It should have the bottom to top airflow system. • It should be mounted within the rack on 19” angles. • It should not consume more than 9U/unit space in the rack. • Split indoor & Outdoor unit design	
2	**Basic PDU** Standard Rack PDU (Vertical) with IEC C13 & IEC C19 for each Rack with 2.5 mtr. power chord (each rack is having two PDU's).	
3	**Fire Detection System** Fire detection system should be rack mounted. It should have Fire alarm unit consuming maximum 2U of rack space.	
4	**Electrical system-POD** 19" rack mountable Power Output Device with essential breakers to be mounted in the rack. It should consume only 3U space of rack height.	
5	Integrated Smart racks should have IP based monitoring facility of all the passive parameters inside racks capable of sending E mail alerts. The monitoring unit should take maximum 1U of the rack height. The environmental system to be able to check below parameters - • Smoke Detector • Water Leak Detection system • Rodent Repellant System • Temperature/ Humidity Sensor • Door Sensor • Alarm beacon • Email notifications	
6	The Intelligent integrated infrastructure would provide much functionality and some of the key functionalities are - Cold Contained Front Aisle & Rear Contained Hot Aisle, insulation, remote management and single point of service.	
7	Auto emergency door opening feature should be provided	
8	provided.	
9	Rack , Rack PDU ,Cooling and monitoring system should be from same & single OEM	
10	of all the passive parameters inside racks capable of sending E mail alerts. The monitoring unit should take maximum 1U of the rack height.	
11	The Cooling Unit should be integrated in rack i.e. 19" mountable & should occupy 9U/ unit. Rack based air conditioning unit using refrigerant R407C/R410A	
12	Preferred make: Raritan/Vertiv/Netrack/Delta	

Annexure-G

Armoured Cat 6 Cable		
Sr.No	**Description**	**Specification**
	Certification	TIA/EIA 568-B.2
		CAT - 6 Armoured Cable
		4P x 23 AWG
1	Construction & Dimensions	
	Construction	4 Unshielded twisted pairs (UTP)
	Inner Conductor	Solid Bare Copper
2	Conductor Diameter in MM	0.53 ± 0.010
3	Insulation Material	HDPE
	Insulation Thickness in MM	0.25 ± 0.05
	Insulation Diameter in MM	1.030 ± 0.05
4	Pairing	
		White /Blue - Blue
		White /Orange - Orange
		White /Green - Green
		White /Brown- Brown
5	Laid -up	
	Laid Up diameter in mm	4.60 ± 0.5
6	Rip Chord	Nylon rip chord
7	Inner Sheathing	FR PVC
	Sheathing Thickness in MM	0.50 ± 0.010
	Inner Sheath Diameter in MM	5.80 ± 0.5
	Inner Sheath Colour	Grey
8	Armouring	GI WIRE
	GI Size in MM	0.9
	Dimeter over Armoured	7.6 ± 0.5
9	Outer Sheath	FR PVC
	Min Sheath Thickness in mm	1.24
	Min Outer Sheath Dia in mm	10.10 ± 1.0
	Outer Sheath Colour	Grey
10	Electrical Parameters (at 20 Deg.cent)	
	Nominal mutual capacitance at 1KHZ	56nf/km
	Maximum Conductor DCR	92.0 Ohm/Km
	NVP- Nominal velocity of Propagation	65% @ 250 MHz
	SKEW-propagation delay difference	Max 48ns/100 mts @ 250 MHz.
	Mean Characteristics impedance	100+/- 15 Ohm @250 MHz.
11	General and Environmental Characteristics	
	Temp Range operation storage	-20°C + 60°C
	Temp Range installation	-0°C + 50°C
	Minimum bending radius- operation	12XD
12	Standard Packing	
	Box Packing	1000 Mtrs
13	Preferred brand	AKSH/Dlink/ Molex/Digisol

Annexure-H	
5 KVA ON-LINE UPS	
Factors	**Description**
Capacity	5KVA
Make	
Model	
Battery DC Voltage (VDC)	156
General	(i) UPSs are free from workmanship defects, sharp edges, nicks, scratches, burs etc. All fasteners fixed properly. The equipment shall be complete with all parts and all parts shall be functional.
	(ii) UPS enclosure's degree of protection shall be IP2L1 as per appendix C of IS 13947 (part 1)/1993 (reaffirmed 2004)
	(iii) Provision of manual By-pass facility for maintenance of UPS
	(iv) UPS shall supply output power and charging current at the same
Technology and capability	True Online Double conversion DSP controlled UPS with advanced IGBT /PWM technology at both rectifier and inverter.
Switching Device	MOSFET/ IGBT
Switching Frequency	> 10 KHz
Input Voltage	160 V – 260V, 50 ± 3% Hz, Single phase AC or
Input Power factor	> 0.95 (lagging)
Output	230 V/ 220 V ± 1%, 50 ± 0.5 Hz, single phase
KW rating of the UPS	0.7 time the KVA rating (Standard), 0.8/0.9/Unity Power factor (optional)
Isolation Transformer	Inbuilt Isolation Transaformer.
Voltage Regulation	Within ± 1 % (from no load to full load) for both single / three phase
Facility for operation in synchronous mode	Provided i.e. Output frequency shall be same as that of mains frequency
Total Harmonics distortion at output	· 2 % maximum up to 5.0 KVA &
	· 3 % maximum above 5.0 KVA on resistive load
Efficiency	At rated output KVA rating, rated power factor, rated voltage and frequency (overall efficiency): 90%
Overload Capacity	110% for 10 min.; 125% for 1 min. & 150% for 30 secs.
Protections	· Over voltage
	· Short Circuits
	· Overload at output terminal
	· Under voltage at battery terminal
	· Over shoot and under shoot : < 4% of rated voltage for duration of 40 m sec. (maximum)
Indicators	· Mains presence
	· Battery Charging & discharging
	· Output overload
	· Low battery voltage
Meters	Provision of Digital Meter for monitoring the following parameters:
	· Input AC voltage
	· Output AC voltage, current and frequency
	· Battery voltage & current
Battery Bank	· Type : SMF VRLA Batteries
	· Make : Exide/ Amararaja or as per JISC:8702 standard
	· Battery Stand : Provided
Noise (dB), Temperature and RH	< 45 dB (1 meter), 0-40 0C, 0-95 % (No condensation)
Protection	IP20/IP21
Other Features (Optional)	
Communication & Interface	Suitable Interface (RS232/RS485) Port and software enable to user to supervise while working on platform such as XP/Windows/Linux/VISTA etc. SNMP communication offers so that critical parameters of UPS can be monitored from remote position.
SNMP	Power management from SNMP manager and Web browser
Parallel Redundancy	Parallel Redundancy/Hot standby modes
Bypass	Static Bypass system for Automatic Transfer
STANDARD	
Certification	ISO 9001, ISO 14001, OHSAS 45001, RoHS, & BIS certified
Safety Standard	IEC/EN-62040-1
EMC Standard	IEC/EN-62040-2; IEC/EN-62040 -3, Complying to CE
Preffered Make	Numeric/APC/R S Power/Emerson

Special terms & Conditions for Electric, Electronic, Audio Speech, Fountain, IOT/ICT related works.

(i) Fixture must be in compliance with BIS/CE standards and T.C. Certificate complete in all respect. OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre-approved by Architect/ Engineer in-charge.

(ii) Contractor should submit minimum five year manufacturing warranty certificate from OEM for all Electrical items Surveillance system, PA & BGM System & Other electric ICT/IOT based equipment, Poles and fountain work. Contractor should hand over the copy of these certificate to JDA prior to installation of the product, so that department can take advantage for the warranty period of the items.

(iii) Items other than the specified in Annexure-AAA at S. No. 4 or less than specified quantity in above list, can be send for testing by Engineer-in-Charge in any NABL accredited/CPRI/ERDA Lab. The details of Sample size is given at Annexure-AAA. Contractor is liable to make all necessary arrangement to send the sample & get report from lab, no extra payment shall be made to contractor for this arrangements. The testing fees/ testing charges will be reimbursed by JDA to the contractor subject to the clearance of the test by the product.

(iv) Testing lab for above must be selected after written consent of Engineer-in-Charge.

(v) All items including Makes & Models must be approved by Engineer-in-Charge in writing and approval letter should be enclosed in work agreement file. Routine type test certificate from OEM lab shall also be submitted by contractor at the time of makes & models approval.

(vi) Drawing of the poles attached at annexure-AA.

(vii) All the luminaries/ lighting fixtures should have minimum IP: 66 class protection.

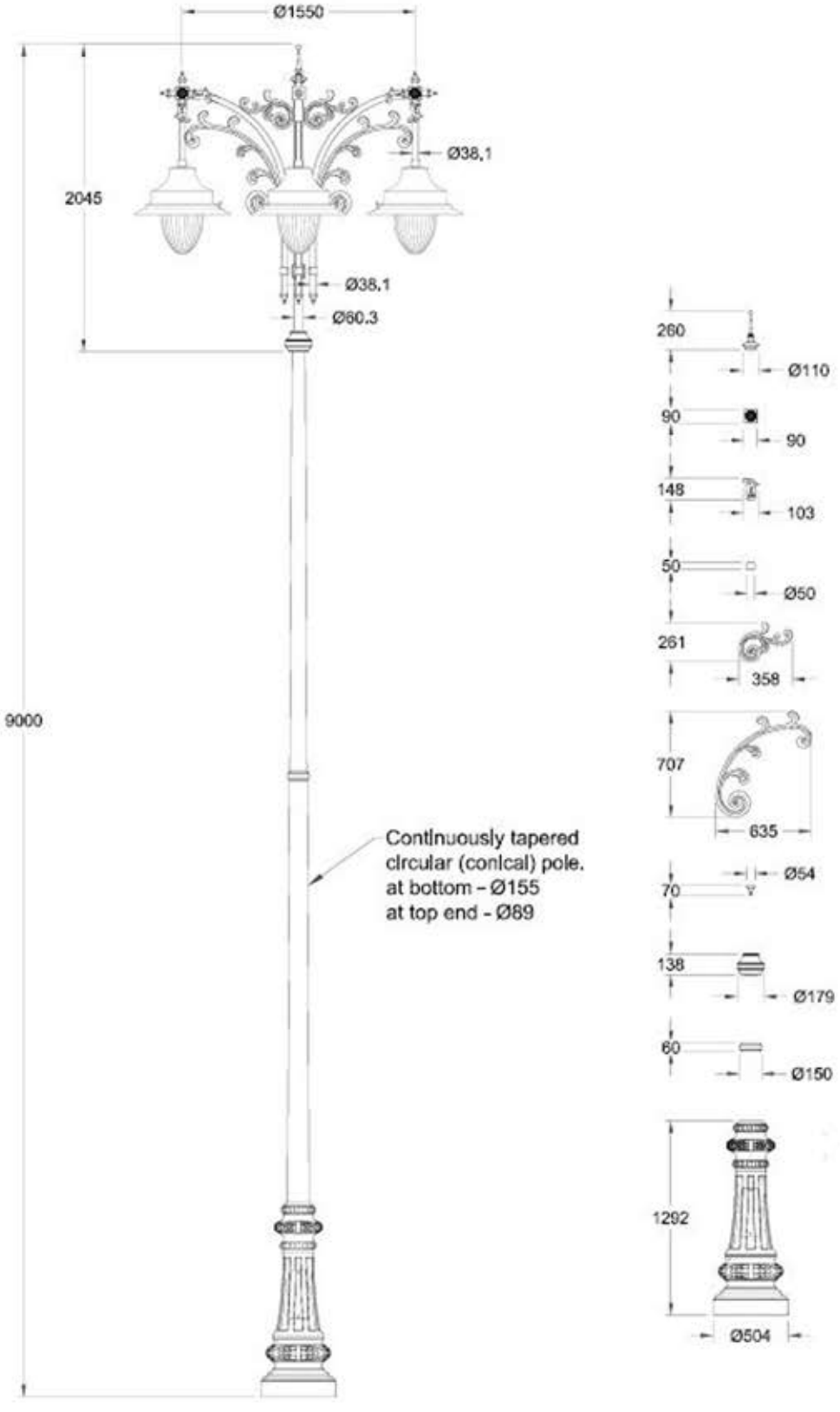
(viii) Rates for the all the items should be quoted including SITC with minimum 5 years warranty from OEM.

Sample size for testing :-

Annexure -AAA

Sr. No.	Item Name	Tests Must be done through NABL accredited/CPRI/ERDA or other approved Labs or as specified with individual item :-
1	F/T accessories (Non-Modular all switch/ socket/ regulator etc.)	01 out of 300 Nos. (Total all switch/ socket/ regulator etc.)
2	Modular accessories (all switch/ socket/ regulator etc.)	01 out of 300 Nos. (Total all switch/ socket/ regulator etc.)
3	FR PVC Flexible Copper Conductor (Totalof any Size)	01 out of 5000 Mtr. (Any size as per EE required)
4	PVC Conduit (Total of all sizes)	01 out of 500 Mtr. (Total of all sizes)
5	Steel Conduit (Total of all sizes)	01 out of 500 Mtr. (Total of all sizes)
6	Sheet Steel Box/ M.S. Box/ GI Box/ PVC Box (Total of all sizes)	01 out of 200 Nos. (Total of all sizes)
7	MCB (1 Pole to 4 Pole) (Total of all amp rating)	01 out of 100 Nos. (Total of all amp rating)
8	DB (SPN to all TPN)	01 out of 20 Nos. (SPN to all TPN)
9	Panel accessories meters/ switches/relays)	OEM test certificate required.
10	ACB & MCCB	01 out of 05 Nos. ACB (OEM type test certificate also required for each quantity.) & 01 out of 25 Nos MCCB (OEM type test certificate also required for each quantity.)
11	SFU (All Types)	01 out of 10 Nos. (OEM type test certificate also required.)
12	LT/ HT Cable (Total All sizes)	01 Sample for 500 Mtr.
13	Earthing (Gel)	01 out of 10 Nos. (factory visit)
14	Ceiling Fan/ Exhaust /fresh air/ wall mounting fan. (Total All sizes)	01 out of 100 Nos. (Total All sizes)
15	Storage water heater (Geyser)	01 out of 20 Nos. (OEM test certificate required.)
16	LED Lighting fixture & accessories (Indoor & Out door	01 out of 200 (Indoor)

	Total all types)	01 out of 50 (Outdoor)
17	LAN wiring	I.O. (LAN Point) - if Min. 80 Nos. (OEM 20 year's performance warranty certificate With penta scanner report required With no extra cost.)
18	LAN Accessories	Switch – OEM / Auth. Dealer genuineness Certificate required.
19	Motor & Pumps , submersible etc.(Total all types)	01 out of 10 Nos. (OEM Certificate for every Piece)
20	Lattice tower	Factory Inspection compulsory
21	Air Conditioner	AC- 01 out of 25 Nos. (Factory visit)
22	Air cooling machine/ Chillers	Factory Inspection / III party certificate must
23	Transformer	01 out of 01 Nos. (Engineer visit compulsory at manufacturing site)
24	Fire Pump / Engine	III party inspection must.
25	Street light pole	If more then 25 , Factory Inspection / III party certificate must
26	High mast pole	Factory Inspection / III party certificate must
27	DG set	Factory Inspection / III party certificate must
28	RMU	Factory Inspection / III party certificate must
29	Bus Bar Trucking	Factory Inspection / III party certificate must
30	Solar water heater	Factory Inspection / III party certificate must



9M (4 ARM) LIGHT POLE

Sincere
THE GLOBAL DESIGN HOUSE
S. A. E. PVT. LTD.

DRG. NO.- J/B2B/UD/L/19

STATUS.- | REV. NO.- 00

DATE OF ISSUE- 14/ 10/ 21

KEY PLAN -

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S.NO.	R.NO.	DATE OF ISSUE	DESCRIPTION

PROJECT -
TRAFFIC IMPROVEMENT AND BEAUTIFICATION WORK AT B2BYEPASS

DRG. TITLE -
LIGHT POLE

PROJ. ARCH. - ARCHANA DAS | DIRECTION -
H.O.D. (ARCH.)- SHASHANK JAIN
DEALT BY - VIDHU CHAUDHARY
CHK. BY - ARCHANA DAS | PRINT - Scale (A3)

DESIGNED BY - ANOOP BARTARIA

SINCERE ARCHITECTS ENGINEERS PVT. LTD.
ARCHITECTURE . STRUCTURAL DESIGN . INTERIORS . LANDSCAPE . BLDG SERVICES
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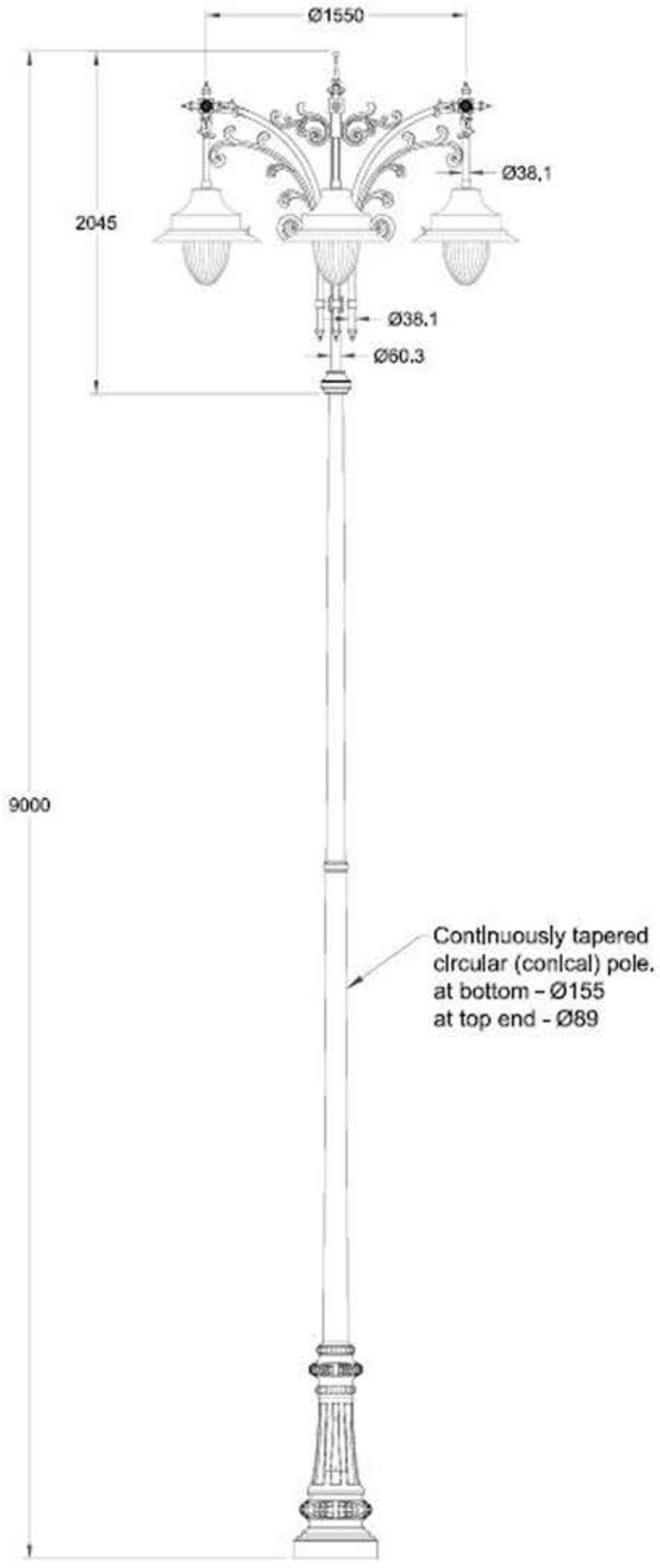
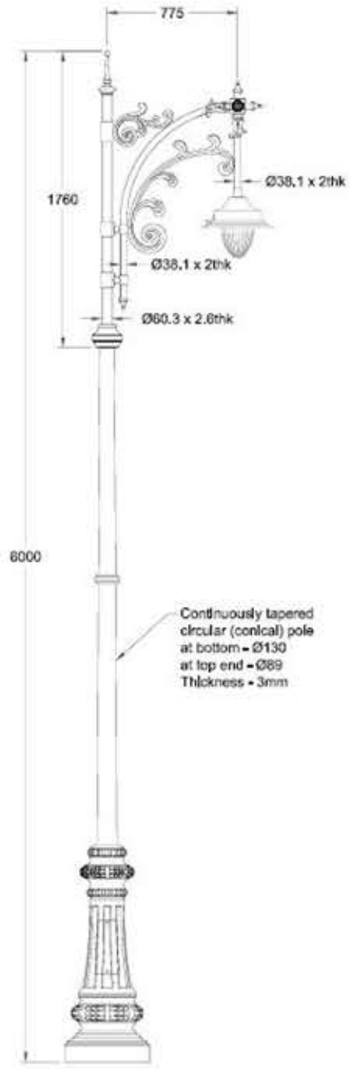
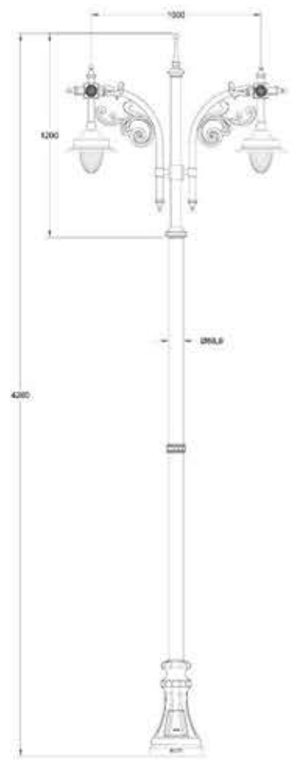
PHONE 91-141-2552384,2721695 FAX 91-141-2721695
E-MAIL - sincerehouse@gmail.com



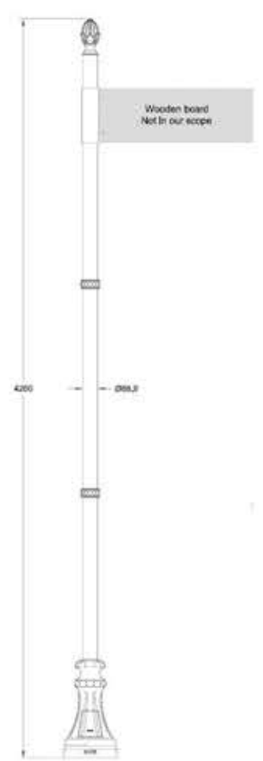
9m - FOUR ARM LIGHTING POLE



6m - SINGLE ARM LIGHTING POLE



4.26m - DOUBLE ARM LIGHTING POLE



4.26m - SINGLE ARM POLE

Sincere
THE GLOBAL DESIGN HOUSE
S. A. E. PVT. LTD.

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PHONE 91-141-2553184,2721693 FAX 91-141-2721693
E-MAIL: sincerehouse@gmail.com

Percentage BoQ

Tender Inviting Authority: Jaipur Development Authority, Jaipur

NAME OF WORK:- Traffic Improvement and beautification works at B2 Byepass Junction, JDA, Jaipur, Rajasthan

Contract No:- JDA/EE (Traffic Works-I)/03/2021-22

Bidder Name :						
		PRICE SCHEDULE				
Sl. No.	**Item Description**	**Quantity**	**Units**	**Estimated Rate**	**TOTAL AMOUNT**	**TOTAL AMOUNT In Words**
1	**2**	**3**	**4**	**5**	**6**	**7**
	DISMENTALING WORK					
1.10	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in-charge. **Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).**	545.689	CUM	729.00	**397807.28**	**INR Three Lakh Ninety Seven Thousand Eight Hundred & Seven and Paise Twenty Eight Only**
2.00	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 50 metres, stacking serviceable and unserviceable materials separately as directed by Engineer.					
2.10	Bituminous courses	16517.040	CUM	1020.00	**16847380.80**	**INR One Crore Sixty Eight Lakh Forty Seven Thousand Three Hundred & Eighty and Paise Eighty Only**
2.20	Granular courses	22284.920	CUM	682.00	**15198315.44**	**INR One Crore Fifty One Lakh Ninety Eight Thousand Three Hundred & Fifteen and Paise Forty Four Only**
3.00	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately as per MoRT&H specification clause 202.	936.000	CUM	976.00	**913536.00**	**INR Nine Lakh Thirteen Thousand Five Hundred & Thirty Six Only**
4.00	Dismantling kerb stone by manual means and disposal of ismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	8952.000	MTR.	9.50	**85044.00**	**INR Eighty Five Thousand &Forty Four Only**
5.00	Removal of telephone / Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and up to a lead of 1000 metres and stacking the serviceable and unserviceable material separately as per MoRT&H specification clause 202.	30.000	EACH	717.00	**21510.00**	**INR Twenty One Thousand Five Hundred & Ten Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
6.00	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50metres lead.	57500.000	Kg	0.90	**51750.00**	**INR Fifty One Thousand Seven Hundred & Fifty Only**
7.00	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	7.584	CUM	1070.00	**8114.88**	**INR Eight Thousand One Hundred & Fourteen and Paise Eighty Eight Only**
8.00	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.					
8.10	In cement mortar	176.955	CUM	608.00	**107588.64**	**INR One Lakh Seven Thousand Five Hundred & Eighty Eight and Paise Sixty Four Only**
9.00	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 50 metres as directed by Engineer.					
9.10	Dismantling Brick / Tile work					
9.20	In cement mortar	384.000	CUM	249.00	**95616.00**	**INR Ninety Five Thousand Six Hundred & Sixteen Only**
	DE-SLITING					
10.00	Cleaning and removal of earth, silt, sludge, kankar, boulder, building material and garbage in existing nallah/drains including onstruction of bye pass arrangement to byepass water with 1.5m lift from ground level and lead upto 50 m including foul & saturated condition where pumping out or bailing out of water is required, including shoring, shuttering where required and dewatering. Making access for disposal and dressing disposal side as per the directed of the Engineer. **Depth upto 1.50 m**	3742.400	CUM	286.00	**1070326.40**	**INR Ten Lakh Seventy Thousand Three Hundred & Twenty Six and Paise Forty Only**
	Excavation					
11.00	Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level. **In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc. Depth upto 1.5 m**	128413.628	CUM	169.00	**21701903.13**	**INR Two Crore Seventeen Lakh One Thousand Nine Hundred & Three and Paise Thirteen Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
12.00	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.9.1.1	27443.043	CUM	25.50	**699797.60**	**INR Six Lakh Ninety Nine Thousand Seven Hundred & Ninety Seven and Paise Sixty Only**
13.00	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.9.1.1	22605.000	CUM	54.50	**1231972.50**	**INR Twelve Lakh Thirty One Thousand Nine Hundred & Seventy Two and Paise Fifty Only**
14.00	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.9.1.1	19365.000	CUM	88.00	**1704120.00**	**INR Seventeen Lakh Four Thousand One Hundred & Twenty Only**
15.00	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.9.1.1	10087.500	CUM	126.00	**1271025.00**	**INR Twelve Lakh Seventy One Thousand &Twenty Five Only**
16.00	Earth work for Sewer line and Manhole in excavation in foundation, trenches manholes, road side chambers etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level including allowances for any additional excavation beyond the drawings (measurements for payment to be as per standard drawings), re-handling of material/earth to complete the task.**In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.** **Depth upto 1.5 m**	9000.000	CUM	203.00	**1827000.00**	**INR Eighteen Lakh Twenty Seven Thousand Only**
17.00	Add extra for over all depth of excavation above 1.5 m andupto 3.0 m over item no 17.1.1.1	1800.000	CUM	30.50	**54900.00**	**INR Fifty Four Thousand Nine Hundred Only**
18.00	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.1.1	1800.000	CUM	65.50	**117900.00**	**INR One Lakh Seventeen Thousand Nine Hundred Only**
19.00	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.1.1	1800.000	CUM	106.00	**190800.00**	**INR One Lakh Ninety Thousand Eight Hundred Only**
20.00	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.1.1	1800.000	CUM	152.00	**273600.00**	**INR Two Lakh Seventy Three Thousand Six Hundred Only**
	SCARIFYING					
21.00	Scarifying existing bituminous road surface, including picking up scarified material and stacking of old serviceable material within a lead of 1000 meters complete as per clause 305.4.3 of MoRT&H specification including all labour, machinery, lighting, guarding and maintenance of diversion.	10449.000	SQM	20.00	**208980.00**	**INR Two Lakh Eight Thousand Nine Hundred & Eighty Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
22.00	Scarifying existing granular road surface, including picking up scarified material and stacking of old serviceable material within a lead of 1000 meters complete as per clause 305.4.3 of MoRT&H specification including all labour, machinery, lighting, guarding and maintenance of diversion.	10449.000	SQM	20.50	**214204.50**	**INR Two Lakh Fourteen Thousand Two Hundred & Four and Paise Fifty Only**
	CLEANING & GRUBBING					
23.00	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposalof unserviceable materials and stacking of serviceable material to a lead of 50 metres from road boundary including removal and disposal of top organic soil not exceeding 150 mm inthickness as directed by Engineer. **In area of light jungle**	0.830	Hectare	51200.00	**42496.00**	**INR Forty Two Thousand Four Hundred & Ninety Six Only**
	CARRIAGE OF MATERIALS					
24.00	CARRIAGE OF MATERIALS (By Mechanical Means) Remarks : The rates will be applicable to net quantities after deduction of percentage for voids mentioned in the specification under ubhead "Carriage of Materials" Carriage of Materials by mechanical ransport including loading, unloading and stacking ::					
24.10	Earth					
24.20	Rate for Lead 5 Km	242638.562	CUM	88.98	**21589979.25**	**INR Two Crore Fifteen Lakh Eighty Nine Thousand Nine Hundred & Seventy Nine and Paise Twenty Five Only**
	SOILING					
25.00	Random rubble dry stone Kharanja (soling) under floor.	425.700	CUM	1007.00	**428679.90**	**INR Four Lakh Twenty Eight Thousand Six Hundred & Seventy Nine and Paise Ninety Only**
	P.C.C					
26.00	Providing, laying and compacting plain/ reinforced cement concrete of specified grade in foundation/ leveling course/ pile cap using concrete mixer and vibrater complete including cost of form work, as per drawing and technical specifications and as per clause 1100, 1500,1700,2100 of MoRT&H specification including all scaffolding material, labour, machinery. **PCC Grade M -15**	3068.792	CUM	3840.00	**11784161.28**	**INR One Crore Seventeen Lakh Eighty Four Thousand One Hundred & Sixty One and Paise Twenty Eight Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
27.00	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix With Concrete Mixer & vibrator pavement over a prepared sub base with 43 grade cement , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed as per approved mix design, laid, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, admixtures (if required) as approved, curing compound, finishing to lines and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion. **PCC M-30**	2770.200	CUM	5180.00	**14349636.00**	**INR One Crore Forty Three Lakh Forty Nine Thousand Six Hundred & Thirty Five and Paise One Hundred Only**
28.00	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :					
28.10	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	1827.311	CUM	3600.00	**6578319.60**	**INR Sixty Five Lakh Seventy Eight Thousand Three Hundred & Nineteen and Paise Sixty Only**
29.00	Providing and laying in position cement concrete 1:3:6 (1Cement : 1 graded stone aggregate 20 mm nominal size) in base course complete including all material, labour, machinery, lighting, guarding for road restoration under sewer line and manhole work including allowances for any additional restoration beyond the drawings (measurements for payment to be as per standard drawings) to complete the task.	120.000	CUM	4330.00	**519600.00**	**INR Five Lakh Nineteen Thousand Six Hundred Only**
30.00	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level.					
30.10	M20 grade Nominal Mix					
30.20	1: 1.5: 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size).	581.100	CUM	3246.30	**1886424.93**	**INR Eighteen Lakh Eighty Six Thousand Four Hundred & Twenty Four and Paise Ninety Three Only**
	R.C.C					
31.00	Bored cast-in-situ R.C.C. pile with design mix concrete using batching plant, transit mixer and concrete pump, excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
31.10	1200 mm dia pile					
31.20	RCC Grade M -35 (Design mix)	6720.000	MTR.	9850.00	**66192000.00**	**INR Six Crore Sixty One Lakh Ninety Two Thousand Only**
31.30	750 mm dia pile					
31.40	RCC Grade M -35 (Design mix)	11424.000	MTR.	4640.00	**53007360.00**	**INR Five Crore Thirty Lakh Seven Thousand Three Hundred & Sixty Only**
32.00	Providing, laying and compacting design mix plain/ reinforced cement concrete of specified grade in foundation/ leveling course/ pile cap using batching plant, transit mixer and concrete pump and vibrater including cost of form work, complete as per drawing and technical specifications as per clause 1100, 1500,1700,2100 of MoRT&H specification including all material, labour, machinery, and maintenance of diversion.					
32.10	RCC Grade M -35	3253.662	CUM	5100.00	**16593676.20**	**INR One Crore Sixty Five Lakh Ninety Three Thousand Six Hundred & Seventy Six and Paise Twenty Only**
32.20	RCC Grade M -25	1770.875	CUM	5010.00	**8872083.75**	**INR Eighty Eight Lakh Seventy Two Thousand &Eighty Three and Paise Seventy Five Only**
32.30	RCC Grade M -40	2000.000	CUM	5150.00	**10300000.00**	**INR One Crore Three Lakh Only**
33.00	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using batching plant, transit mixer, concrete pump and vibrater including cost of form work complete as per drawing and clause 1500, 1700 and 2200 of MoRT&H specification including all scaffolding, material, labour, machinery etc.					
33.10	RCC Grade M -45	822.875	CUM	5870.00	**4830276.25**	**INR Forty Eight Lakh Thirty Thousand Two Hundred & Seventy Six and Paise Twenty Five Only**
33.20	RCC Grade M -35	2333.700	CUM	5560.00	**12975372.00**	**INR One Crore Twenty Nine Lakh Seventy Five Thousand Three Hundred & Seventy One and Paise One Hundred Only**
33.30	RCC Grade M -40	1744.500	CUM	5620.00	**9804090.00**	**INR Ninety Eight Lakh Four Thousand &Ninety Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
34.00	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrater, including cost of form work, as per drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc**. RCC Grade M -35**	432.000	CUM	5250.00	**2268000.00**	**INR Twenty Two Lakh Sixty Eight Thousand Only**
35.00	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in superstructure at all levels including cost of steel form work complete as per clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, achinery etc.					
35.10	RCC/PSC Grade M -45					
35.20	For box girder/ voided slab and balanced cantilever	5621.500	CUM	7650.00	**43004475.00**	**INR Four Crore Thirty Lakh Four Thousand Four Hundred & Seventy Five Only**
35.30	For solid slab superstructure	834.750	CUM	6340.00	**5292315.00**	**INR Fifty Two Lakh Ninety Two Thousand Three Hundred & Fifteen Only**
36.00	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using batching plant, transit mixer, concrete pump and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc.					
36.10	RCC M-40	2952.440	CUM	6170.00	**18216554.80**	**INR One Crore Eighty Two Lakh Sixteen Thousand Five Hundred & Fifty Four and Paise Eighty Only**
37.00	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 &1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc					
37.10	RCC M-35	695.600	CUM	6340.00	**4410104.00**	**INR Forty Four Lakh Ten Thousand One Hundred & Four Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
37.20	RCC M-30	157.500	CUM	6310.00	**993825.00**	**INR Nine Lakh Ninety Three Thousand Eight Hundred & Twenty Five Only**
38.00	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders as per drawing and clause 1800 & 2300 of MoRT&H specifications (excluding cost of reinforcement, HTS strands and pre-stressing) including all material, labour, machinery (suitable crane). **RCC M-45**	1090.908	CUM	9450.00	**10309080.60**	**INR One Crore Three Lakh Nine Thousand &Eighty and Paise Sixty Only**
39.00	CAST-IN-SITU CONCRETE					
39.10	Providing and laying in position Ready mix concrete manufactured in fully automatic Batching Plant and transported to site in transit mixer for having continous agitated mixer, manufactured as per approved mix design of specified grade of RCC work including pumping of R.M.C. from transit mixer to site of laying , exculding the cost of centering, shuttering and reinforcement with all lead and lift including cost of admixtures in recommended portion as per IS 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge . All works upto floor V floor M20 grade Design Mix by using min 400 Kg of cement per cum of concrete	3729.783	CUM	3902.40	**14555105.18**	**INR One Crore Forty Five Lakh Fifty Five Thousand One Hundred & Five and Paise Eighteen Only**
39.20	Add extra for providing richer mixes respectively at all floor levels					
39.30	Providing M-30 grade concrete by using min 420 kg of cement per cum instead of M-20 grade design mix.	2542.758	CUM	103.50	**263175.45**	**INR Two Lakh Sixty Three Thousand One Hundred & Seventy Five and Paise Forty Five Only**
39.40	Providing M- 40 grade concrete by using min. 435 kg of cement per cum instead of M-20 grade design mix.	1187.024	CUM	180.90	**214732.64**	**INR Two Lakh Fourteen Thousand Seven Hundred & Thirty Two and Paise Sixty Four Only**
39.50	Add extra for RCC work in superstructure above floor five level for each four floor or part thereof .	1980.702	CUM	88.20	**174697.92**	**INR One Lakh Seventy Four Thousand Six Hundred & Ninety Seven and Paise Ninety Two Only**
	CENTERING & SHUTTERING					
40.00	Centring and shuttering upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :					
40.10	Suspended floors, roofs, landings, balconies and access platform.	2212.586	SQM	364.00	**805381.30**	**INR Eight Lakh Five Thousand Three Hundred & Eighty One and Paise Thirty Only**
40.20	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	4459.321	SQM	299.00	**1333336.98**	**INR Thirteen Lakh Thirty Three Thousand Three Hundred & Thirty Six and Paise Ninety Eight Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
40.30	Columns, Pillars, Piers, Abutments, Posts and Struts.	3359.744	SQM	385.00	**1293501.44**	**INR Twelve Lakh Ninety Three Thousand Five Hundred & One and Paise Forty Four Only**
40.40	Arches, domes, vaults upto 6 m span	670.000	SQM	1010.00	**676700.00**	**INR Six Lakh Seventy Six Thousand Seven Hundred Only**
40.50	Extra for arches, domes, vaults exceeding 6 m span	670.000	SQM	411.00	**275370.00**	**INR Two Lakh Seventy Five Thousand Three Hundred & Seventy Only**
	REINFORCEMENT					
41.00	Providing and laying TMT bar reinforcement at any level in foundation/ pile/ pile cap complete as per drawing and clause 1600 of MoRT&H Specification including all material, labour and machinery.	2875.914	tonne	64600.00	**185784044.40**	**INR Eighteen Crore Fifty Seven Lakh Eighty Four Thousand &Forty Four and Paise Forty Only**
42.00	Supplying, fitting and placing TMT bar reinforcement in sub structure/ superstructure at all level complete as per drawing and clause 1600 & 2200 of MoRT&H Specification including all material, labour, machinary etc.	2780.892	tonne	65700.00	**182704604.40**	**INR Eighteen Crore Twenty Seven Lakh Four Thousand Six Hundred & Four and Paise Forty Only**
43.00	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete.	978500.500	Kg	64.50	**63113282.25**	**INR Six Crore Thirty One Lakh Thirteen Thousand Two Hundred & Eighty Two and Paise Twenty Five Only**
43.10	Thermo-Mechanically Treated bars.					
	EXPANSION JOINT					
44.00	Providing, laying and fixing of strip seal expansion joint catering to maximum horizontal movement upto 70 mm complete as per approved drawings and as per clause 2600 of MoRT&H specifications to be installed by manufacturer's authorized representative ensuring to compliance to manufacturer's instruction for installation including preparing the edges of bridge, welding to exposed reinforcement, concreting with design mix of grade of bridge or M-35 whichever is richer including all material, labour, machinery etc complete.	195.500	MTR.	9060.00	**1771230.00**	**INR Seventeen Lakh Seventy One Thousand Two Hundred & Thirty Only**
45.00	Providing and laying expansion joint complete as per drawing and technical specification and as per clause 2605 of MoRT&H Specification including all material, labour, machinary etc					
45.10	Fillar joint with 20m thick compressible fibre board.	480.000	SQM	813.00	**390240.00**	**INR Three Lakh Ninety Thousand Two Hundred & Forty Only**
45.20	Fillar joint with Joint sealing compound with coarse sand and 6 % bitumen by weight..	8975.000	Metre Per Cm Depth	23.50	**210912.50**	**INR Two Lakh Ten Thousand Nine Hundred & Twelve and Paise Fifty Only**
	STEEL WIRE/STRANDS					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
46.00	Providing and laying High tensile steel wires/ strands at any level including all accessories for stressing, stressing operations and grouting complete as per drawing, technical specification and as per clause 1800 of MoRT&H Specification.	295.250	tonne	147900.00	**43667475.00**	**INR Four Crore Thirty Six Lakh Sixty Seven Thousand Four Hundred & Seventy Five Only**
	PRECAST RCC FACIA					
47.00	Designing, providing and erection of Precast RCC facia panels of thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrater for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete)	2696.000	SQM	4620.00	**12455520.00**	**INR One Crore Twenty Four Lakh Fifty Five Thousand Five Hundred & Twenty Only**
	BACKFILL					
48.00	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls.	10272.000	CUM	383.00	**3934176.00**	**INR Thirty Nine Lakh Thirty Four Thousand One Hundred & Seventy Six Only**
49.00	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering andconsolidation with lead up to 50m and lift upto 1.5m.	8461.980	CUM	95.50	**808119.09**	**INR Eight Lakh Eight Thousand One Hundred & Nineteen and Paise Nine Only**
	INTREGRATED TESTING					
50.00	Non destructive Integrated testing of cast-in-situ pile using pile deriving analyzer or equivalent as detailed in specification and as approved by Engineer.	130.000	Each	1650.00	**214500.00**	**INR Two Lakh Fourteen Thousand Five Hundred Only**
	LOAD TESTING					
51.00	Plie load testing on single vertical piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per direction of Engineer and as per clause 1100 of MoRT&H specification including all labour, material, machinery. **Initial and routine vertical load test**	5200.000	tonne	303.00	**1575600.00**	**INR Fifteen Lakh Seventy Five Thousand Six Hundred Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
52.00	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges /loading material etc. The load shall be 1.25 times the stipulated design load Based on Design load & not span (Load = 200 T)					
52.10	For span design load upto 100 MT.	4.000	P.TEST	220000.00	**880000.00**	**INR Eight Lakh Eighty Thousand Only**
52.20	Extra for increase of 100 MT or part thereof in the span load capacity upto 800 MT.	4.000	Per 100 TPer Test	27500.00	**110000.00**	**INR One Lakh Ten Thousand Only**
	ROAD WORK					
53.00	Prime Coat					
53.10	Low porosity Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per MoRD Specification Clause 502	16422.500	SQM	31.50	**517308.75**	**INR Five Lakh Seventeen Thousand Three Hundred & Eight and Paise Seventy Five Only**
53.20	Medium porosity Providing and applying primer coat with Bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90- 1.2 kg/sqm using mechanical means as per MoRD Specification Clause 502	2728.500	SQM	36.00	**98226.00**	**INR Ninety Eight Thousand Two Hundred & Twenty Six Only**
54.00	Tack Coat					
54.10	Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.20 to 0.25 kg per sqm on the prepared bituminous surface cleaned with Hydraulic broom as per MoRD Specification Clause 503.	102276.500	SQM	9.00	**920488.50**	**INR Nine Lakh Twenty Thousand Four Hundred & Eighty Eight and Paise Fifty Only**
54.20	Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared dry and hungry bituminous surface cleaned with Hydraulic broom as per MoRD Specification Clause 503.	66978.500	SQM	10.80	**723367.80**	**INR Seven Lakh Twenty Three Thousand Three Hundred & Sixty Seven and Paise Eighty Only**
54.30	Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per MoRD Specification Clause 503.	19151.000	SQM	10.80	**206830.80**	**INR Two Lakh Six Thousand Eight Hundred & Thirty and Paise Eighty Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
55.00	Providing, laying, spreading and compacting of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and ompacting with vibratory power roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.					
55.10	Grading - I Material	9609.850	CUM	1080.00	**10378638.00**	**INR One Crore Three Lakh Seventy Eight Thousand Six Hundred & Thirty Eight Only**
56.00	Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MORT&H specifications (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion.	11285.225	CUM	1300.00	**14670792.50**	**INR One Crore Forty Six Lakh Seventy Thousand Seven Hundred & Ninety Two and Paise Fifty Only**
57.00	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT & H Specifications Clause 509 complete in all respects					
57.10	for Grading-II (13 mm nominal size) Bitumen (VG-30)	9485.932	P.MT	2934.00	**27831724.49**	**INR Two Crore Seventy Eight Lakh Thirty One Thousand Seven Hundred & Twenty Four and Paise Forty Nine Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
58.00	Providing and laying 25 mm thick bitumen mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29 (including cost of anti-stripping compound wherever required) @ 14-17% (by weight) as per job mix formula, coarse aggregate as per Table 500-32, fine aggregate as per Table 500-31 and lime stone powder as filler, prepared by using mastic cooker and laid to required level and grade after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size @ 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 degree Centigrade, protruding 1 mm to 4 mm over mastic surface, all complete including all material, labour, machinery, lighting, guarding andmaintenance of diversion complete as per clause 515 of MoRT&H specification.	6570.500	SQM	544.00	**3574352.00**	**INR Thirty Five Lakh Seventy Four Thousand Three Hundred & Fifty Two Only**
59.00	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tones per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H Specifications Clause 507 complete in all respects.					
59.10	for Grading II (19 mm nominal size)					
59.20	In MT	14893.628	P.MT	2722.50	**40547902.23**	**INR Four Crore Five Lakh Forty Seven Thousand Nine Hundred & Two and Paise Twenty Three Only**
	G.I PIPE					
60.00	Providing and erecting Drainage Spouts with 0.15m long GI pipe 150mm dia and GI bolt 10mm dia with Galvanised MS flat clamp complete as per drawing and Technical specification as per clause 2705 of MoRT&H specifications including all material, labour, machinery etc.	84.000	Each	862.00	**72408.00**	**INR Seventy Two Thousand Four Hundred & Eight Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
61.00	Providing and fixing G.I. Pipes railing of 80 mm dia. (Class B) over brackets of 16 mm thick MS plate with 200 mm at bottom & 120 mm at top with 200 mm height welded to 16 mm thick MS Plates of size 200 X 175 anchored with 400 mm long 4-12 mm dia.steel bars at the top of RCC crash barrier @1.0m c/c including fixing arrangement as per the drawing, clause 800 of MoRTH specification and as per the direction of the Engineer.	2188.000	MTR.	1170.00	**2559960.00**	**INR Twenty Five Lakh Fifty Nine Thousand Nine Hundred & Sixty Only**
	BITUMEN IMPREGNATED					
62.00	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS:1838 including cost of primer, sealing compound in expansion joints.	45.000	Cm/100 mtr	594.00	**26730.00**	**INR Twenty Six Thousand Seven Hundred & Thirty Only**
	POT-PTFE BEARING					
63.00	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRT&H Specifications complete as per drawing and approved technical specifications and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	9181.000	Per Tonne Load	308.00	**2827748.00**	**INR Twenty Eight Lakh Twenty Seven Thousand Seven Hundred & Forty Eight Only**
	BARRICADING					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
64.00	Providing, fixing, maintaining, shifting & refixing, barricading of minimum 2.0 mtr height at stipulated active site of the same project site, made with angle iron frame of 50x50x5mm and GI sheet of 0.63mm thick including primer painted initialy, painting, lettering & border with reflective paint at the time of every shifing, traffic diversion arrangement, safety guard, suitable lightning arrangement during night, complete in all respect till completion of the project as per technical specification and direction of Engineer-In-charge and same shall be possessed by the contractor after completion of the Project. Payment under this item will be released (1) 50% At the time of Providing new barricading at the time of start of project at location and plan as approved by the Engineer & certification (2) 50% After completion of project including shifting re-erecting and maintaining the barricading in position, during entire construction tenure with requisite manpower /flagman etc. complete for guiding traffic and safety etc and dismantling after completion of project.	4440.000	SQM	2650.00	**11766000.00**	**INR One Crore Seventeen Lakh Sixty Six Thousand Only**
	STEEL WORK					
65.00	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					
66.00	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	157000.000	Kg	88.50	**13894500.00**	**INR One Crore Thirty Eight Lakh Ninety Four Thousand Five Hundred Only**
	MASONARY WORK					
67.00	Random rubble stone masonry work in cement mortar with mechanical mixer in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 and 1400 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.					
67.01	In cement mortar 1:4 (1 cement : 4 coarse sand)	1275.300	CUM	3160.00	**4029948.00**	**INR Forty Lakh Twenty Nine Thousand Nine Hundred & Forty Eight Only**
68.00	Brick masonry work with First class FPS bricks (min. 10.5 Mpa) in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1300 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
68.10	In cement mortar 1:4 (1 cement : 4 coarse sand)	129.720	CUM	4210.00	**546121.20**	**INR Five Lakh Forty Six Thousand One Hundred & Twenty One and Paise Twenty Only**
69.00	Half brick masonry with bricks of class designation 75 in superstructure above plinth level upto two stories.					
69.10	Cement mortar 1:4 (1 cement :4 coarse sand)	1000.000	SQM	480.00	**480000.00**	**INR Four Lakh Eighty Thousand Only**
70.00	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :					
70.10	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) : **With Sewer bricks conforming to IS : 4885**	30.000	EACH	15400.00	**462000.00**	**INR Four Lakh Sixty Two Thousand Only**
70.20	Construction of solid block masonry of M20 grade solid concrete block having nominal size 400 mm x 200 mm x 200 mm in cement mortar 1:3 upto plinth level with all lead & lift.	200.000	CUM	6291.00	**1258200.00**	**INR Twelve Lakh Fifty Eight Thousand Two Hundred Only**
	PAINT WORK					
71.00	Painting two coats on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade as per clause 803 of MoRT&H Specification including all material, labour.					
71.10	On new plastered concrete surface	3782.000	SQM	83.00	**313906.00**	**INR Three Lakh Thirteen Thousand Nine Hundred & Six Only**
72.00	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:					
72.10	Two or more coats on new work	1050.000	SQM	69.00	**72450.00**	**INR Seventy Two Thousand Four Hundred & Fifty Only**
	COMPACTING GROUND					
73.00	Compacting original ground					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
73.10	Loosening upto a level of 500 mm below the subgrade level atered, graded and compacted in layers by vibratory roller 8-10 tonne to meet requirement of table 300-2 for subgrade construction as per MoRT&H specification clause 305.3.4.	6567.000	CUM	42.00	**275814.00**	**INR Two Lakh Seventy Five Thousand Eight Hundred & Fourteen Only**
	KERB STONE					
74.00	SAND STONE FLOORING					
74.10	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement in position to the required line, level and curvature jointed with cement mortar 1:3 (1 cement : 3 coarse sand) including making joints with without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete including painting etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineerin- charge).	121.500	CUM	4104.00	**498636.00**	**INR Four Lakh Ninety Eight Thousand Six Hundred & Thirty Six Only**
	CEMENT PLASTER					
75.00	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :					
75.10	1:4 (1 cement : 4 fine/ coarse sand)	4350.000	SQM	190.00	**826500.00**	**INR Eight Lakh Twenty Six Thousand Five Hundred Only**
75.20	1:4 (1 cement : 4 fine/ coarse sand)	3372.000	SQM	134.00	**451848.00**	**INR Four Lakh Fifty One Thousand Eight Hundred & Forty Eight Only**
76.00	Add extra over items of Cement Plaster / Cement Concrete Flooring / Plain or RCC work providing and mixing admixture of synthetic fibre 6 mm / 12 mm @ rate of 125 gm.pack per 50 kg.of Cement or in the ratio of as specified by manufacture specification and direction of the Engineer with all leads and lifts.	31200.000	Per Pack 125gm	53.00	**1653600.00**	**INR Sixteen Lakh Fifty Three Thousand Six Hundred Only**
	BRICK WORK					
77.00	Brick work with bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in :					
77.10	Cement mortar 1:4 (1 cement : 4 coarse sand)	110.400	CUM	4090.00	**451536.00**	**INR Four Lakh Fifty One Thousand Five Hundred & Thirty Six Only**
	SAND STONE SLAB ROOFING					
78.00	Providing sand stone slab for roofing and laying them in cement mortar 1 : 4 (1 cement : 4 coarse sand) over wooden karries or R.C.C. battens (Karries and battens to be paid separately) including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 fine sand) complete :					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
78.10	White sand stone slab :					
78.20	40 to 50 mm thick	4332.000	SQM	590.00	**2555880.00**	**INR Twenty Five Lakh Fifty Five Thousand Eight Hundred & Eighty Only**
	WATER PROOFING					
79.00	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) Ist layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.					
79.10	Using rough Kota stone.	1898.000	SQM	755.00	**1432990.00**	**INR Fourteen Lakh Thirty Two Thousand Nine Hundred & Ninety Only**
	CONSTRUCTION OF EMBANKMENT					
80.00	Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRT&H specification clause 305. (Lead taken upto 5 km)	5328.000	CUM	196.00	**1044288.00**	**INR Ten Lakh Forty Four Thousand Two Hundred & Eighty Eight Only**
	UPVC PIPE					
81.00	Providing, lowering, laying in trenches, aligning, fixing in position and jointing socketed rubber gasket type ISI marked uPVC pipes of Class III (6 Kg/sqcm) suitable for potable water with rubber ring joints (as per IS 4985-2000) of following outer dia with all accessories (excluding specials) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
81.10	110 mm dia	400.000	MTR.	282.00	**112800.00**	**INR One Lakh Twelve Thousand Eight Hundred Only**
81.20	160 mm dia	100.000	MTR.	569.00	**56900.00**	**INR Fifty Six Thousand Nine Hundred Only**
81.30	315 mm dia	300.000	MTR.	2180.00	**654000.00**	**INR Six Lakh Fifty Four Thousand Only**
	RCC NP4 PIPE					
82.00	Providing, laying and jointing RCC NP4 pipe with cement mortar joints by trenchless method adopting any suitable technology below ground at required depth under running traffic condition as per the direction of NHAI including carrying out survey work at the job site for determining underground cable trenches like telephone, power cable, water & sanitary lines and resistivity tests for finding the soil strata using necessary equipments for completion of work, mobilizing of machineries and specialized crew at the job site, etc. complete in all respects, including excavation of drive pit and exit pit (upto 3 metre depth) with proper protection at the three sides, providing and casting of MS cutting edges for front shield and constructing thrust bed at designed level as directed by the Engineer, necessary de-watering and providing concrete foundations at the base of the Drive pit, crane for handling of pipes, and any other machinery, tool & tackels required, construction of temporary works as per requirement and as approved by NH authorities complete in all respect for the road crossing at necessary depth (all depths) with all lead and lifts, as per specification and the direction of the Engineer.					
82.10	1600 mm dia RCC pipe	600.000	MTR.	38600.00	**23160000.00**	**INR Two Crore Thirty One Lakh Sixty Thousand Only**
82.20	600 mm dia RCC pipe	250.000	MTR.	18000.00	**4500000.00**	**INR Forty Five Lakh Only**
	IRON WORK					
83.00	Wrought iron and mild steel welded work) (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid Separately.	64.000	Quintal	7820.00	**500480.00**	**INR Five Lakh Four Hundred & Eighty Only**
	SHEET COVERING					
84.00	Providing and fixing sheet covering over expansion joints with iron screws as per design to match the colour / shade of wall treatment.					
84.10	Aluminium fluted strips 3.15mm thick.					
84.20	200 mm wide	40.000	MTR.	455.00	**18200.00**	**INR Eighteen Thousand Two Hundred Only**
	WEEP HOLES					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
85.00	Providing weep holes in brick/ stone masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with following dia AC pipe, extending through the full width of the structure with slope of 1V : 20H towards drawing face complete as per drawing, technical specifications and clause 2205 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.					
85.10	100 mm dia	400.000	MTR.	104.00	**41600.00**	**INR Forty One Thousand Six Hundred Only**
	FILTER MEDIA					
86.00	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.	300.000	CUM	1150.00	**345000.00**	**INR Three Lakh Forty Five Thousand Only**
	RCC PIPES NP3					
87.00	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP3 class (with s/s ends) IS: 458 - 1988 (amended up to date) marked and pipes from 300 mm upto 2000 mm manufactured through vertical casting process all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional testing of the sewer pipe line (including cost and conveyance of water to site) etc., complete as directed by Engineer. **Note : E/w to be measured and paid separately**					
87.10	1400 mm internal diameter	1500.000	MTR.	10700.00	**16050000.00**	**INR One Crore Sixty Lakh Fifty Thousand Only**
	RCC BOX CULVERT					
88.00	Providing and laying Precast reinforced cement concrete Box culvert section of M-40 grade designed for 'AA' class loading as per IRC specifications including the effect of impact, EQ etc. complete on firm base of 200mm thick lean concrete of M-10 grade with aggregate of size 40mm nominal of following internal sizes. The work includes required safety measures, construction of drain for diversion of flowing water, cost of design of RCC Precast Box and its proof checking from IIT/MNIT Jaipur etc. complete in all respect as per specifications					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
88.10	Size 1.00 M x 1.00 M	2263.000	MTR.	10600.00	**23987800.00**	**INR Two Crore Thirty Nine Lakh Eighty Seven Thousand Eight Hundred Only**
88.20	Size 1.50 M x 1.50 M	926.000	MTR.	22600.00	**20927600.00**	**INR Two Crore Nine Lakh Twenty Seven Thousand Six Hundred Only**
	TRENCHING					
89.00	Trenching in specified soil upto a depth of 60 cm. including removal and stacking of serviceable materials and then disposal by spreading and neatly leveling within a lead of 50 metres and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and farm-yard manure before and after flooding with water (excluding cost of imported earth and sludge or farm-yard manure).	1305.000	CUM	170.00	**221850.00**	**INR Two Lakh Twenty One Thousand Eight Hundred & Fifty Only**
	MOUNDS					
90.00	Preparation of mounds of various size and shape by available excavated/surplus/earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc.lead upto 50 meters and lift upto 1.5 m as per direction of officers in charge.	3225.000	CUM	189.00	**609525.00**	**INR Six Lakh Nine Thousand Five Hundred & Twenty Five Only**
	MANURE					
91.00	Supply of dry manure including loading unloading, transportation & stacking at site **Fram yard manure (organic).**	702.840	CUM	380.00	**267079.20**	**INR Two Lakh Sixty Seven Thousand &Seventy Nine and Paise Twenty Only**
	GOOD EARTH					
92.00	Supply and Stacking good earth at site complete including loading unloading and transporation etc.	1475.280	CUM	142.50	**210227.40**	**INR Two Lakh Ten Thousand Two Hundred & Twenty Seven and Paise Forty Only**
	CARPET GRASS					
93.00	Grassing with 'Carpet' grass (selection no. 1) including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed.(The good earth shall be paid separately) **With grass Turf**	7028.400	SQM.	560.00	**3935904.00**	**INR Thirty Nine Lakh Thirty Five Thousand Nine Hundred & Four Only**
	CHEMICAL FERTILIZER					
94.00	Supply of Chemical Fertilizers at store in bags weighing not less than 50 kg. each including loading unloading & transporation etc.					
94.10	D.A.P.	1.000	Per Bag 50Kg	902.50	**902.50**	**INR Nine Hundred & Two and Paise Fifty Only**
94.20	Murrate of Photash.	1.000	Per Bag 50Kg	427.50	**427.50**	**INR Four Hundred & Twenty Seven and Paise Fifty Only**
	PLANTING					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
95.00	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 300 mm min. height ground covers at site in 0.3 m dia holes, 0.3 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.					
95.10	Asparagus myerii (Fox Tail)	3278.400	SQM.	253.00	**829435.20**	**INR Eight Lakh Twenty Nine Thousand Four Hundred & Thirty Five and Paise Twenty Only**
95.20	Lantana sellowiana	360.000	SQM.	129.00	**46440.00**	**INR Forty Six Thousand Four Hundred & Forty Only**
96.00	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 900 mm min. height plants at site in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.					
96.10	Ficus panda	156.000	EACH	353.00	**55068.00**	**INR Fifty Five Thousand &Sixty Eight Only**
96.20	Tabernaemontana variegated (Chandni)	353.000	EACH	347.00	**122491.00**	**INR One Lakh Twenty Two Thousand Four Hundred & Ninety One Only**
97.00	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 600 mm min. height shurbs at site in 0.45 m dia holes, 0.45 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.					
97.10	Phonenix sylvertris (Date Palm)	40.000	EACH	2190.00	**87600.00**	**INR Eighty Seven Thousand Six Hundred Only**
98.00	Supply & Plantation of selected specimen plants including mortality replacement, loading - unloading transportation and maintenance for 30 days after planting the plants					
98.10	Juniprus chinensis 5'-6'	180.000	EACH	675.00	**121500.00**	**INR One Lakh Twenty One Thousand Five Hundred Only**
99.00	Supply & plantation of Hedges including mortility replacement loading - unloading transportation and maintenance for 30 days after planting the plants					
99.10	Crossostephium chinense	256.000	EACH	15.00	**3840.00**	**INR Three Thousand Eight Hundred & Forty Only**
99.20	Duranta repens dew drops	100.000	EACH	12.00	**1200.00**	**INR One Thousand Two Hundred Only**
	TREE GUARD					
100.00	Maintenance of Roads Side Plantation					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
100.10	Transportation of tree guards from Depot to the plantation site including loading & unloading	40.000	Per Tree Guard	12.35	**494.00**	**INR Four Hundred & Ninety Four Only**
	ROAD MARKING					
101.00	Providing and laying marking of center line and stop line etc with hot thermoplastic compound 2.5 mm thick on road/ plain surface, including reflectorising glass beads @ 250 gms per sqm area with special applicator machine, as per IRC:35 including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control involved. The finished surface to be level, uniform and free from streaks and holes as per clause 803 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	3993.400	SQM	803.00	**3206700.20**	**INR Thirty Two Lakh Six Thousand Seven Hundred and Paise Twenty Only**
	RETRO-REFLECTORISED CAUTIONARY SIGN					
102.00	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 3 metre long and size 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.					
102.10	60 cm equilateral triangle	10.000	EACH	2770.00	**27700.00**	**INR Twenty Seven Thousand Seven Hundred Only**
102.20	60 cm circular	10.000	EACH	3660.00	**36600.00**	**INR Thirty Six Thousand Six Hundred Only**
102.30	60 cm x 45 cm rectangular	35.000	EACH	3570.00	**124950.00**	**INR One Lakh Twenty Four Thousand Nine Hundred & Fifty Only**
	RETRO-REFLECTORISED DIRECTION SIGN					
103.00	Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting 2 mm thick framed to angle iron 40x40x5mm with area exceeding 0.9 sqm supported on two nos mild steel angle iron post 75 mm x 75 mm x 6 mm, firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.	20.860	SQM	9650.00	**201299.00**	**INR Two Lakh One Thousand Two Hundred & Ninety Nine Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
104.00	Providing and erecting direction and place identification retro- eflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick framed to angle iron 40x40x5mm with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.	12.000	SQM	9010.00	**108120.00**	**INR One Lakh Eight Thousand One Hundred & Twenty Only**
	PAVEMENT MARKER					
105.00	Supplying and fixing of Single Molded twin Shank Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97-DO III Dt 11.06.1997. The height, width and length shall not exceed 50 mm, 100 mm and 100 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35+/-5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 700 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. (manufactured from 3M, Avery or equivalent)	2020.000	EACH	183.00	**369660.00**	**INR Three Lakh Sixty Nine Thousand Six Hundred & Sixty Only**
	SPEED BREAKER					
106.00	Providing and fixing PVC Bump Speed Breakers size 350 mm x 250 mm x 50 mm fitted with key hooks complete with labour material and traffic diversion arrangements.	840.000	RMT.	1926.00	**1617840.00**	**INR Sixteen Lakh Seventeen Thousand Eight Hundred & Forty Only**
	BOLLARD					
107.00	Supply of 'L' type Bollard made out of 1.25 mm thick M.S.sheet height 134 cm, welded in circular type ring section having upper dia 15 cm. and lower dia 21 cm with another attachment of 15x15 cm circular section with 15 cm. face plateand hold fast at bottom, whole body is processed in white stoving enamel and red reflective 3 hands, each of 7.5 cm end one reflective sheet of 15 cm. dia provided to it complete in all respect.	25.000	EACH	1435.50	**35887.50**	**INR Thirty Five Thousand Eight Hundred & Eighty Seven and Paise Fifty Only**
	ELECTRICAL ITEMS					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
108.0	P & Laying XLPE insulated IS:7098/II/85 of approved make H.T.cable for working voltage 11 K.V.Earthed direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.					
108.1	3 core 185.0 Sq.mm	1920.00	Mtr	1280.00	**2457600.00**	**INR Twenty Four Lakh Fifty Seven Thousand Six Hundred Only**
109.0	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of approved make suitable for XLPE insulated 11 KV cable, with required components, prepration of cable ends,testing etc. as required of following sizes .					
109.1	Indoor, 3 core 120/150/185/225 Sq.mm	12.00	Per Set	3265.00	**39180.00**	**INR Thirty Nine Thousand One Hundred & Eighty Only**
109.2	Outdoor, 3 core 120/150/185/225 Sq.mm	10.00	Per Set	3465.00	**34650.00**	**INR Thirty Four Thousand Six Hundred & Fifty Only**
109.3	Straight Through, 3 core 120/150/185/225 Sq.mm	10.00	Set	8160.00	**81600.00**	**INR Eighty One Thousand Six Hundred Only**
110.0	Providing and laying under ground cable IS:7098 Part-II as per JVVNL specifications enclosed and of approved make suitable for working voltage upto and including 33 KV in aluminium conductors XLPE armoured category-I including excavation of 30cm x 150cm size trench as per IS:1255, 24cm thick under layer, refill earth in the remaining portion, making necessary connections including testing etc. as required of size given below and providing & making heat shrinkable type indoor/outdoor/straight through terminations for 33 KV XLPE cables with required components. Preparation of cable ends, testing etc. as required.					
110.1	laying of cables; 3 core 300.0 Sq.mm	980.00	Mtr	2560.00	**2508800.00**	**INR Twenty Five Lakh Eight Thousand Eight Hundred Only**
110.2	Outdoor terminations; 3 core 240/300/400 Sq.mm	10.00	Set	7490.00	**74900.00**	**INR Seventy Four Thousand Nine Hundred Only**
110.3	Straight through Jointing; 3 core 240/300/400 Sq.mm	10.00	Set	22400.00	**224000.00**	**INR Two Lakh Twenty Four Thousand Only**
111.0	SITC of 11 KV, 400/630 A, 20kA / 3 sec, Out door, Extensible type Ring main unit (RMU) in suitable RCC foundation with 2 no. Load break switch & 1 no. VCB / SF6 circuit breaker with over load, Earth fault, short circuit relay, copper bus bar, earthing switch, mechanical ON / OFF / Earth indication, Voltage presence indicator, Ring core protection CT 2.5 VA, 10P10 as per transformer rating, Shunt trip coil, Anti reflex operating handle, right angle boots etc. as required.	4.00	Set	331648.00	**1326592.00**	**INR Thirteen Lakh Twenty Six Thousand Five Hundred & Ninety Two Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
112.0	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required. 2x2.5 Sq.mm+1x1.5 Sq.mm. Complete Rate Group 1	9650.00	Mtr.	48.00	**463200.00**	**INR Four Lakh Sixty Three Thousand Two Hundred Only**
113.0	S&F following sizes (dia.) of ISI marked medium duty PVC conduit along with accessories in surface / recessed using saddles, clamps, fastener as required including cutting the wall, covering conduit and making good the same as required.					
113.1	32 mm	800.00	Each	44.00	**35200.00**	**INR Thirty Five Thousand Two Hundred Only**
114.0	P & F in position frame made out of M.S. angle (riveted or welded) finished with two coats of red oxide and enamel paint including cutting, welding, holes etc.of following sizes as required. 50mm x 50mm x 6mm Complete Rate Group 1	332.50	Mtr.	299.00	**99417.50**	**INR Ninety Nine Thousand Four Hundred & Seventeen and Paise Fifty Only**
115.0	Bakelite sheet, 6.4 mm thick	20.25	Sq.m	851.00	**17232.75**	**INR Seventeen Thousand Two Hundred & Thirty Two and Paise Seventy Five Only**
116.0	P&F 240/415 V AC MCB with positive isolation of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections, testing etc. as required.					
116.1	Single pole MCB, 6 A to 32 A rating Complete Rate Group 1	2006.00	Each	233.00	**467398.00**	**INR Four Lakh Sixty Seven Thousand Three Hundred & Ninety Eight Only**
117.0	SITC of wall/ free standing floor mounted dust and vermin proof compartmentalised cubical panel made out of CRCA sheet , required hardware ,duly treated for derusting in 7 tank process with dephosphating and with powder coating on both side of panel in desired shade The panel having PU/ Neoprene rubber gasket of not less than 3mm thickness , separate detachable gland plate M.S. base channel ,hinged door with locking arrangement for equipment/switchgear . Thickness of sheet shall not be less than 1.6 mm up to 600 mm length / width of any compartment and be of 2.0 mm above 600 mm. Load bearing structure shall be of 2.0 mm thick sheet supported by base M.S. channel if required . Side walls and cable alley compartments having bolted type doors with / without detachable extension type structure. (only outer area on all sides shall be measured & panel to be fabricated from CPRI approved fabricator) Complete Rate Group 1	332.50	sqm	2560.00	**851200.00**	**INR Eight Lakh Fifty One Thousand Two Hundred Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
118.0	Supplying and fixing of Aluminium / Copper bus bar by means of SMC / DMC type insulator, high tensile nuts and bolts spring washers in existing panel including bending , cutting in required shape and size and colour coding with heat shrinkable PVC sleeves. Electrolytic grade Aluminium bus bar Complete Rate Group 1	72.50	Kg	350.00	**25375.00**	**INR Twenty Five Thousand Three Hundred & Seventy Five Only**
119.0	SF of 110/220 V, LED (22.5 mm dia) Indicating lamp with integral circuit, terminal block, including connection etc. as required. Red/yellow/Green colour Complete Rate Group 1	45.00	Each	150.00	**6750.00**	**INR Six Thousand Seven Hundred & Fifty Only**
120.0	P&F of mechanical / digital time switch having following day / week programme and minimum 100 hours reserve and AC1 rating of 16-20 amperes including making connection, programming etc. as required One day & week reserve (digital type) Complete Rate Group 1	15.00	Each	5750.00	**86250.00**	**INR Eighty Six Thousand Two Hundred & Fifty Only**
121.0	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size.					
121.1	10.0 Sq.mm 2 core Complete Rate Armoured	27610.00	Mtr.	136.00	**3754960.00**	**INR Thirty Seven Lakh Fifty Four Thousand Nine Hundred & Sixty Only**
121.2	16.0 Sq.mm 4 core Complete Rate Armoured	23375.00	Mtr.	175.00	**4090625.00**	**INR Forty Lakh Ninety Thousand Six Hundred & Twenty Five Only**
121.3	25.0 Sq.mm 3.5 core Complete Rate Armoured	3750.00	Mtr.	209.00	**783750.00**	**INR Seven Lakh Eighty Three Thousand Seven Hundred & Fifty Only**
121.4	120.0 Sq.mm 3.5 core Complete Rate Armoured	3750.00	Mtr.	582.00	**2182500.00**	**INR Twenty One Lakh Eighty Two Thousand Five Hundred Only**
122.0	Random rubble stone masonry work in cement mortar with mechanical mixer in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 and 1400 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering					
122.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	120.00	cum	3430.00	**411600.00**	**INR Four Lakh Eleven Thousand Six Hundred Only**
123.0	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.					

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
123.1	2 x 10.0 sq.mm	510.00	Set	55.00	**28050.00**	**INR Twenty Eight Thousand &Fifty Only**
123.2	3.5 x 25.0 sq.mm	30.00	Set	114.00	**3420.00**	**INR Three Thousand Four Hundred & Twenty Only**
123.3	4 x 16.0 sq.mm	170.00	Set	108.00	**18360.00**	**INR Eighteen Thousand Three Hundred & Sixty Only**
123.4	3.5 x 120.0 sq.mm	30.00	Set	310.00	**9300.00**	**INR Nine Thousand Three Hundred Only**
124.0	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, copper lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.					
124.1	2 x 10.0 sq.mm	30.00	Set	60.00	**1800.00**	**INR One Thousand Eight Hundred Only**
124.2	3.5 x 25.0 sq.mm	10.00	Set	144.00	**1440.00**	**INR One Thousand Four Hundred & Forty Only**
124.3	4 x 16.0 sq.mm	15.00	Set	126.00	**1890.00**	**INR One Thousand Eight Hundred & Ninety Only**
125.0	S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required. 25mm x 5mm copper strip	575.00	Mtr.	714.00	**410550.00**	**INR Four Lakh Ten Thousand Five Hundred & Fifty Only**
126.0	Maintenance free Gel Earthing with Pipe in pipe / Pipe in strip technology filled with anti corrosive conductive compound (CPRI Tested) below the ground in 150 - 200 mm dia. earth pit & surrounding filled with required mineral filling compound (MFC should have hygroscopic property to retain the moisture for long time to create low resistance zone) and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete testing of earth resistance as required. of following sizes.					
126.1	With Pipe in Pipe Technology (Inner pipe dia. / Outer pipe dia.) 80 - 100 micron GI Coating; GI pipe 3000 mm long, 80 / 40 mm, Terminal 14 mm GI Strip	115.00	Set	13450.00	**1546750.00**	**INR Fifteen Lakh Forty Six Thousand Seven Hundred & Fifty Only**
127.0	P & F of ac operated heavy duty 230 /440 Volt power contactor conforming to IS:13947-4-1/IEC:947-4-1 having provision of mechanical interlocking, auuxilary contacts, Din rail mounting type including making connections, testing etc. as required.					
127.1	4 pole Power contactors with following AC 1 Rating; 100 Amp	15.00	Each	4595.20	**68928.00**	**INR Sixty Eight Thousand Nine Hundred & Twenty Eight Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
128.0	SITC of quick make and quick break 3 pole current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 60947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip , earth fault trip, push (test) to trip, including making connections with lugs & spreaders, etc. as required.					
128.1	With Thermal Magnetic release; up to 100 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	175.00	Each	3825.60	**669480.00**	**INR Six Lakh Sixty Nine Thousand Four Hundred & Eighty Only**
129.0	SITC of quick make and quick break 4 POLE current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 60947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip ,earth fault trip, push (test) to trip , including making connections with lugs & spreaders, etc. as required.					
129.1	With Thermal Magnetic release; up to 100 Amp; up to 100 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	15.00	Each	5072.80	**76092.00**	**INR Seventy Six Thousand &Ninety Two Only**
130.0	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1KV grade with Copper conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size.					
130.1	10.0 Sq.mm 2 core Complete Rate Armoured	500.00	Mtr.	281.60	**140800.00**	**INR One Lakh Forty Thousand Eight Hundred Only**
130.2	16.0 Sq.mm 4 core Complete Rate Armoured	350.00	Mtr.	603.20	**211120.00**	**INR Two Lakh Eleven Thousand One Hundred & Twenty Only**
130.3	25.0 Sq.mm 4 core Complete Rate Armoured	300.00	Mtr.	921.60	**276480.00**	**INR Two Lakh Seventy Six Thousand Four Hundred & Eighty Only**
131.0	Providing and fixing of HDPE pipe ISI mark (IS:4984/95) for water supply (suitable for subermersible & jet pump) with required fittings. For Horizontal installation;					
131.1	90 mm OD 6Kg/cm2	5000.00	cum	188.00	**940000.00**	**INR Nine Lakh Forty Thousand Only**
132.0	P/Laying ISI marked P.V.C. insulated submersible cable confirming to IS:694 with flexible copper conductor including making connection etc. as required.					
132.1	10.0 Sq.mm 3 core flat / Round	1500.00	Mtr.	232.00	**348000.00**	**INR Three Lakh Forty Eight Thousand Only**

Sl. No.	Item Description	Quantity	Units	Estimated Rate	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
133.0	Supply and fixing of oil / Air break DOL / Star Delta Starter made out of sheet steel powder coated enclosure with single phasing protection, ON / OFF push buttons, etc. complete in all respect suitable for following rating motors. Complete Rate Group-1					
133.1	Fully Automatic Star/ Delta Starter; 20.0 HP to 25.0 HP	6.00	Each	7328.00	**43968.00**	**INR Forty Three Thousand Nine Hundred & Sixty Eight Only**
134.0	SITC of ISI marked Submersible mud pump set minimum 20 mm solid handling 2900 RPM , three phase, 415 V, 50 Hz, having following capacity. Complete Rate Group-1					
134.1	5 HP, (21.5 - 6) Mtr. (300 - 1200) LPM	6.00	Each	56000.00	**336000.00**	**INR Three Lakh Thirty Six Thousand Only**
Total in Figures					**1180476429.3**	**INR One Hundred Eighteen Crore Four Lakh Seventy Six Thousand Four Hundred & Twenty Nine and Paise Thirty Only**
Quoted Rate in Figures			**Select**		**0.00**	**INR Zero Only**
Quoted Rate in Words	**INR Zero Only**					

Item Rate BoQ

Tender Inviting Authority: Jaipur Development Authority, Jaipur

Name of Work: Traffic Improvement and beautification works at B2 Byepass Junction, JDA, Jaipur, Rajasthan

Contract No:- JDA/EE (Traffic Works-I)/03/2021-22

Bidder Name :						
		PRICE SCHEDULE				
Sl. No.	**Item Description**	**Quantity**	**Units**	**BASIC RATE In Figures To be entered by the Bidder Rs. P**	**TOTAL AMOUNT**	**TOTAL AMOUNT In Words**
1	**2**	**3**	**4**	**5**	**6**	**7**
1.00	**JODHPUR STONE CLADDING**					
1.10	Providing & fixing **Jodhpur Stone CLADDING 40 MM thick** over Structural base with cement Mortar, with hairline joint at transition including cutting, rubbing and finishing, complete as per drawing and direction of Enginner- In- Charge and Architect. The Stone measurement will be done of outer most dimension of finished stone in X, Y and Z directions. The Cost includes all charges like material, labour, fixing, scaffolding arrangement, wastage and Adhesive etc. complete in all respect as per direction of Engineer in charge.	4387.63	SQM		**0.00**	**INR Zero Only**
2.00	**JEERAWAL WHITE GRANITE FLOORING**					
2.10	Fine dressed & machine cut edges 25-30 mm thick **Jeerawal White Granite flooring over 20 mm** (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) jointed grey cement slurry mixed with pigment to match the shade of stone complete as per design drawing The work may be done with combination of other Granite stone as per pattern given in drawing.The Cost includes all charges like material, labour, fixing, scaffolding arrangement, wastage and Adhesive etc. complete in all respect as per direction of Engineer in charge. Stone Sample to be Approved By Engineer Incharge and Architect Before Execution of Work.	2115.90	SQM		**0.00**	**INR Zero Only**
3.00	**GRAY GRANITE**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
3.10	Fine dressed & machine cut edges 30-35 mm thick **Grey Granite (Sadarhali Stone) flooring over 20 mm** (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) jointed grey cement slurry mixed with pigment to match the shade of stone complete as per design drawing and instruction of EI. The work may be done with combination of other Granite stone as per pattern given in drawing.The Cost includes all charges like material, labour, fixing, scaffolding arrangement, wastage and Adhesive etc. complete in all respect as per direction of Engineer in charge. Stone Sample to be Approved By Engineer Incharge and Architect Before Execution of Work.	2115.90	SQM		**0.00**	**INR Zero Only**
4.00	**BLACK GRANITE FLOORING**					
4.10	Fine dressed & machine cut edges 25-30 mm thick **Black Granite flooring over 20 mm** (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) jointed grey cement slurry mixed with pigment to match the shade of stone complete as per design & drawing. The work may be done with combination of other Granite stone as per pattern given in drawing.The Cost includes all charges like material, labour, fixing, scaffolding arrangement, wastage and Adhesive etc. complete in all respect as per direction of Engineer in charge. Stone Sample to be Approved By Engineer Incharge and Architect Before Execution of Work.	666.90	SQM		**0.00**	**INR Zero Only**
5.00	**PINK GRANITE FLOORING**					
5.10	Fine dressed & machine cut edges 25-30 mm thick **Pink Granite flooring over 20 mm** (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) jointed grey cement slurry mixed with pigment to match the shade of stone complete as per design drawing and instruction of EI. The work may be done with combination of other Granite stone as per pattern given in drawing.The Cost includes all charges like material, labour, fixing, scaffolding arrangement, wastage and Adhesive etc. complete in all respect as per direction of Engineer in charge. Stone Sample to be Approved By Engineer Incharge and Architect Before Execution of Work.	222.30	SQM		**0.00**	**INR Zero Only**
6.00	**ACP**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
6.10	Providing and Fixing Aluminium composite panel of approved make 3mm thick with 0.5mm thick skin & PVDF coated approved shade for wall panelling. Main framing work to be done using 50mmx25mmx1.6mm tubular section of approved make. Stainless steel screw to be used to fix the ACP panel to be fixed to the main frame with industrial adhesive tape and panel groove to be sealed with weather proof silicon sealant suitable for glass/aluminium etc. Complete in all respect as approved by Engineer-in-charge.Sample to be Approved By Engineer Incharge and Architect Before Execution of Work.	16892.70	SQM		**0.00**	**INR Zero Only**
7.00	**ART WORK**					
7.10	Providing and executing at site mural art work with traditional architecture by synthetic paint as per design and drawing. The item should be inclusive of finished wall with birla putty (interior/exterior). The cost is inclusive of all supplies, labour, civil work (if required), scaffoldign, looading, unloading, and cost of molds whenever required. Complete in all respect as direction of engineer in charge.	1540.00	SQM		**0.00**	**INR Zero Only**
8.00	**JODHPUR STONE**					
8.10	Providing and Fixing **Jodhpur Stone Sculpture, Column, Artifact, capital, pedestial, cornices,Pots, Kalash etc** including all carving as per approved drawing and all charge like labour, charges for fixing and material required for fixing like araldite, white cement, pigment and all scaffolding required etc, Complete in all respect as direction of Engineer in charge Stone sample to be approved by Engineer-in-charge and Architect before execution of Work.	163.64	CUM		**0.00**	**INR Zero Only**
9.00	**BASAWARA WHITE STONE**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
9.10	Providing and fixing at site, solid stone ement/statue/sculpture/cladding made out by carving work in first class (Superior class) Basawara White Stone free from cracks, flaws & stains etc. with additional/required carving work (3-dimensional work) on stone element including Plainning, developing, making base, carving work, polishing, all loading-unloading, transportation, scaffolding, hoisting, installation with all required T&P (including white cement, pigment, Chemical, SS clamps and fasteners of approved brand etc.), fixing over/on base/surface as per shape-size & placement of approved drawing , finishing, surface treatment etc. covering properly till the date of opening/inauguration of site etc. The stone should be pre/post -treated with suitable chemical polish for maintaining original color and Ceramic surface treatment to be done to avoid surface taining & effectof external weather condition, pollution & dust etc. Proto type model of element/statue/sculpture/cladding (fiber glass or plaster of Paris) may also be required of same shape, size and detailing, for which nothing be paid extra. Preferably, the single piece stone block shall be used for the particular element/statue/sculpture but if not possible, material from the same block/lot of stone, shall only be used for similarity & fine n hair line pasting/jointing shall be done with suitable material in such a way so that joint(s) be not visible from front site. Complete job in all respect including in-lay work if required, as per approved design & drawing under approval of project consultant, appointed for the project & as per directions of Engineer-In-Charge complete in all respect.	149.33	CUM		**0.00**	**INR Zero Only**
10.00	**LATERITE WALL TILES**					
10.10	Providing and fixing laterite wall tiles conforming to IS: 15622 , of approved make of 12"x7"x18" size as approved by Engineer-in-Charge, on wall, as a wall tile (12"x7"x18")over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. Sample to be approved by Engineer-in-charge and Architect before execution of Work.	5370.00	SQM		**0.00**	**INR Zero Only**
11.00	**GUN METAL**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
11.10	P & F Gun metal statue/sculpture of any type & size as per approved drawing and placement of statue/sculpture as per direction of engineer-in-charge (composition of Gun Metal, Copper 85%, Tin 5% Lead 5% Zinc 5%.) 1: 1 Scale Model 1:1 Scale Model Shall be prepared in EPS with a final finish of POP to finalize stance and basics of required sculpture and to examine final features and shape of statue Sillicon Rubber Mold for Waxoming Mouds shall be prepared in Sillicon Rubber for further working in WAX Metal Casting Lost Wax casting process shall be applied and panel of the statue will be casting in minimum 1 to 2 pieces at our in house foundry. Average thickness of skin shall be 6 to 7 mm with composition of bronze will be Copper 75% ,Tin-10 %, Lead -10 %, Zinc -5% (Including 12% GST and Transportation and installation cost)	22000.00	KG		**0.00**	**INR Zero Only**
12.00	**BENCHES**					
12.10	Providing & Fixing of Benches (As per the Drawing) A. Dimensions (Approximate) :- Length - 2250 mm, Width - 700 mm, Height – 950 mm B. Planks :- cedar wood plank 100mm X 20mm] Finish in Wooden smooth Metal Frames & Structure are in Mild Steel duly powder coated. NOTE :- 1. The Mild Steel Section of 100 x 400 x 8 mm was used to grout and anchor fasten the structure on PCC base. 2.The Planks used are of 100 mm x 20 mm dimensions and were replaced from the ones mentioned in the drawings. 3. Few minor changes were done as per the need to strengthen the structure.	10.00	EACH		**0.00**	**INR Zero Only**
13.00	**DUSTBIN**					
13.10	Providing & Fixing of Dustbin (As per the Drawing) A. Dimensions (Approximate) ;- Length - 1300 mm, Width - 500 mm, Height – 1200 mm B. Planks ;- Polystyrene Section [60mm X 20mm] Finish in Wooden smooth C. Metal Frames & Structure are in Mild Steel duly powder coated. Note: 1. The Mild Steel Section of 200 mm x 8 mm round was used to grout and anchor fasten the structure on PCC base. 2. The Planks used are of 60 mm x 20 mm dimensions and were replaced from the ones mentioned in the drawings.	47.00	EACH		**0.00**	**INR Zero Only**
14.00	**BLACK CADAPPA COBBLE FLOORING**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
14.10	Providing and fixing Black Cadappa Cobble (4"x4"x3") Stone flooring work dressed stone (4" by 4") 3" thick in honed finished with pattern as per approved design over 25-50mm thick base in CM 1:6 including pointing with cement sand mortar 1:2 (1 Cement:2 sand) match the shade of stone with joint. The Cost includes all charges like material, labour, fixing, scaffolding arrangement, wastage and Adhesive etc. complete in all respect as per direction of Engineer in charge.	3225.00	SQM		**0.00**	**INR Zero Only**
15.00	**CERAMIC GLAZED WALL**					
15.10	Providing and fixing Ist quality Handmade ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified as per design;approved by Engineer-in-charge and Architect), of approved make, in all colours, shades of any size as approved by Engineer-in-Charge, on wall as a handmade ceramic mural (4 METER X 80 METER)over 12 mm thick bed of cement mortar 1:5 (1 cement : 5 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. Sample to be approved by Engineer-in-charge and Architect before execution of Work.	980.00	SQM		**0.00**	**INR Zero Only**
16.00	**BASAWARA WHITE STONE**					
16.10	Providing & fixing **50 mm thick Banswara stone cladding** as per drawing including drawing shape on stone and engraving traditional shapes and engraving groove, border etc. The ladding shall of shapes and size as per the drawing including ixing at site as per directions. The cladding shall be measured net area provided and all wastage, cutting in shapes etc shall be borne by the agency. The Cost includes all charges like aterial, labour, fixing, scaffolding arrangement, wastage and dhesive etc. complete in all respect as per direction of Engineer in charge. Stone sample to be approved by Engineer-in-charge and Architect before execution of Work.	445.22	SQM		**0.00**	**INR Zero Only**
17.00	**TRANSPLANTATION OF TREES (girth of trees beyond 50 and upto 90 cm)**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
17.10	Transplantation of trees with in a distance of 2km including excavation around existing tree, pruning of branches, lifting, loading and transportation of existing tree, digging pits for placing tree at new place, adding manure, sand, fertilizer, hormones and bio fertilizer to it. Levelled and neatly dressed and disposal of surplus materials from old existing and new sites to designated place. Each tree should be firmly secured to the stake so as to prevent excessive movement, flooding with water, treatment of roots, rope and gunny bags as per direction of the officer incharge. T&P and all required materials shall be arranged by the contractor and nothing extra shall be paid on this account (a) Girth of tree shall be measured at a height of 1m above ground level. **Girth of trees beyond 50cm and upto 90cm.**	7.00	EACH		**0.00**	**INR Zero Only**
18.00	**KERB STONE**					
18.10	Providing and fixing in position Jodhpur stone/ Kerb stone of size 230mmx300 mm and cut to shape as per with exposed face fine chiesel dresses fixing and jointing/pointing wit cement mortar 1:4 using pigment as per drawing and instruction of Enineer Incharge complete in all respect.(including all taxes). Stone Sample to be Approved By Engineer Incharge and Architect Before Execution of Work.	2826.00	MTR.		**0.00**	**INR Zero Only**
19.00	**NATURAL LANDSCAPING**					
19.10	Providing and fixing Natural landscaping sandstone block extracted directly from natural stone quarries of natural irregularties. Ideal for Feature wall, garden lanscaping; imperfection types-chipped corners, uneven surface and tapering widths; surface- rough and unfinished (including All Taxes and transportation) (Size approx. base-5'x5' and height 8 to 10 feet) Complete in all respect as approved by Engineer-in-charge. (including all taxes). Stone Sample to be Approved By Engineer Incharge and Architect Before Execution of Work. Additional variation in size upto 10% may be possible as per the instruction given by arichitect & Engineer In Charge for which no extra payment will be made.	4.00	EACH		**0.00**	**INR Zero Only**
20.00	**RWH SYSTEM**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
20.10	Providing and installing of RWH system by trenching of 160mmx3m RWH pipe-PN6 with injection well with 12mm spirally perforated holes at 30 mm intervals throughout the pipe resulting to an open area of 135 square centimeter/Meter and specially designed with more tensile strength to take earth's spherical force when it inserted in the Injection well bore. The Run off along with dirt and debries deposits in the silt trap (8 feet down from ground level/ as per site condition)and overflow of water, flows to the injection well (storage well with filtration unit- 20 feet down from ground level/ as per site condition) through a underground pipe and passes through multi-layers of filetration Media- 150mm gravel and coarse stone, 100 mmm of 20mm crushed stones, 100mm of Charcoal and Activated carbon, 50 mm of 40 mm crushed stones followed by perforated reinforced concrete slab wall tickness 75mm then 1350 mm dia X 150 mm ht X 100mm wt. heavy duty RCC ring (14 nos. or as per soil condition) after that "V" wire screen with 140mm HDPE percolated pipe (upto driling level) of 24m both ends are inserted with "V" wire screen which if filled with 10mm crushed stone. Also include trenching work and GST. Complete in all respect as approved by Engineer-in-charge.	4.00	EACH		**0.00**	**INR Zero Only**
21.00	**TRANSPLANTATION OF TREES (girth of trees beyond 90 and upto 120 cm)**					
21.10	Transplantation of trees with in a distance of 2km including excavation around existing tree, pruning of branches, lifting, loading and transportation of existing tree, digging pits for placing tree at new place, adding manure, sand, fertilizer, hormones and bio fertilizer to it. Levelled and neatly dressed and disposal of surplus materials from old existing and new sites to designated place. Each tree should be firmly secured to the stake so as to prevent excessive movement, flooding with water, treatment of roots, rope and gunny bags as per direction of the officer incharge. T&P and all required materials shall be arranged by the contractor and nothing extra shall be paid on this account.	3.000	EACH		**0.00**	**INR Zero Only**
22.00	**Electrical Items**					
22.10	**Electrical with Illumination:**					

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
23.00	Supply , installation testing and commissioning of 9M height four arm Pole Made in combination of continous Conical tapper section (6000 mm length minimum) which is fabricated using High tensile MS Sheet (3mm thick) with top dia. 80-90mm minimum & bottom 140-155 dia. Minimum 1.7M height four arm ornamental designed bracket made in combination of mild steel pipe sections 60mm dia. x 2.6mm thick & 38mm dia x 2mm thick. Decorative part made in combination of gravity cast aluminium to get horizonal arm length as shown in drawing with pleasing aesthetics. The brackets shall be a single piece assembly and should be capable of orientation in any direction and secured with stainless steel 304 grade allen grub screws. Decorative ring between base pole and bracket is made of cast iron. Decorative finial top is made of cast iron in single piece of min. height 250mm. The decorative base is made of Gravity cast aluminium with the company / brand logo embossed on it. With minimum dia of the base is 500 mm & height is 125afety etc and dismantling after completion of project.mpressor/limiting, delay, speaker equalization. The audio output device shall indicate signal and clip with LEDs on the front panelranty (Details specifications as per Annexure 5)Approved Makes:- Pelco, Axis, Hikvision, Pramamilarity & fine	78.00	Each		0.00	INR Zero Only
24.00	Supply, Installation testing and Commmisioning of A modern heritage pathway luminaire, integral model, totally weather proof aesthetically contoured. Improved long lasting protection against ingress of dust / moisture / insects inside optical compartment with top opening facility for maintenance. Streamlined aerodynamic profile for lesser resistance. Luminaire comprises of specially contoured spun aluminium body. Non yellowing, UV stabilised, convex type acrylic diffuser. Luminaire Ø600 and height 600mm. Suitable for mounting to internally threaded pipe of designation M30. Supplied with wattage of 100W. System efficacy 100 lm/W minimum, The value shall not exceed junction temperature Tj 85°C, Luminaire body temperature should not exceed 30°C, CRI >70, different CCTs, life span of L70 / B10 @ 50000 Hrs, SDCM = 3, Type III light distribution, Operating Temperature 0°C~45°C, Input Voltage 230-240V ac, Operating voltage 100-277V ac with cut-off protection and self restart feature in case of over / under voltage awith 140mm HDPE percolated pipe (upto driling level) of 24m both ends are inserted with "V" wire screen which if filled with 10mm crushed stone. Also include	312.00	Each		0.00	INR Zero Only

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
25.00	Supply , installation testing and commissioning of 6M height single arm Pole Made in combination of continous tapper Conical section (4200mm length minimum) which is fabricated using High tensile MS Sheet (3mm thick) with top dia. 70mm minimum & bottom 135 dia. Miniumum 1.76M height single arm ornamental design bracket made in combination of mild steel pipe sections 60mm dia.* 2.6mm thick min and 38mm dia. x 2mm thick . Decorative part made of combination of gravity cast aluminium to get horizontal arm as shown in drawing with pleasing aesthetics.The brackets shall be a single piece assembly and should be capable of orientation in any direction and secured with stainless steel 304 grade allen grub screws.. Decorative ring between base pole and bracket is made of cast iron .Decorative finial top is made of cast iron in single piece of min height 250mm.. The decorative base is made of gravity cast aluinium with aluminium with the company / brand logo embossed on it.With miniumum dia of the base is 500 mafety etc and dismantling after completion of project.mpressor/limiting, delay, speaker equalization. The audio output device shall indicate signal and clip with LEDs on the front panelranty (Details specifications as per Annexure 5)Approved Makes:- Pelco, Axis, Hikvision, Pramamilarity & fine	152.00	Each		0.00	INR Zero Only
26.00	Supply , installation testing and commissioning of A modern heritage pathway luminaire, integral model, totally weather proof aesthetically contoured. Improved long lasting protection against ingress of dust / moisture / insects inside optical compartment with top opening facility for maintenance. Streamlined aerodynamic profile for lesser resistance. Luminaire comprises of specially contoured spun aluminium body. Non yellowing, UV stabilised, convex type acrylic diffuser. Luminaire Ø400 and height 400mm. Suitable for mounting to internally threaded pipe of designation M30. Supplied with wattage of 30W. System efficacy 100 lm/W minimum, The value shall not exceed junction temperature Tj 85°C, Luminaire body temperature should not exceed 30°C, CRI >70, different CCTs, life span of L70 / B10 @ 50000 Hrs, SDCM = 3, Operating Temperature 0°C~45°C, Input Voltage 230-240V ac, Operating voltage 100-277V ac with cut-off protection and self restart feature in case of over / under voltage and phase to phase voltage, drwith 140mm HDPE percolated pipe (upto driling level) of 24m both ends are inserted with "V" wire screen whi	152.00	Each		0.00	INR Zero Only

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
27.00	Supply , installation testing and commissioning of 4.26M height twin arm pole made in combination of circular pipe (2500mm length minimum) which is fabricated using 88.9mm dia x 2.9mm thick (minimum) .Minimum 1.M height double armornamental designed bracket made in combination of mild steel pipe sections 60mm dia. x 1000mm (L) x 2.6mm thick min. (vertical) and 38mm dia. 2mm thick min. Decorative part made of combination of gravity cast aluminium to get horizonal arm length as shown in drawing & pleasing aesthetics. The bracket shall be in singke piece assembly and should be capable of orientation any direction and secured with stainless steel 304 grade allen grub screws .Decorative ring between base pole and bracket is made of aluminium (124mm dia. x 60mm(H) – 0.3 kgs.). Decorative ring in the middle of the base pole is made of aluminium Decorative finial top is made of cast iron in single pieceof min height 250mm. Decorative base is made of Gravity cast aluminium with the company / brand logo eafety etc and dismantling after completion of project.mpressor/limiting, delay, speaker equalization. The audio output device shall indicate signal and clip with LEDs on the front panelranty (Details specifications as per Annexure 5)Approved Makes:- Pelco, Axis, Hikvision, Pramamilarity & fine	267.00	Each		0.00	INR Zero Only
28.00	Supply, Installation testing and Commisioning of A modern heritage pathway luminaire, integral model, totally weather proof aesthetically contoured. Improved long lasting protection against ingress of dust / moisture / insects inside optical compartment with top opening facility for maintenance. Streamlined aerodynamic profile for lesser resistance. Luminaire comprises of specially contoured spun aluminium body. Non yellowing, UV stabilised, convex type acrylic diffuser. Luminaire Ø280 and height 250mm. Suitable for mounting to internally threaded pipe of designation M20. Supplied with wattage of 24W. System efficacy 100 lm/W minimum, The value shall not exceed junction temperature Tj 85°C, Luminaire body temperature should not exceed 30°C, CRI >70, different CCTs, life span of L70 / B10 @ 50000 Hrs, SDCM = 3, Operating Temperature 0°C~45°C, Input Voltage 230-240V ac, Operating voltage 100-277V ac with cut-off protection and self restart feature in case of over / under voltage and phase to phase voltage, drwith 140mm HDPE percolated pipe (upto driling level) of 24m both ends are inserted with "V" wire screen whi	534.00	Each		0.00	INR Zero Only

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
29.00	Supply , installation testing and commissioning of 4.26M height single arm pole made in combination of circular pipe (4000 mm length minimum) which is fabricated using 88.9mm dia x 2.9 thick. Decorative part made in combination of gravity cast aluminium to get horizonal arm length as shown in drawing with pleasing aesthetics. The sleeve shall be a single piece assembly and should be capable of orientation in any direction and secured with stainless steel 304 grade allen grub screws. Decorative ring between base pole and bracket is made of gravity cast aluminium. Decorative finial top is made of cast aluminium in single piece of min. height 180mm. The decorative base is made of Gravity cast aluminium with the company / brand logo embossed on it. With minimum dia of the base is 300mm & height is 570mm. All dimension are within +/- 5% tolerance. Cast aluminium material is LM6 grade. The decorative pedestal to be mounted on a suitable size steel plate. The pole is to be provided with a surface mounting suitableafety etc and dismantling after completion of project.mpressor/limiting, delay, speaker equalization. The audio output device shall indicate signal and clip with LEDs on the front panelranty (Details specifications as per Annexure 5)Approved Makes:- Pelco, Axis, Hikvision, Pramamilarity & fine	5.00	Each		**0.00**	**INR Zero Only**
30.00	Supply installation and commissioning of LED Linear Lighting" surface mounted, energy efficient LED luminaire, elegantly designed fixture, corrosion resistant coating, and the special heat dissipation design ensures the best performance and life span. LED designed for highest efficiency in terms of more lumens at reduced wattage contributing to a Greener World. 24W Linear Wall Washer Luminaire made up of extruded aluminium for better thermal management. Corrosion resistant. Tempered glass diffuser for excellent diffused lighting experience throughout the life of the fixture. Beam angle : 10^{o} x 60^{o}. Operating Temperature : -40°C~+55°C. Mounting bracket with tilting feature to facilitate proper aiming of the luminaire at desired angle. Cable entries for through-wiring of mains supply cable. Protection class IP65. CE/BIS certified	40.00	Each		**0.00**	**INR Zero Only**
31.00	Supply, Installation testing and commissioning of Tunnel light for ceiling mount neutral white with power supply safety class 1, CE/BIS certified with a high lumen per watt ratio ensuring a long lifetime good performance and low maintenance cost. LED designed for highest efficiency in terms of more lumens at reduced wattage 8340 Lm (WW) with a efficacy of more than 130 lm /w The luminaire to include driver, connectors and surge protection devices .	20.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
32.00	Supply, Installation testing and Commissioning of 3W CE/BIS certified IP65 safety class 1 having integrated power supply hardly construction luminaire . The luminaire comes with a luminous flux of 210 lm(at 3000K) and beam angle of 15deg/ 25deg/ 40deg. The landscape luminaire should have bracket arrangement and swivel range +70/20 in the horizontal direction Finish to be pure polyester powder coated as per architect color scheme .	20.00	Each		**0.00**	**INR Zero Only**
33.00	Supply, Installation testing and Commissioning of 6W CE/BIS certified IP65 safety class 1 having integrated power supply hardly construction luminaire . The luminaire comes with a luminous flux of 401 lm(at 3000K) and beam angle of 15deg/ 25deg/ 40deg.The landscape luminaire should have bracket arrangement and swivel range +70/20 in the horizontal direction Finish to be pure polyester powder coated as per Engineer-in-charge color scheme.	15.00	Each		**0.00**	**INR Zero Only**
34.00	Supply, Installation testing and Commissioning of 12W CE/BIS certified IP65 safety class 1 having integrated power supply hardly construction luminaire . The luminaire comes with a luminous flux of 986 lm(at 3000K) and beam angle of 15deg/ 25deg/ 40deg. The landscape luminaire should have bracket arrangement and swivel range +70/20 in the horizontal direction Finish to be pure polyester powder coated as per Engineer-in-charge color scheme .	10.00	Each		**0.00**	**INR Zero Only**
35.00	Supply , installation testing and commissioning of IP65 safety class 1, CE/BIS certified bollard made up of Extruded aluminium column with die-cast aluminium flat top cover ,(grade 6063) with die cast AL componment and non corrosive SS fasterner .. Cast iron /AL plate to be provide for bolting and foundation . 15W bollard of Ø166 x 895mm, with lumen output of 673lm(WW), creating a pleasant light distribution with high degree of visual comfort . Finish to be pure polyster powder coated as per Engineer-in-charge design requirement. Luminaire prewired with LED driver and suitable for operation on 240V, 50Hz single phase ac supply.	10.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
36.00	Supply , installation and commissioning of IP65, IK06 Floor-, wall- and ceiling-mounted recessed luminaire intended for use with LED light sources. Comprising body and installation frame casing .Extruded aluminium body closed at the top by a transparent or anti-slip glass screen secured with silicone; with die-cast aluminium end caps complete with silicone seals; aluminium outer casing with techno-polymer caps. Having atleast 13W and 925 lm. CE/BIS certified complete with power supply , as per Engineer-in-charge design requirement . Length :-1056mm.	16.00	Each		**0.00**	**INR Zero Only**
37.00	Supply , installation and commissioning of IP66, IK06 Floor-, wall- and ceiling-mounted recessed luminaire intended for use with LED light sources. Comprising body and installation frame casing .Extruded aluminium body closed at the top by a transparent or anti-slip glass screen secured with silicone; with die-cast aluminium end caps complete with silicone seals; aluminium outer casing with techno-polymer caps. Having atleast 6W and 525 lm. CE/BIS certified complete with power supply , as per Engineer-in-charge design requirement . Length :-1056mm.	4.00	Each		**0.00**	**INR Zero Only**
38.00	Supply ,installation testing and commissioning 24 V, flexible opal encapsulated IP67 protected LED light lines with a cross section of 16 x 15 mm (W x H) and vertical bending direction (Top View). 3M self adhesive tape on rear side. Homogeneous and dot free illumination in very low installation depths. Can be delivered in lengths of multiples of 62.5 mm to a maximum length of up to 5 m. 110 mm IP68 plug in connectors on both ends. At maximum length only one side with IP68 plug in connector male, no female connector. Lifetime of > 60,000 hours (L80/B10). Easy installation and a rugged design for harsh environments (e. g. resistant to saltwater, UV, chlorine and solvents). Having atleast 10W/mtr as per Engineer-in-charge design requirement .	100.00	Each		**0.00**	**INR Zero Only**
39.00	**Fountain and Pump Station:**					
40.00	Supplying and fixing of mini volcano jet made out with stainless steel 304gr. Achive water effect ht upto 3-4 mtr. high make - Color Design India/Oase/H2O or equivalent as per entire instruction, direction and satisfaction of Engineer-in-charge.	4.00	Set		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
41.00	Supplying and fixing of water diffuser nozzle for bowl made out with pvc body having size of 50mm dia. make - Color Design India/Oase/H2O or equivalent and as per entire instruction, direction and satisfaction of Engineer-in-charge.	12.00	Set		**0.00**	**INR Zero Only**
42.00	Supplying and Fixing of 40mm dia. Gunmetal Ball Valve (Make Zoloto/Sant/Leader/Arch or equivalent) complete as per per the direction and entire satisfaction of Engineer in Charge	8.00	Nos.		**0.00**	**INR Zero Only**
43.00	Supplying and Fixing of 50mm dia. Gunmetal Ball Valve (Make Zoloto/Sant/Leader/Arch or equivalent) complete as per per the direction and entire satisfaction of Engineer in Charge	12.00	Nos.		**0.00**	**INR Zero Only**
44.00	Supplying installation testing and commissioning of horizontal monoset submersible Pump Set with Starter and totally enclosed water filled squirrel cage induction motor water lubricated with oil seals with sleeves and thrust bearing having all rotating parts dynamically balanced for silent operation Suitable for three phase 50 HZ AC supply as per direction, instruction and entire satisfaction of Engineer-in-charge. Motor Body : CI Pump Body : CI Make : Kirlosker/Crompton/CRI or equivalent Capacity : 2 HP Three Phase Discharge 12 LPS Head 6 Mtr Suction & Delivery 65x50mm	4.00	Set		**0.00**	**INR Zero Only**
45.00	Supply & Fixing water proof high power LED lights 6x3=18 watts, color changing/multicolored made out of stainless steel 304gr. suitable to be fitted with emitter type power LED's with all in one optical lens of 85% effeciency step pempered glass 8 mm with protection class of IP-68. (Color Design India/Oase/H2O or equivalent) complete as per the direction & entire satisfaction of Engineer in charge.	96.00	Each		**0.00**	**INR Zero Only**
46.00	Supply & Fixing adjustable stainless stand (SS-304)/housing for LED lights with all accessories including nuts bolts complete as required for jet nozzle (Color Design India/Oase/H2O or equivalent) etc complete as per the direction & entire satisfaction of Engineer in charge.	96.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
47.00	Supply & Fixing of Master Control Device for LED Lights having Specifications:- * PLC based controller with master & slave communication protocol. * Push feature to lock any running colour chase to a fix colour. * 24 Pre-Programmed colour patterns and Load Circuit-Inbuilt with accessories complete, Body - Plastic/PVC, Output Power - 12V DC, Make : - (Color Design India/Oase/H2O or equivalent) complete.	2.00	Each		**0.00**	**INR Zero Only**
48.00	Supply and fixing of Constant Voltage Driver (CVD) 20A suitable for 18Watt LED lights (Color Design India/Oase/H2O or equivalent) as per the direction and entire satisfaction of Engineer in Charge.	8.00	Each		**0.00**	**INR Zero Only**
49.00	Supplying installation, testing and commissioning of out door type control panel suitable for 2 nos. submersible pumps including wiring, cabling, cable tray control wiring etc. The control panel shall be compartalized for individual outgoing and shall be made out of 16 SWG CRC sheet in grey color and shall be floor mounted with following, Size 600(L)x600(H)x300(D) including following accessories: (a) 4 Pole MCCB 63A (L.T.make) 1.00 no. (b) 3 Pole MCB 16 Amps 2.00 nos. (c) SP MCB 6 Amp 2.00 nos. (d) DP MCB 20 Amp. 2.00 nos. (e) Single Phase Preventor 2.00 nos. (f) Volt selector switch 1.00 no. (g) Voltmeter 0-300 v 1.00 no. (h) Ammeter 0-30 amps 2.00 nos. (i) Overload relay 6- 12 Amp. - 2.00 nos. (j) TPN Power Contractors MNX-12- 2.00 nos. (k) On/off push Buttons - 2.00 set (l) Indicators - 2.00 set	2.00	Set		**0.00**	**INR Zero Only**
50.00	Supplying and fixing 3x 2.5 sqmm round cables PVC insulated PVC sheathed copper conductor of make Polycab/Finolex/Havells or equivalent for filter pumps (a) 3 x 2.5 sq mm size.	200.00	Meter		**0.00**	**INR Zero Only**
51.00	Supplying and fixing 4 x 2.5 sqmm submersible Round cables PVC insulated PVC sheathed copper conductor of make Polycab/Finolex/Havells or equivalent for RGB LED Lights complete. (b) 4X2.5 sq mm size.	200.00	Meter		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
52.00	Supplying and fixing PVC Medium Class conduit pipe for concealing of Cables make Kalinga/AKG/Polycab/Supreme/ISI Mark (e) 25 mm size.	100.00	Meter		**0.00**	**INR Zero Only**
53.00	Supplying and Making water Proof joint of underwater cables for submersible cable complete as required.	96.00	Nos.		**0.00**	**INR Zero Only**
54.00	Supplying and 65mm dia. Debris Collection Stainers in Stainless Steel 304 grade complete as required.	4.00	Nos.		**0.00**	**INR Zero Only**
55.00	Supplying and Fixing of UPVC pipes (10 Kgf/cm2) of make supreme / Prince or equivalent confirming to IS 4985:2000 including all UPVC fitting tested to a test pressure of 10 Kgf/sqcm i/c jointing with good quality solvent of following sizes. All fixing to be done to the entire satisfaction and sample approved by Engineer-incharge.					
55.10	63 mm OD Pipe (for delivery)	24.00	Meter		**0.00**	**INR Zero Only**
55.20	50 mm OD Pipe (for overflow and drain)	96.00	Meter		**0.00**	**INR Zero Only**
55.30	32 mm OD Pipe (for inlet)	120.00	Meter		**0.00**	**INR Zero Only**
56.00	Supplying and fixing of 50 mm dia CI Butterfly Valve of pressure rating PN1.6 with EPDM rubber lining matching flanges and accessories complete short pattern as required (Kirloskar/leader/Zoloto/Sant or equivalent) as per per the direction and entire satisfaction of Engineer in Charge.	4.00	No.		**0.00**	**INR Zero Only**
57.00	Supply and fixing of 50 mm dia Non return Valve and accessories complete. Make - Sant/Leader/HVI/Zoloto or equivalent	4.00	No.		**0.00**	**INR Zero Only**
58.00	**Intelligent Transportation System:**					
59.00	SITC of Traffic flow bullet camera For traffic analysis which Cover 3 lanes with steel hoop for mounting over gantry with 5 yrs warranty(Details specifications as per Annexure 1)	4.00	Each		**0.00**	**INR Zero Only**
60.00	SITC of Strobe IR light which Support ambient brightness detection with steel hoop for mounting over gantry with 5 yrs warranty(Details specifications as per Annexure 1)	12.00	Each		**0.00**	**INR Zero Only**
61.00	SITC of L2, Unmanaged, 6 × gigabit PoE RJ45 ports, 2 × gigabit Hi-PoE RJ45 ports and 2 × gigabit SFP fiber optical ports with 5 yrs warranty(Details specifications as per Annexure 11)	3.00	Each		**0.00**	**INR Zero Only**
62.00	SITC of Terminal server for Traffic flow detection with 5 yrs warranty (Details specifications as per Annexure 3)	4.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
63.00	SITC of 5 MP Varifocal Bullet Network Camera with mounting bracket with 5 yrs warranty(Details specifications as per Annexure 4)	8.00	Each		**0.00**	**INR Zero Only**
64.00	**Panoromic Camera**: **Panoromic Camera:** Eight 1/1.8" 4 MP progressive scan CMOS, Up to 2 × 5520 × 2400 at 30fps , Min Illumination: 0.0005 Lux at F1.6, 2.8 mm Focal Length, Privacy Mask, Supports people density detection in panoramic channel, Intrusion detection, line crossing detection, region entrance detection, region exiting detection, Support detecting the level of people density in the configured area, **Tracking PTZ Camera**: 1/1.8" 4 MP progressive scan CMOS, Up to 2560 × 1440 at 30fps, Min. illumination: Color: 0.0005 Lux at F1.2, 6.0 to 240 mm, 40 × Optical Zoom, 16 × Digital Zoom, IR distance: 250 m, Pan and tilt range: 360° (Pan), Pan Manual Speed: 0.1°/s to 210°/s, Pan Preset Speed: 240°/s, -15° to 90° (Tilt), Tilt Manual Speed: 0.1°/s to 150°/s, Tilt Preset Speed: 200°/s WDR 120 dB, Smart Tracking, Tripple Stream Configurable, Intrusion detection, line crossing detection, region entrance detection, region exiting detection, Face Capture, H.265, H.264 Video Compression, Alarm: 7-ch Input, 2-ch Output, Audio 1-ch Input, 1-ch Output, IP66, IK10, Built-in microSD slot, support microSD/microSDHC/microSDXC cards, up to 256 GB, UL/CE/FCC Certified.with mounting bracket with three yrs warranty (Details specifications as per Annexure 5)Approved Makes:- Pelco, Axis, Hikvision, Prama	4.00	pcs		**0.00**	**INR Zero Only**
65.00	**4 MP 42 × Network IR Speed Dome**: 1/1.8" progressive scan CMOS, 2560 × 1440 Resolution, Min illumination: 0.002 Lux at F1.2, 0 Lux with IR, 140 dB WDR, BLC, HLC, 3D DNR, Defog, EIS, 6.0 mm to 252 mm Focal length, 42 × Optical Zoom, 16x Digital Zoom, Pan: 360°, Tilt: -20° to 90° (auto flip), Pan configurable speed: 0.1° to 210°/s, Pan preset speed: 280°/s, Tilt configurable speed: 0.1° to 150°/s, Tilt preset speed: 280°/s, H.265, H.264, MJPEG Video Compression, Face Capture, Face Comparison, Motion Detection, Video Tampering Detection, line crossing detection, region entrance detection, region exiting detection, audio exception detection, Built-in memory card slot, up to 256 GB, Alarm: 7 in/2 Out, Audio 1 in/1 out, Smart IR up to 500 m, Power supply 24 VAC, Temperature: -40°C to 70°C, Humidity: ≤ 95%, IP67, IK10 (Details specifications as per Annexure 2)	4.00	Each		**0.00**	**INR Zero Only**
66.00	SITC of NVR for Bullet, IR Speed dome, Panovu camera with 5 yrs warranty (Details specifications as per Annexure 12)	1.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
67.00	SITC of 8TB Surveillance HDD in NVR Approved Makes:- Seagate, WD, HP	8.00	Each		**0.00**	**INR Zero Only**
68.00	Surveillance class Common Micro SD Card 128GB for camera (Details specifications as per Annexure 6)	20.00	Each		**0.00**	**INR Zero Only**
69.00	SITC of Panic Alarm Station with 5 yrs warranty (Details specifications as per Annexure 7)	4.00	Each		**0.00**	**INR Zero Only**
70.00	SITC of L2, Unmanaged, 6 × gigabit PoE RJ45 ports, 2 × gigabit Hi-PoE RJ45 ports and 2 × gigabit SFP fiber optical ports with 5 yrs warranty (Details specifications as per Annexure 11)	20.00	Each		**0.00**	**INR Zero Only**
71.00	SITC of Hybrid SAN for the central storage with 5 yrs warranty(Details specifications as per Annexure 8)	1.00	Each		**0.00**	**INR Zero Only**
72.00	SITC of 6 TB enterprises HDD Approved Makes :- Seagate, WD, HP	10.00	Each		**0.00**	**INR Zero Only**
73.00	SITC of Video management software license with existing software and software should be from the same camera OEM with 5 yrs warranty(Details specifications as per Annexure 9)	1.00	Each		**0.00**	**INR Zero Only**
74.00	SITC of Server for VMS (Details specifications as per Annexure 10)	1.00	Each		**0.00**	**INR Zero Only**
75.00	SITC of 55" 4K, HDMI*2, VGA*1, USB2.0, USB3.0, build-in speaker, view angle 178'178' plastic casing, VESA, 7*24h (Details specifications as per Annexure 13) Approved Makes:- Panasonic,Samsung Hikvision, Prama, Sony	1.00	Each		**0.00**	**INR Zero Only**
76.00	SITC of Web Managed 8 Gigabit PoE ports, 2 Gigabit SFP ports, 802.3af/at, PoE power budget 110W, max. 300 meter long distance PoE transmission, PoE watchdog, VLAN, QoS, SNMP, Port Mirroring, Storm Control,STP/RSTP with 5 yrs warranty (Details specifications as per Annexure 14)	2.00	Each		**0.00**	**INR Zero Only**
77.00	SITC of Gantry structure for SVD and traffic flow (Details specifications as per annexure 15)	4.00	Each		**0.00**	**INR Zero Only**
78.00	SITC 48 F UG Armoured OFC with splicing, termination & HDPE Duct complete in all respect as per detailed specification at Annexure-A	2000.00	Mtr.		**0.00**	**INR Zero Only**
79.00	SITC of LIU 6F at Pole mount Outdoor rack fully loaded complete in all respect as per detailed specification at Annexure-B	27.00	Each		**0.00**	**INR Zero Only**
80.00	SITC of LIU 96F at Control Room fully loaded complete in all respect as per detailed specification at Annexure-C	1.00	Each		**0.00**	**INR Zero Only**

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1	2	3	4	5	6	7
81.00	SITC of Pole Mount Outdoor Rack complete in all respect as per detailed specification at Annexure-D	27.00	Each		**0.00**	**INR Zero Only**
82.00	SITC of 1 KVA LI UPS in Outdoor Rack complete in all respect as per detailed specification at Annexure-E	27.00	Each		**0.00**	**INR Zero Only**
83.00	SITC of 5 KVA online UPS in control room complete in all respect as per detailed specification at Annexure-H	1.00	Each		**0.00**	**INR Zero Only**
84.00	SITC of 42 U Smart Rack in Control room complete in all respect as per detailed specification at Annexure-F	1.00	Each		**0.00**	**INR Zero Only**
85.00	SITC of 4 Armoured Cat 6 cable with Patch panel at each pole complete in all respect as per detailed specification at Annexure-G	50.00	Each		**0.00**	**INR Zero Only**
86.00	**Digital Signage:**					
87.00	SITC OF UHD Smart Professional Signage Display with Web OS, Brightness 500nits, 1000000:1 Dynamic Contrast Ratio , 24/7 operation, HDMI, DP, DVI-D, RS232, LAN,USB, WiFI, Screen share, 8GB inbuilt Memory,IP5X Dust Proof Certified Design, Built-in Speakers, Narrow Bezel, Super Sign CMS compatibity, with 1.1 Ghz Quad Core CPU , Clear View with Non Anti glare Coating Certificates : UL,FCC , BIS	8.00	Each		**0.00**	**INR Zero Only**
88.00	SITC OF Video Wall Controller with 8 nos. FHD HDMI output, 4 nos. FHD HDMI inputs, 16 GB RAM and 240 GB SSD, Intel Xeon processor, dual LAN,Single power supply, Windows 10 Pro 64bit, Wireless Keyboard mouse, Rack mount kit, 19" 4U chassis.	1.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
89.00	SITC OF The TV Shield is a universal Professional display enclosure for 43" TVs, Provides comprehensive water, dust, & tamper protection for commercial displays, The unit also features a guaranteed not to crack, thick, shatterproof front panel and vents with moisture screen that prevent heat buildup and intruders (big and small), Secured with two metal chambered and keyed locks which prevent theft, tampering and vandalism. Universal design - Works with any standard VESA mount; lightweight and easy to install. · 8-way tool-less micro adjustment provides quick vertical, horizontal and depth flush adjustment of display . Low profile design extends 3.96" (101mm) away from the floor · Highly secure frame hinges open for easy installation and maintenance access · Internal cable management system helps keep cables concealed and organized · Stand-alone kiosk enclosure or fully integrated with screen, media player, power and thermal management, etc. ·High quality steel construction ·Security hardware included · 75 lb total weight capacity	8.00	Each		**0.00**	**INR Zero Only**
90.00	**Audio PA & BGM System:**					
91.00	**Horn Speakers:** Long throw compression horn loudspeaker, 100 volt / 30 watts and 8 ohms / 45 watts, ABS plastic, cool grey SITC of IP66 rated ,Industrial Grade , high power speaker suitable to deliver clear audio reproduction in high noise environment with following specifications or better : The speaker shall have SPL (1W,1m):105dB or more with Low impedance power handling :45W@8ohm and inbuilt transformer : 30W,15W,7.5W.The speaker shall have coverage angle (HxV): 150 deg x 105 deg and max SPL : 119dB.The speaker shall integrated Steel or weather resistant ,corrosion resistant metal mounting bracket	22.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
92.00	**Wall Speaker :** 6.5"surface mounted speaker equipped with a high efficiency full range speaker and a multi tap 100 volt transformer (1.5-3-6 watts), all certified according EN 54-24. SITC of EN54 rated , wall mounted high power speaker with following specifications or better : The speaker shall have SPL (1W,1m):92dB or more with Low impedance power handling :6W@8ohm and inbuilt transformer : 6W,3W,1.5W.The speaker shall have coverage angle (HxV): 150 deg x 150 deg and max SPL : 101dB.The speaker shall integrated metal /Steel front grille.	2.00	Each		**0.00**	**INR Zero Only**
93.00	**Amplifier :** 4 Channel class D amplifier 4 x 240 Watts (70/100 Volts or RMS @ 4 Ohms) or in bridge mode 2 x 480 Watts (70/100 Volts or RMS @ 8 Ohms), combined convection and fan cooling, 2 U, 19" rackmount Supply, Installation, testing and commissioning of Amplifier with following minimum specifications or better : High power Hypex Class-D amplifier,High thermal efficiency, Integrated APC limiter, Transformer : Toroidal, Input connections : 4 x unbalanced on RCA with passthrough + 4 x balanced on euroblock,Input sensitivity : 0 dBV / 1 V or less, Input impedance : 22 kΩ, S/N ratio : >101 dB A weighted or better, THD : < 0.07 %, Frequency response : 50 – 20kHz, Protection circuits : over current, over temperature, Channel separation : >68 dB @ 1 kHz, Power supply : 2Xswitching mode power supply, Cooling : temperature controlled fan, Bridged output power: 2x480W@100V etc complete required as per specifications.	3.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
94.00	**Audio Output Interface** Networked audio output expansion device with 4 line-level output channels, plus Emergency Message storage SITC of networked audio output expansion device with 4 line-level output channels.The audio output device shall be designed in such a manner that provide audio and control by Layer-2 protocol . It shall have Local storage of Emergency Messages in non-volatile memory, receive Power over Ethernet (PoE) utilizing a single (CAT5) network cable to a rear panel RJ45 connector. The output device shall provide four removable terminal block connectors for linelevel audio outputs, four control inputs, and four control outputs. It shall have channel-to-channel and device-to-device failover,local non-volatile storage of Emergency Messages,dual PoE capable with alternate powering from auxiliary 24V DC supply (dual inputs), Page Active Relays, Control Inputs, and Control OutputsThe audio output device shall provide local digital audio signal processing and local storage of configuration data,signal processing including volume control, filters, compressor/limiting, delay, speaker equalization. The audio output device shall indicate signal and clip with LEDs on the front panel	3.00	Each		**0.00**	**INR Zero Only**
95.00	**Message Server** Enhanced Networked Messaging Processor SITC of networked messaging processor. The Playing live & Pre-recorded server shall networked based & to be rack mountable in one rack space (1RU) and shall support advanced paging functionalities such as recorded message storage and playback, system configuration storage, event scheduling, time server support, storage of logged system data, VoIP triggered paging, email notification, and remote third party control capability. The processor shall feature a status LED and separate ports for TCP/IP Control and networked based Layer-2 or above protocol . The message Server shall be CE marked and shall be compliant with the RoHS directive.	1.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
96.00	**Paging Station** Emergency Wall-mounted Paging Station, 10 Buttons with hand-held microphone (EN 54-16 certified) SITC of EN 54-16 certified wall-mounted paging station to provide paging audio and network control data via network cable and using PoE power from RJ-45 connector. It shall have 10 or more buttons with mutliple functions e.g .direct page ,zone recall etc. It shall provide multi level paging priorities functions and facility for override, store and forward, and keypad lock-out . It shall have inbuilt DSP ,data storage. It should have LED/LCD backlit screen, access via special code ,sutiable to work in high noise area with inbuilt noise-cancelling microphone. It shall be CE, RoHS compliant and EN 54-16 certified.	1.00	Each		**0.00**	**INR Zero Only**
97.00	**Audio Input Interface** Networked audio input device with 6 channels of BGM or user configurable mic/line audio SITC of networked audio input expansion device .The audio input device shall provide audio and control via networked based Layer-2 or above protocol. It shall receive Power over Ethernet (PoE). The audio input device shall provide four sets of dual RCA connectors plus removable terminal block connectors for line-level inputs, two microphone/line inputs with phantom power, four paging inputs, six Rj45 outputs, four control inputs, and four control outputs. Software-configurable local audio signal processing including gain, filters, and compressor/limiter. The input device shall indicate signal and clip with LEDs on the front panel. The input device shall be CE marked and shall be compliant with the RoHS directive. Approved makes : Biamp, Baldwin Boxall,Mediamatrix,BOSE or equivalent	1.00	Each		**0.00**	**INR Zero Only**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder Rs. P	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
98.00	**Audio Player** Versatile DAB+ and FM RDS / CD / USB / SD-card /Bluetooth music source, RS232 control, IR remote included, 1U, 19" SITC of professional multisource CD/USB/SD-card music player with unbalanced outputs 2 x RCA + COMBI RCA, integrated FM RDS and tuner with RS232 control, IR remote included, rack mountable.	1.00	Each		**0.00**	**INR Zero Only**
Total in Figures					**0.00**	**INR Zero Only**
Quoted Rate in Words		**INR Zero Only**				