



RAILTEL CORPORATION OF INDIA LTD.

(A Govt. of India Enterprise)

Eastern Region Office

19th Floor, Aurora Waterfront, GN 34/1, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Corporate Office

Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New Delhi-110023

Invitation for Expression of Interest

for

**Selection of Suitable Backend Partner from RailTel Empanelled Business Associate
/System Integrator for exclusive PRE-BID TEAMING ARRANGEMENT for
“Supply, installation, testing & commissioning of IP based CCTV surveillance system
at various location of DVC power houses / hydel stations throughout the valley area
along with 5 years comprehensive annual maintenance contract (CAMC)”.**

EOI No: RAILTEL/ER/MKT/EOI/2023-24/Tender/023

DTD 06.10.2023

EOI NOTICE

RailTel Corporation of India Ltd.

19th Floor, Aurora Waterfront, GN 34/1, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

EXPRESSION OF INTEREST

EOI Notice No: RAILTEL/ER/MKT/EOI/2023-24/Tender/023 DTD 06.10.2023

RailTel Corporation of India Ltd., (hereafter referred to as RailTel) invites EOIs from RailTel's Empanelled Partners Selection of Implementation Partner from RailTel Empanelled Business Associate /System Integrator for exclusive PRE-BID TEAMING ARRANGEMENT for *“Supply, installation, testing & commissioning of IP based CCTV surveillance system at various location of DVC power houses / hydel stations throughout the valley area along with 5 years comprehensive annual maintenance contract (CAMC)”*.

The details are as under:

1	Date of EOI Floating	06 th October ,2023 at 16:00 Hours
2	Last date for submission of Bids against EOI	11 th October,2023 at 15:00 Hours
3	Opening of Bids received against EOI	11 th October,2023 at 15:15 Hours
4	Number of copies to be submitted	Single Stage (Single Packet System)
5	Estimated value of EoI	Rs 42,99,00,000
5	EOI document cost inclusive tax(non-refundable)	Rs. 5900/- (Five Thousand Nine Hundred only)
6	EOI EMD	Rs. 5,00,000/- (Five Lakhs Only) to be submitted along with EOI. (To be submitted via online bank transfer) per tendered SOR Balance EMD of 1% of Bided value shall be submitted by selected Business Associate in the

		form of BG/DD/online transfer, before submission of final bid to the end customer. (With bank SFMS report marked to Union Bank of India., IFSC Code UBIN0540161)
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Note: RailTel reserves the right to change the above dates at its discretion.

Initially while participating in EoI the bidder needs to submit EMD i.e., **Rs. 5,00,000/-** in form of RTGS / NEFT. The remaining amount may be submitted before the CoR Bid.

The EMD should be in the favour of RailTel Corporation of India Limited payable at KOLKATA through online bank transfer. Partner needs to share the online payment transfer details like UTR No. date and Bank along with the proposal.

RailTel Bank Details for Submission of EMD/PBG: Union Bank of India, **Account no. 401601010519491, IFSC Code: UBIN0540161.** Demand Draft should be submitted in favour of RailTel Corporation of India Limited payable at Kolkata.

Eligible Business Associates are required to direct all communications related to this Invitation for EoI document, through the following Nominated Point of Contact persons:

Prospective bidders are required to direct all communications related to this Invitation for EoI document, through the following Help Desk:

Level:1 Contact: Sh. Rajneesh Ranjan Position: Sr. Manager/Marketing/ER

Email: rranjan@railtelindia.com Contact: +91- 9007041223

Level:2 Contact: Sh. Abhishek Mani Position: Sr. DGM/Marketing/ER

Email: abhishekmani@railtelindia.com Contact: +91-6289857500

Note:

1. Empanelled partners are required to submit soft copy of response through Online on RailTel's e-nivida portal at <https://railtel.enivida.com> duly signed by Authorized Signatories with Company seal and stamp.
2. The EOI response is invited from eligible **Empaneled Partners of RailTel only.**
3. All the document must be submitted with **proper indexing and page no.**
4. This is an **exclusive pre-RFP partnership arrangement with empaneled business associate of RailTel for participating in the end customer RFP.** Selected partner's authorized signatory has to give an undertaking they will not submit directly or indirectly their bids and techno-commercial solution/association with any other organization once selected in this EOI for pre-bid teaming arrangement (before and after submission of bid to end customer organization by RailTel). This undertaking has to be given with this EOI Response.
5. **Transfer and Sub-letting.** The Business Associate/consortium has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present.
6. **Bidder has to agree to comply with all scope of work and term and conditions including special term and condition, SLA, Warrantee, AMC and OEM technical & Financial documentation including MAF, Technical certificates/others as per end-to-end requirement mentioned in the end customer's RFP as mentioned below:**

Tender Ref. No.	GEM/2023/B/3953223
Date of floating	14/09/2023
Floated on portal	GeM e-tender Portal (https://bidplus.gem.gov.in/)

7. **All the mandatory documents (MAF, MII, OEM Undertaking, No Malicious Code Certificate, etc) as per end customer's RFP should be submitted a day before final Bid submission to end customer by RailTel.**
8. Anything not mentioned in the EOI, Customer RFP may be referred & considered.

1. RAILTEL – INTRODUCTION

RailTel Corporation of India Limited (RailTel), an ISO-9001:2000 organization is a Mini Ratna Government of India undertaking under the Ministry of Railways. The Corporation was formed in Sept 2000 with the objectives to create nationwide Broadband Telecom and Multimedia Network in all parts of the country, to modernize Train Control Operation and Safety System of Indian Railways and to contribute to realization of goals and objective of national telecom policy 1999. RailTel is a wholly owned subsidiary of Indian Railways.

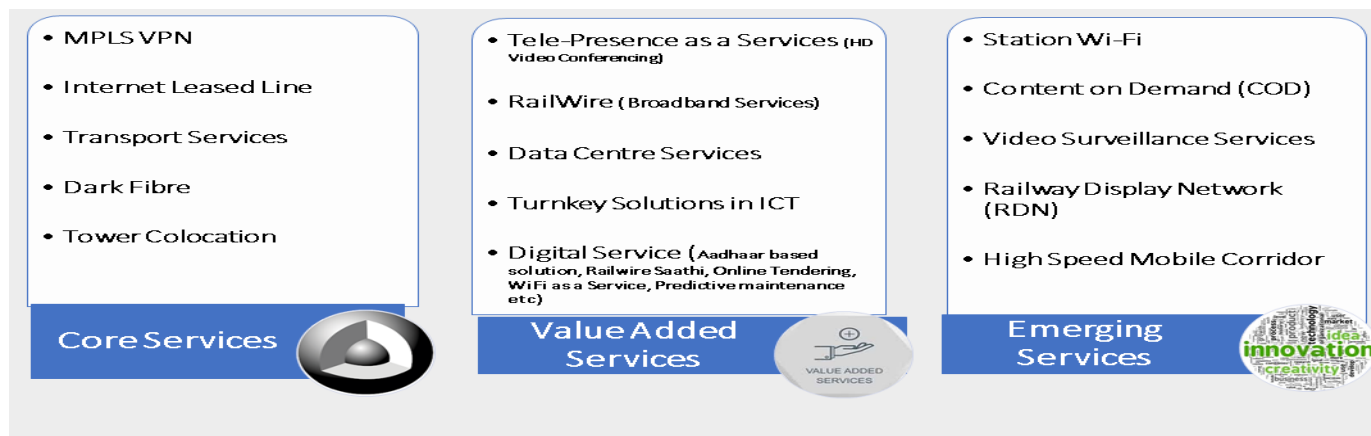
RailTel has approximately 61000 kms of OFC along the protected Railway tracks. The transport network is built on high capacity DWDM and an IP/ MPLS network over it to support mission critical communication requirements of Indian Railways and other customers. RailTel has Tier-III Data Center in Gurgaon and Secunderabad hosting / collocating critical applications. RailTel is also providing Telepresence as a Service (TPaaS), where a High-Definition Video Conference facility bundled with required BW is provided as a Service.

For ensuring efficient administration across India, country has been divided into four regions namely, Eastern, Northern, Southern & Western each headed by Executive Director and Headquartered at Kolkata, New Delhi, Secunderabad & Mumbai respectively. These regions are further divided into territories for efficient working. RailTel has territorial offices at Guwahati, & Bhubaneswar in East, Chandigarh, Jaipur, Lucknow in North, Chennai & Bangalore in South, Bhopal, and Pune & Ahmedabad in West. Various other territorial offices across the country are proposed to be created shortly.

RailTel's business service lines can be categorized into three heads namely B2G/B2B (Business to Government and Business to Business) and B2C (Business to customers):

Licenses & Service portfolio:

Presently, RailTel holds Infrastructure Provider -1, National Long-Distance Operator, International Long-Distance Operator and Internet Service Provider (Class-A) licenses under which the following services are being offered to various customers:



- National Long Distance: Carriage of Inter & Intra -circle Voice Traffic across India using state of the art NGN based network through its Interconnection with all leading Telecom Operators
- Lease Line Services: Available for granularities from E1 to multiple of Gigabit bandwidth & above
- Dark Fiber/Lambda: Leasing to MSOs/Telco's along secured Right of Way of Railway tracks
- Co-location Services: Leasing of Space and 1000+ Towers for collocation of MSC/BSC/BTS of Telco's

b) Enterprise Services

- Managed Lease Line Services: Available for granularities from E1, DS-3, STM-1 & above
- MPLS VPN: Layer-2 & Layer-3 VPN available for granularities from 2 Mbps & above
- Dedicated Internet Bandwidth: Experience the "Always ON" internet connectivity at your fingertips in granularities 2 Mbps to several Gbps

c) DATA CENTER

Infrastructure as a service (IaaS), Hosting as Services, Security operation Centre as a Service (SOCaaS): RailTel has MeitY empanelled two Tier-III data centres in Gurgaon & Secunderabad. Presently RailTel is hosting critical applications of Indian Railways, Central & State government/ PSUs applications. RailTel will facilitate Government's applications / Hosting services including smooth transition to secured state owned RailTel's Data Centers and Disaster Recovery Centres. RailTel also offers SOC as a Service 'SOCaaS'. In addition, RailTel offers VPN client services so that employees can seamlessly access government's intranet, applications securely from anywhere without compromising security.

d) High-Definition Video Conference:

RailTel has unique service model of providing high-definition video conference bundled with Video Conference equipment, bandwidth and FMS services to provide end to end seamless services on OPEX model connecting HQ with other critical offices. RailTel also offers application-based video conference solution for employees to be productive specially during this pandemic situation.

e) Retail Services – RailWire

RailWire: Triple Play Broadband Services for the Masses. RailTel has unique model of delivering broadband services, wherein local entrepreneurs are engaged in delivering &

maintaining broadband services and upto 66% of the total revenues earned are shared to these local entrepreneurs in the state, generating jobs and revitalizing local economies. On date RailTel is serving approx. 5,00,000 subscribers on PAN Indian basis. RailTel can provide broadband service across– Government PSU or any organization's officers colonies and residences.

2. PROJECT BACKGROUND AND OBJECTIVE OF EOI

RailTel intends to participate in **RFP floated** by end Customer organization for “*Supply, installation, testing & commissioning of IP based CCTV surveillance system at various location of DVC power houses / hydel stations throughout the valley area along with 5 years comprehensive annual maintenance contract (CAMC)*” with **RFP No. GEM/2023/B/3953223** dated 14.09.2023.

RailTel invites EOIs from RailTel's Empaneled Partners for the selection of suitable partner for participating in above mentioned work for the agreed scope work. The empaneled partner is expected to have excellent execution capability and good understanding customer local environment.

3. SCOPE OF WORK:

The scope of work will be as mentioned in the pertinent end Customer organization Tender for “*Supply, installation, testing & commissioning of IP based CCTV surveillance system at various location of DVC power houses / hydel stations throughout the valley area along with 5 years comprehensive annual maintenance contract (CAMC)*” floated through GeM E-Tender Notice No: **GEM/2023/B/3953223** on the GeM e-tender Portal (<https://bidplus.gem.gov.in/>) in with all latest amendment/Corrigendum/ clarifications.

The above scope of work is indicative and the detailed scope of work is given in the end customer tender documents with latest amendments and clarifications.

In case of any discrepancy or ambiguity in any clause / specification pertaining to scope of work area, the RFP released by end customer organization shall supersede and will be considered sacrosanct. (All associated clarifications, response to queries, revisions, addendum and corrigendum, associated prime service agreement (PSA)/MSA/SLA also included.)

Business associate can participate as a sole bidder or as a consortium (maximum three members are allowed in the consortium). In case of consortium, lead bidder of the consortium must be RailTel's empaneled partner (BA/DSP/SDWAN/SI) and will be responsible for all the conditions mentioned in the end customer RFP.

Special Note: RailTel may retain any portion of the work mentioned in the end organization RFP, where RailTel has competence so that overall proposal becomes most winnable proposal.

4. RESPONSE TO EOI GUIDELINES

4.1 Language of Proposals

The proposal and all correspondence and documents shall be written in English in soft copy through an email.

4.2 RailTel's Right to Accept/Reject responses

RailTel reserves the right to accept or reject any response and annul the bidding process or even reject all responses at any time prior to selecting the partner, without thereby incurring any liability to the affected bidder or Business Associate or without any obligation to inform the affected bidder or bidders about the grounds for RailTel's action.

4.3 EOI response Document

The bidder is expected to examine all instructions, forms, terms and conditions and technical specifications in the bidding documents. Submission of bids, not substantially responsive to the bidding document in every aspect will be at the bidder's risk and may result in rejection of its bid without any further reference to the bidder.

All pages of the documents shall be signed by the bidder including the closing page in token of his having studied the EOI document and should be submitted along with the bid.

4.4 Period of Validity of bids and Bid Currency

Bids shall remain valid for a period of **210 days** from the last date of submission of bids to end Customer organization.

4.5 Bidding Process

The bidding process as defined in para 4.10 & 6.

4.6 Bid Earnest Money (EMD)

4.6.1 The Business Associate shall furnish a sum as given in EOI Notice via online transfer from any scheduled bank in India in favour of "RailTel Corporation of India Limited" along with the offer. This will be called as **EOI EMD**.

4.6.2 Offers not accompanied with valid EOI Earnest Money Deposit shall be summarily rejected.

4.6.3 In case of sole partner/ consortium offer is selected for bidding, sole partner/

consortium has to furnish Earnest Money Deposit (for balance amount as mentioned in the customer's Bid as and if applicable) for the bid to RailTel. The selected Business Associate shall have to submit a Bank Guarantee against EMD in proportion to the quoted value/scope of work to RailTel before submission of bid to end customer as and if applicable.

4.6.4 Return of EMD for unsuccessful Business Associates: EOI EMD of the unsuccessful Business Associate shall be returned without interest after completion of EOI process.

4.6.5 Return of EMD for successful Business Associate: EOI-EMD & Earnest Money Deposit (balance proportionate EMD) if applicable of the successful bidder will be discharged / returned as promptly as possible after the receipt of RailTel's EMD/BG from the Customer and or on receipt of Security Deposit Performance Bank Guarantee as applicable (clause no. 4.7) from Business Associate whichever is later.

4.6.6 Forfeiture of EOI EMD or EOI EMD & EMD (balance proportionate EMD) and or Penal action as per EMD Declaration:

4.6.6.1 The EOI EMD may be forfeited and or penal action shall be initiated if a Business Associate withdraws his offer or modifies the terms and conditions of the offer during validity period.

4.6.6.2 In case of non-submission of SD/PBG (as per clause no. 4.7) lead to forfeiture of EOI EMD, EMD (balance proportionate EMD) if applicable and or suitable action as prescribed in the EMD Declaration shall be initiated as applicable.

4.6.6.3 In case of non-submission of Bid by RailTel due to **lack of support or mandatory documents by Bidder** will lead to forfeiture of EOI EMD, EMD (balance proportionate EMD) if applicable and or suitable action will be initiated as applicable.

4.7 Security Deposit / Performance Bank Guarantee (PBG)

4.7.1 In case the bid is successful, the PBG of requisite amount proportionate to the agreed scope of the work will have to be submitted to RailTel.

4.7.2 As per work share arrangements agreed between RailTel and Business Associate the PBG will be proportionately decided and submitted by the selected Business Associate.

4.8 Last date & time for Submission of EOI response

EOI response must be submitted to RailTel at the email address specified in the preamble not later than the specified date and time mentioned in the preamble.

4.9 Modification and/or Withdrawal of EOI response

EOI response once submitted will be treated, as final and no modification will be permitted except with the consent of the RailTel.

No Business Associate shall be allowed to withdraw the response after the last date and time for submission.

The successful Business Associate will not be allowed to withdraw or back out from the response commitments. In case of withdrawal or back out by the successful business associate, the Earnest Money Deposit shall be forfeited and all interests/claims of such Business Associate shall be deemed as foreclosed.

4.10 Details of Financial bid for the above referred tender

Sole partner/ consortium with lowest (L1) offer will be selected for exclusive pre-bid arrangement for optimizing technical and commercial solution so that most winnable solution is submitted to end customer.

The final bid for the tender will be prepared jointly with the selected Business Associate/Consortium so that the optimal bid can be put with a good chance of winning the Tender.

4.11 Clarification of EOI Response

To assist in the examination, evaluation and comparison of bids the purchaser may, at its discretion, ask the Business Associate for clarification. The response should be in writing and no change in the price or substance of the EOI response shall be sought, offered or permitted.

4.12 Period of Association/Validity of Agreement

RailTel will enter into a pre-bid agreement with selected bidder with detailed Terms and conditions.

5. ELIGIBILITY CRITERIA FOR BIDDING BUSINESS PARTNER OF RAILTEL

S No.	Particulars	Criteria for Tender Package
A)	Financial Conditions	
i)	Sole partner/all consortium members should be registered under Companies Act, 1956 or Companies Act 2013 or as amended and should have at least 3 years of operations in India as on bid submission date.	<ol style="list-style-type: none"> 1. Certificate of Incorporation 2. GST Registration 3. PAN Card
ii)	<p>Sole partner/ consortium should have</p> <p>a. Net working capital should be considered for the last financial year. Net working capital or access to credit facilities (unutilized portions) on the date of NIT shall not be less than Rs. 1075 lakhs.</p> <p>b. Minimum Average Annual Turnover (MAAT) of the bidder during best three (03) financial years out of last 05 financial years ending on 31/03/2023 shall not be less than Rs. 4299 lakhs.</p> <p>c. Net worth of the bidder as on the last day of the preceding financial year shall not be less than 100 % of the paid-up share capital.</p> <p>d. Companies/ Organization under National Company Law Tribunal (NCLT) or Companies/ Organization under Debt Recovery Tribunal (DRT) or Companies/ Organization, who have applied for Corporate Debt Restructuring (CDR) in last two financial years, shall not be considered for bid qualification. A certificate of practicing Chartered Accountant must be produced by the</p>	<p>Certificate issued by the Chartered Accountant. Certificate should contain UDIN no. issued by ICAI.</p> <p>If 31.03.23 balance sheet is yet to be finalized then data may be provided along with the undertaking that Balance sheet for year ending 22-23 is yet to be finalized from Statutory Auditor.</p>

S No.	Particulars	Criteria for Tender Package
	bidder(s) that the bidder(s) does/do not fall under the above criteria.	
iii)	Sole partner/ consortium should also have a positive net worth & be profitable in the last 3 financial years.	<p>Positive Net Worth and Profitability Certificate issued by the CA for the last three financial years (FY 19-20, 20-21, 21-22). Certificate should contain UDIN no. issued by ICAI.</p> <p>If 31.03.23 balance sheet is yet to be finalized then data may be provided along with the undertaking that Balance sheet for year ending 22-23 is yet to be finalized from Statutory Auditor.</p>
B)	Technical Conditions	
iv)	<p>Experience: The Bidder (Sole partner/ consortium) must have experience of works (includes completed/ ongoing) with completion certificate/P.O of similar during last 7(seven) years ending Bid submission date</p> <p>i) One similar completed works each costing not less than the amount equal to Rs. 34.39 crore exclusive of taxes</p> <p style="text-align: center;">OR</p> <p>ii) Two similar completed works each costing not less than the amount equal to Rs. 21.50 crore exclusive of taxes</p> <p style="text-align: center;">OR</p> <p>iii) Three Similar completed works costing not less than the amount equal to Rs. 17.20 crore exclusive of taxes</p> <p>Definition of similar work: “Supplying, Installation, Testing, Commissioning, O&M for IP based CCTV Surveillance system including Video</p>	<p>Documentary evidence such as Certificate from Customer for satisfactory services/supply/ Payments along with Customer's purchase orders/ work orders etc for completed / ongoing project.</p>

S No.	Particulars	Criteria for Tender Package
	<p>Management System/ Cameras and its Integration.”</p> <p>Completed works/services** means the executed/completed/delivered portion of Work Order/AMC/RC/ Purchase Order, Payment receipt documents with ref. to WO No. and date or execution certificate with executed value and referred order number be also considered as a proof of execution/delivery even if the works/services have not been completed in totality (subject to furnishing proof of executed/supplied value of works/services in the form of certified copies of RA Bills) or any relevant documents, which is sufficient to proof the works/services completed/delivered or to be completed.</p>	
C)	Annexures	
vii)	Annexure 1	Covering Letter: Self-certification duly signed by authorized signatory on company letter head.
viii)	Annexure 2	<p>The Bidder should agree to abide by all the technical, commercial & financial conditions of the end customer RFP for which EOI is submitted.</p> <p>Self-certification duly signed by authorized signatory on company letter head.</p>
ix)	Annexure 3	An undertaking signed by the Authorized Signatory of the by sole partner/ all consortium partners to be provided on letter head. The Bidder should not have been blacklisted/debarred by any Governmental/ Non-Governmental Organization in India as on bid submission date.
x)	Annexure-4	Format for Affidavit to be uploaded by sole partner/ all consortium partners with the tender documents.

S No.	Particulars	Criteria for Tender Package
xi)	Annexure-5	Non-disclosure agreement by sole partner/ all consortium partners with RailTel.
xii)	Power of Attorney	<p>In case of Sole Partner: Power of Attorney and Board Resolution in favour of one of its employees who will sign the Bid Documents.</p> <p>In case of consortium:</p> <p>1) Board resolution of each consortium members authorizing and appointing the authorized signatory for signing the EOI documents.</p> <p>2) Power of Attorney by all the members of consortium in favor of the lead member</p> <p>3) Consortium Agreement duly signed by all authorized members of consortium.</p>
xiii)	Additional Documents to be Submitted	Technical Proposal with overview of the project with strength of the Partner.
xiv)	Annexure-6	EMD (as PBG) Format
xv)	Annexure-7	MAF Format
xvi)	Annexure-8	Consortium Format
xvii)	Annexure-9	Price Bid Format (Financial Bid)
xviii)	Annexure-10	Site wise Bill of Quantity (BOQ)

6. BIDDER'S PROFILE

The bidder shall provide the information in the below table:

S. No.	ITEM	Details
1.	Full name of bidder's firm	

2.	Full address, telephone numbers, fax numbers, and email address of the primary office of the organization / main / head / corporate office	
3.	Name, designation and full address of the Chief Executive Officer of the bidder's organization as a whole, including contact numbers and emailAddress	
4.	Full address, telephone and fax numbers, and email addresses of the office of the organization dealing with this tender	
5.	Name, designation and full address of the person dealing with the tender to whom all reference shall be made regarding the tender enquiry. His/her telephone, mobile, Fax and email address	
6.	Bank Details (Bank Branch Name, IFSC Code, Account number)	
7.	GST Registration number	

7. EVALUATION CRITERIA

7.1 The Business Associates are first evaluated on the basis of the Eligibility Criteria as per clause 5 above.

7.2 The Business Associate who fulfills the Eligibility criteria of Bidding sole partner/ consortium shall be further evaluated on the basis of Technical Evaluation and Financial evaluation.

For the opened bid as per outcome of the Eligibility criteria above, the bidder will be selected on the lowest quote (L-1) basis for complete 'Scope of Work' as mentioned in the EOI document and documents of technical specifications of CoR, subject to the respective overall bid is in compliance to the requirements of this EOI. The so selected partner will be termed as 'Commercially Suitable Partner (hereafter referred to as 'CSP')'. It is re-mentioned, that the final selection of CSP will be on the L-1 basis only. Further, RailTel reserves the right to have negotiation with the CSP at any stage before issuing Work Order.

7.3 The Business Associate with lowest commercial (L1) offer will be selected for exclusive pre-bid arrangement for optimizing technical and commercial solution so that most winnable solution is submitted to end customer.

7.4 RailTel reserves the right to accept or reject the response against this EOI, without assigning any reasons. The decision of RailTel is final and binding on the participants. The RailTel evaluation committee will determine whether the proposal/ information is complete in all respects and the decision of the evaluation committee shall be final. RailTel may at its discretion assign lead factor to the Business associate as per RailTel policy for shortlisting partner against this EOI.

7.5 All General requirement mentioned in the Technical Specifications are required to be complied. The solution proposed should be robust and scalable.

8. PAYMENT TERMS

- a) Payment will be on '**back-to-back**' basis and as per the payment terms mentioned in the pertinent CoR's RFP.
- b) Payment will be released after receiving the invoice for the work / services and after RailTel has received the payment from CoR for the same work / services. Any deduction /Penalties levied by CoR on invoices of RailTel will be carried **back-to-back** and will be deducted from CSP's invoices, subject to the cause to deduction / penalty is due to deviation in terms and conditions of service standards by the CSP.
- c) Documents list required at the time of payment/invoice submission by selected bidder shall be: -

- i PO copy issued to selected vendor.
- ii Submission/Declaration of applicable BG amount against PO issued to selected bidder/vendor.
- iii Original Invoice for the period claimed.
- iv TDS declaration.
- v Delivery challan
- vi Inspection certificate
- vii Warranty certificate of the OEM/Authorized dealer.
- viii Bidders Certificate of Dispatch
- ix E-way bill
- x Copy of Purchase Order
- xi Insurance of the materials
- xii PAN, GST Registration Certificates

- i. **Payment will only be released once GSTR-1 and GST-3B is filed by the bidder for claimed invoice**
- ii. **Last bills shall be settled after end of the contract period after adjusting all outstanding dues**
- iii. **No interest is payable on any amount whatsoever to the successful Bidder.**
- iv. **Final Costing and Reverse Auction:** The Bidder has to revise its cost during RA and the same will be considered as the final Bidding value of the EoI. The Work Order will be issued on the final negotiated rates after Reverse Auction.

9. Bill Passing Authority: TM/KOL**10. Bill Paying Authority: GM/Fin****11. SERVICE LEVEL AGREEMENT (SLA):**

The selected bidder will be required to adhere to the SLA matrix as defined in the end Customer organization tender for his scope of work and the SLA breach penalty will be applicable proportionately on the selected bidder, as specified in the end Customer organization Tender. The SLA scoring and penalty deduction mechanism for in-scope of work area shall be followed as specified in the Tender. All associated clarifications, responses to queries, revisions, addendum and corrigendum, associated Prime Services Agreement (PSA)/ MSA/ SLA also included. Any deduction by Customer from RailTel payments on account of SLA breach which is attributable to Partner will be passed on to the Partner proportionately in terms of value based on its scope of work.

SERVICE LEVEL AGREEMENT: Penalty Criteria:

The CSP shall provide 99.5%((Minimum) uptime on 24 x 7 x 365 basis. CSP will maintain the logs for outage of each equipment to ascertain the service levels. The outage log shall be submitted to CoR on monthly basis for deductions against downtime of services calculated on yearly basis. If the downtime against any services like Switches, Camera, Video data store facilities etc. is beyond committed uptime, deduction shall be made from the yearly bill as per following table.

Parameter	Availability	Penalty i.e. Deduction
Availability of Services	>= 99.5%	Nil
	Between 97.0% to <99.5%	1% of the yearly Bill
	Between 95% to <97%	2% of the yearly Bill
	Between 93% to < 95%	3% of the yearly Bill
	Less than 93%	25% of the yearly Bill

12. Performance Bank Guarantee (PBG)

- a) In case of successful participation by RailTel in the pertinent CoR's tender and subsequent engagements with CSP, The CSP shall at its own expense, deposit with department, within fifteen (15) days of the notification of award (done through issuance of the Purchase Order / Work Order etc.) and communicated through email, an unconditional and irrevocable Performance Bank Guarantee (PBG) from a a Nationalized/ Commercial Scheduled Indian Bank as per the format enclosed in this EOI, payable on demand, for the due performance and fulfilment of the contract by the CSP. This PBG will be for an amount of '10 %' of the contract value. The quantum of this 'percentage (%)' will be equal to the PBG % as

asked by CoR from RailTel. All charges whatsoever such as premium, commission, etc. with respect to the PBG shall be borne by the CSP. Besides, if the total BG amount comes upto ₹5 Lakhs, then same may be deposited through DD/RTGS/NEFT. Along with submission of PBG, CSP needs to submit PBG issuing bank's SFMS report. The SFMS report is also to be submitted in case of renewal / extension of PBG.

- b) The PBG should have validity for a period as per CoR RFP and shall be on back to back basis. The PBG may be discharged / returned by RailTel upon being satisfied that there has been due performance of the obligations of the CSP under the contract. However, no interest shall be payable on the PBG. In the event, CSP being unable to service the contract for whatsoever reason, RailTel would invoke the PBG at its discretion. Notwithstanding and without prejudice to any rights whatsoever of RailTel under the contract in the matter, the proceeds of the PBG shall be payable to RailTel as compensation for any loss resulting from the CSP's failure to complete its obligations under the contract. RailTel shall notify the CSP in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the CSP is in default.
- c) RailTel shall also be entitled to make recoveries from the CSP's bills, PBG or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.
- d) If the service period gets extended by virtue of extension of same by CoR, PBG should also be extended accordingly.
- e) During the contract period, RailTel may issue Purchase Order(s) for the additional services ordered by CoR (in case) to RailTel. In such scenario(s) also, Clause No. 13.1. to Clause No. 13.4. are to be followed by the CSP.
- f) In case the CoR has sought PBG of the contract in the terms of Indemnity Bond from RailTel, the selected bidder has to provide the equivalent value PBG from scheduled Bank to RailTel. No Indemnity Bond from Selected Bidder will be accepted in lieu of PBG from Scheduled Bank.
- g) In case CoR has sought any other types of PBG in this contract at present or in future or else Integrity Pact PBG (presently or in future), same remain applicable on selected Bidder. The Said PBG will be issued by Selected Bidder from Scheduled Bank favoring

RailTel Corporation of India Limited. No Indemnity Bond in lieu of such PBG will be accepted by RailTel.

- h) If, CoR ask for submission for value more than 10%, same also needs to be submitted by the selected BA.
- i) Integrity pact in the format as per CoR to be provided by the Bidder.

13. Insurance

The CSP agrees to take insurances to cover all the elements of the project under this EOI including but not limited to Manpower, Hardware, Software etc. as per CoR tender specified terms.

14. Liquidated Damages:

RailTel will levy the liquidated damages imposed by CoR to bidder on value terms for the services/items under its SOR.

15. Delivery & Inspection

- i. Delivery, Installation and Commissioning Period: As per CoR Tender
- ii. All the material should be made available for Inspection by RailTel nominated person/agency.
- iii. Bidder will be custodian of all the material till installation and commissioning of system.

16. Provisional Acceptance Certificate (PAC)

- a) Immediately after the completion of the work at all the sites, the Bidder shall certify and advise the purchaser in writing that the installation is complete, commissioned and ready for handing over to customer.
- b) The tests will be conducted jointly by purchaser and Bidder as soon as possible after receipt of such advice of completion of the work from the Bidder. The test schedule shall be finalized mutually between the Bidder and RailTel. Any

component/modules/sub-assemblies or equipment failing during the commissioning shall be replaced/repaired free of cost by tenderer.

- c) Purchaser's Engineer shall issue a Provisional Acceptance Certificate (PAC) after successful Supply, installation, Configuration, integration & commissioning at all locations covering all materials and services included in the Schedule of Requirements after the acceptance test as per the approved test procedure have been completed and the performance has been found to meet the specifications. RailTel's decision in this respect shall be final. The Provisional Acceptance Certificate (PAC) shall be signed by both the parties. The period of Comprehensive Maintenance shall commence from the date of issue of Provisional Acceptance Certificate (PAC).

17. Final Acceptance Certificate (FAC)

- a) The final acceptance of the works shall take effect after Eight year i.e. 96 months of issue of Provisional Acceptance Certificates, provided in any case that the Bidder has complied fully with his obligations in respect of each item under the contract
- b) Notwithstanding the issue of Final Acceptance Certificate (FAC), the Bidder and the purchaser (subject to Sub Clause as above) shall remain liable for fulfillment of any obligation incurred under the provision of the contract prior to the issue of Final Acceptance Certificate which remains unperformed at the time such certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.

Note: Depending on RailTel's business strategy RailTel may choose to work with Partner who is most likely to support in submitting a winning bid.

Annexure 1: Format for COVERING LETTER (to be submitted by sole partner/lead partner in case of consortium)

COVERING LETTER (To be on company letter head)

To,

The Regional General Manager
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Dear Sir,

SUB: Participation in the Eol process

Having examined the Invitation for Eol document bearing the reference number _____ released by your esteemed organization, we, undersigned, hereby acknowledge the receipt of the same and offer to participate in conformity with the said Invitation for Eol document.

If our application is accepted, we undertake to abide by all the terms and conditions mentioned in the said Invitation for Eol document.

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for Eol document, are true to the best of our knowledge. We understand that in case any discrepancy is found in the information submitted by us, our Eol is liable to be rejected.

We hereby Submit EMD amount of Rs. _____ issued vide _____ from Bank _____.

Authorized Signatory
Name
Designation

Annexure 2: Format for Self-Certificate & Undertaking (to be submitted by sole partner/lead partner in case of consortium)

Self-Certificate (To be on company letter head)

Eoi Reference No:

Date:

To,

The Regional General Manager
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Dear Sir,

Sub: Self Certificate for Tender, Technical & other compliances

- 1) Having examined the Technical specifications mentioned in this EOI & end customer tender, we hereby confirm that we meet all specification.
- 2) We_____agree to abide by all the technical, commercial & financial conditions of the end customer RFP for which EOI is submitted (except pricing, termination & risk purchase rights of the RailTel). We understand and agree that RailTel shall release the payment to selected sole partner/lead partner in case of consortium after the receipt of corresponding payment from end customer by RailTel. Further we understand that in case selected sole partner/lead partner in case of consortium fails to execute assigned portion of work, then the same shall be executed by RailTel through third party or departmentally at the risk and cost of selected sole partner/lead partner in case of consortium.
- 3) We agree to abide by all the technical, commercial & financial conditions of the end customer's RFP for the agreed scope of work for which this EOI is submitted.
- 4) We hereby agree to comply with all OEM technical & Financial documentation including MAF, Technical certificates/others as per end to end requirement mentioned in the end customer's RFP. We are hereby enclosing the arrangement of OEMs against each of the BOQ item quoted as mentioned end customer's RFP. We also undertake to submit MAF and other documents required in the end Customer organization tender in favour of RailTel against the proposed products.
- 5) We hereby certify that any services, equipment and materials to be supplied are produced in eligible

source country complying with OM/F. No. 6/18/2019 dated 23rd July 2020 issued by DoE, MoF.

- 6) We hereby undertake to work with RailTel as per end customer's RFP terms and conditions. We confirm to submit all the supporting documents constituting/ in compliance with the Criteria as required in the end customer's RFP terms and conditions like technical certificates, OEM compliance documents.
- 7) We understand and agree that RailTel is intending to select sole partner/ consortium who is willing to accept all terms & conditions of end customer organization's RFP for the agreed scope of work. RailTel will strategies to retain scope of work where RailTel has competence.
- 8) We hereby agree to submit that in case of being selected by RailTel as sole partner/ consortium for the proposed project(for which EOI is submitted), we will submit all the forms, appendix, relevant documents etc. to RailTel that is required and desired by end Customer well before the bid submission date by end customer and as and when required.
- 9) We hereby undertake to sign Pre Bid Agreement and Non-Disclosure Agreement with RailTel on a non-judicial stamp paper of Rs. 100/- in the prescribed Format.
- 10) We undertake that we will not submit directly or indirectly out bids and techno-commercial solution/association with any other organization once selected in this EOI for pre-bid teaming arrangement (before and after submission of bid to end customer organization by RailTel)

Authorized Signatory

Name & Designation

Annexure 3: Undertaking for not Being Blacklisted/Debarred (to be submitted by sole partner/each of the consortium partners)

<On Company Letter Head>

To,

The Regional General Manager
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Subject: **Undertaking for not Being Blacklisted/Debarred**

We, Company Name, having its registered office at Address

hereby declares that that the Company has not been blacklisted/debarred by any

Governmental/ Non-Governmental organization in India for past 3 Years as on bid submission date.

Date and Place

Authorized Signatory's Signature:

Authorized Signatory's Name and Designation:

Bidder's Company Seal:

Annexure 4: Format of Affidavit (to be submitted by sole partner/each of the consortium partners)

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY SOLE PARTNER/ ALL CONSORTIUM PARTNERS ALONGWITH THE EOI DOCUMENTS

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs. 100/-.
The paper has to be in the name of the BA) **

I..... (Name and designation)** appointed as the attorney/authorized signatory of the BA (including its constituents),
M/s.....(hereinafter called the BA) for the purpose of the EOI documents for the work of as per the EOI No. of (RailTel Corporation of India Ltd.), do hereby solemnly affirm and state on the behalf of the BA including its constituents as under:

1. I/we the BA (s), am/are signing this document after carefully reading the contents.
2. I/we the BA(s) also accept all the conditions of the EOI and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the EOI documents from RailTel website www.railtel.enivida.com. I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the EOI document. In case of any discrepancy noticed at any stage i.e. evaluation of EOI, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/we declare that the information and documents submitted along with the EOI by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of EOI, it shall lead to forfeiture of the EOI EMD besides banning of business for five years on entire RailTel. Further, I/we (insert name of the BA)**.....and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.
8. I/we also understand that if the certificates submitted by us are found to be false/forged or

incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT
SEAL AND SIGNATURE
OF THE BA

VERIFICATION

I/We above named EOI do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT
SEAL AND SIGNATURE
OF THE BA

Place:

Dated:

****The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by BA. Attestation before Magistrate/Notary Public.**

Annexure-5: Non-Disclosure Agreement (NDA) Format(to be submitted by sole partner/each of the consortium partners)

NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement (this “**Agreement**”) is made and entered into on this ____ day of ____, 2023 (the “**Effective Date**”) at _____.

By and between

RailTel Corporation of India Limited, (CIN: L64202DL2000GOI107905), a Public Sector Undertaking under Ministry of Railways, Govt. of India, having its registered and corporate office at Plate-A, 6th Floor, Office Block, Tower -2, East Kidwai Nagar, New Delhi-110023, (hereinafter referred to as '**RailTel**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of the ONE PART,

And

_____) (CIN: _____), a company duly incorporated under the provisions of Companies Act, _____ having its registered office at _____, (hereinafter referred to as '**_____**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of OTHER PART

RailTel and _____ shall be individually referred to as “Party” and jointly as “Parties”

WHEREAS, RailTel and _____, each possesses confidential and proprietary information related to its business activities, including, but not limited to, that information designated as confidential or proprietary under Section 2 of this Agreement, as well as technical and non-technical information, patents, copyrights, trade secrets, know-how, financial data, design details and specifications, engineering, business and marketing strategies and plans, forecasts or plans, pricing strategies, formulas, procurement requirements, vendor and customer lists, inventions, techniques, sketches, drawings, models, processes, apparatus, equipment, algorithms, software programs, software source documents, product designs and the like, and third party confidential information (collectively, the “**Information**”);

WHEREAS, the Parties have initiated discussions regarding a possible business relationship for _____.

WHEREAS, each Party accordingly desires to disclose certain Information (each Party, in such disclosing capacity, the “**Disclosing Party**”) to the other Party (each Party, in such receiving capacity, the “**Receiving Party**”) subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the receipt of certain Information, and the mutual promises made in this Agreement, the Parties, intending to be legally bound, hereby agree as follows:

1. Permitted Use.

(a) Receiving Party shall:

(i) hold all Information received from Disclosing Party in confidence;

(ii) use such Information for the purpose of evaluating the possibility of entering into a commercial arrangement between the Parties concerning such Information; and

(iii) restrict disclosure of such Information to those of Receiving Party's officers, directors, employees, affiliates, advisors, agents and consultants (collectively, the "**Representatives**") who the Receiving Party, in its reasonable discretion, deems need to know such Information, and are bound by the terms and conditions of (1) this Agreement, or (2) an agreement with terms and conditions substantially similar to those set forth in this Agreement.

(b) The restrictions on Receiving Party's use and disclosure of Information as set forth above shall not apply to any Information that Receiving Party can demonstrate:

(i) is wholly and independently developed by Receiving Party without the use of Information of Disclosing Party;

(ii) at the time of disclosure to Receiving Party, was either (A) in the public domain, or (B) known to Receiving Party;

(iii) is approved for release by written authorization of Disclosing Party; or

(iv) is disclosed in response to a valid order of a court or other governmental body in the India or any political subdivision thereof, but only to the extent of, and for the purposes set forth in, such order; provided, however, that Receiving Party shall first and immediately notify Disclosing Party in writing of the order and permit Disclosing Party to seek an appropriate protective order.

(c) Both parties further agree to exercise the same degree of care that it exercises to protect its own Confidential Information of a like nature from unauthorised disclosure, but in no event shall a less than reasonable degree of care be exercised by either party.

2. Designation.

(a) Information shall be deemed confidential and proprietary and subject to the restrictions of this Agreement if, when provided in:

(i) written or other tangible form, such Information is clearly marked as proprietary or confidential when disclosed to Receiving Party; or

(ii) oral or other intangible form, such Information is identified as confidential or proprietary at the time of disclosure.

3. Cooperation. Receiving Party will immediately give notice to Disclosing Party of any unauthorized use or disclosure of the Information of Disclosing Party.

4. Ownership of Information. All Information remains the property of Disclosing Party and no license or other rights to such Information is granted or implied hereby. Notwithstanding the foregoing, Disclosing Party understands that Receiving Party may currently or in the future be developing information internally, or receiving information from other parties that may be similar to Information of the Disclosing Party. Notwithstanding anything to the contrary, nothing in this Agreement will be construed as a representation or inference that Receiving Party will not develop products, or have products developed for it, that, without violation of this Agreement, compete with the products or systems contemplated by Disclosing Party's Information.

5. No Obligation. Neither this Agreement nor the disclosure or receipt of Information hereunder shall be construed as creating any obligation of a Party to furnish Information to the other Party or to enter into any agreement, venture or relationship with the other Party.

6. Return or Destruction of Information.

(a) All Information shall remain the sole property of Disclosing Party and all materials containing any such Information (including all copies made by Receiving Party) and its Representatives shall be returned or destroyed by Receiving Party immediately upon the earlier of:

- (i) termination of this Agreement;
- (ii) expiration of this Agreement; or
- (iii) Receiving Party's determination that it no longer has a need for such Information.

(b) Upon request of Disclosing Party, Receiving Party shall certify in writing that all Information received by Receiving Party (including all copies thereof) and all materials containing such Information (including all copies thereof) have been destroyed.

7. **Injunctive Relief:** Without prejudice to any other rights or remedies that a party may have, each party acknowledges and agrees that damages alone may not be an adequate remedy for any breach of this Agreement, and that a party shall be entitled to seek the remedies of injunction, specific performance and/or any other equitable relief for any threatened or actual breach of this Agreement

8. Notice.

(a) Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows, with notice deemed given as indicated:

- (i) by personal delivery, when delivered personally;
- (ii) by overnight courier, upon written verification of receipt; or
- (iii) by certified or registered mail with return receipt requested, upon verification of receipt.

(b) Notice shall be sent to the following addresses or such other address as either Party specifies in writing.

RailTel Corporation of India limited:

Attn: _____

Address: _____

Phone:

Email.

_____:

Attn:

Address:

Phone:

Email:

9. Term, Termination and Survivability.

(a) Unless terminated earlier in accordance with the provisions of this agreement, this Agreement shall be in full force and effect for a period of _____ years from the effective date hereof.

(b) Each party reserves the right in its sole and absolute discretion to terminate this Agreement by giving the other party not less than 30 days' written notice of such termination.

(c) Notwithstanding the foregoing clause 9(a) and 9 (b) , Receiving Party agrees that its obligations, shall:

(i) In respect to Information provided to it during the Term of this agreement, shall survive and continue even after the expiry of the term or termination of this agreement; and

(ii) not apply to any materials or information disclosed to it thereafter.

10. Governing Law and Jurisdiction. This Agreement shall be governed in all respects solely and exclusively by the laws of India without regard to its conflicts of law principles. The Parties hereto expressly consent and submit themselves to the jurisdiction of the courts of New Delhi.

11. Counterparts. This agreement is executed in duplicate, each of which shall be deemed to be the original and both when taken together shall be deemed to form a single agreement

12. No Definitive Transaction. The Parties hereto understand and agree that no contract or agreement with respect to any aspect of a potential transaction between the Parties shall be deemed to exist unless and until a definitive written agreement providing for such aspect of the transaction has been executed by a duly authorized representative of each Party and duly delivered to the other Party (a "**Final Agreement**"), and the Parties hereby waive, in advance, any claims in connection with a possible transaction unless and until the Parties have entered into a Final Agreement.

13. Settlement of Disputes:

- a) The parties shall, at the first instance, attempt to resolve through good faith negotiation and consultation, any difference, conflict or question arising between the parties hereto relating to or concerning or arising out of or in connection with this agreement, and such negotiation or consultation shall begin promptly after a Party has delivered to another Party a written request for such consultation.
- b) In the event of any dispute, difference, conflict or question arising between the parties hereto, relating to or concerning or arising out of or in connection with this agreement, is not settled through good faith negotiation or consultation, the same shall be referred to arbitration by a sole arbitrator.
- c) The sole arbitrator shall be appointed by CMD/RailTel out of the panel of independent arbitrators maintained by RailTel, having expertise in their respective domains. The seat and the venue of arbitration shall be New Delhi. The arbitration proceedings shall be in accordance with the provision of the Arbitration and Conciliation Act 1996 and any other statutory amendments or modifications thereof. The decision of arbitrator shall be final and binding on both parties. The arbitration proceedings shall be conducted in English Language. The fees and cost of arbitration shall be borne equally between the parties.

14. CONFIDENTIALITY OF NEGOTIATIONS

Without the Disclosing Party's prior written consent, the Receiving Party shall not disclose to any Person who is not a Representative of the Receiving Party the fact that Confidential Information has been made available to the Receiving Party or that it has inspected any portion of the Confidential Information or that discussions between the Parties may be taking place.

15. REPRESENTATION

The Receiving Party acknowledges that the Disclosing Party makes no representation or warranty as to the accuracy or completeness of any of the Confidential Information furnished by or on its behalf. Nothing in this clause operates to limit or exclude any liability for fraudulent misrepresentation.

16. ASSIGNMENT

Neither this Agreement nor any of the rights, interests or obligations under this Agreement shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of each of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this Agreement will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

17. EMPLOYEES AND OTHERS

Each Party shall advise its Representatives, contractors, subcontractors and licensees, and shall require its Affiliates to advise their Representatives, contractors, subcontractors and licensees, of the obligations of confidentiality and non-use under this Agreement, and shall be responsible for ensuring compliance by its and its Affiliates' Representatives, contractors, subcontractors and licensees with such obligations. In addition, each Party shall require all persons and entities who are not employees of a Party and who are provided access to the Confidential Information, to execute confidentiality or non-disclosure

agreements containing provisions no less stringent than those set forth in this Agreement. Each Party shall promptly notify the other Party in writing upon learning of any unauthorized disclosure or use of the Confidential Information by such persons or entities.

18. NO LICENSE

Nothing in this Agreement is intended to grant any rights to under any patent, copyright, or other intellectual property right of the Disclosing Party, nor will this Agreement grant

the Receiving Party any rights in or to the Confidential Information of the Disclosing Party, except as expressly set forth in this Agreement.

19. RELATIONSHIP BETWEEN PARTIES:

Nothing in this Agreement or in any matter or any arrangement contemplated by it is intended to constitute a partnership, association, joint venture, fiduciary relationship or other cooperative entity between the parties for any purpose whatsoever. Neither party has any power or authority to bind the other party or impose any obligations on it and neither party shall purport to do so or hold itself out as capable of doing so.

20: UNPULISHED PRICE SENSITIVE INFORMATION (UPSI)

_____ agrees and acknowledges that _____, its Partners, employees, representatives etc., by virtue of being associated with RailTel and being in frequent communication with RailTel and its employees, shall be deemed to be "Connected Persons" within the meaning of SEBI (Prohibition of

Insider Trading) Regulations, 2015 and shall be bound by the said regulations while dealing with any confidential and/ or price sensitive information of RailTel. _____ shall always and at all times comply with the obligations and restrictions contained in the said regulations. In terms of the said regulations, _____ shall abide by the restriction on communication, providing or allowing access to any Unpublished Price Sensitive Information (UPSI) relating to RailTel as well as restriction on trading of its stock while holding such Unpublished Price Sensitive Information relating to RailTel

21 MISCELLANEOUS. This Agreement constitutes the entire understanding among the Parties as to the Information and supersedes all prior discussions between them relating thereto. No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed on behalf of each Party by its authorized representative. The failure or delay of any Party to enforce at any time any provision of this Agreement shall not constitute a waiver of such Party's right thereafter to enforce each and every provision of this Agreement. In the event that any of the terms, conditions or provisions of this Agreement are held to be illegal, unenforceable or invalid by any court of competent jurisdiction, the remaining terms, conditions or provisions hereof shall remain in full force and effect. The rights, remedies and obligations set forth herein are in addition to, and not in substitution of, any rights, remedies or obligations which may be granted or imposed under law or in equity.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date set forth above.

_____ :

RailTel Corporation of India Limited:

By _____

By _____

Name:

Name:

Title:

Title:

Witnesses

Annexure-6: EMD (as PBG) Format

BG NO :
ISSUANCE DATE : DD-MM-YYYY
BG AMOUNT : Rs xxxxxxxx /-
EXPIRY DATE : DD-MM-YYYY
CLAIM EXPIRY DATE : DD-MM-YYYY

In consideration of the **RailTel Corporation of India Limited**, (CIN: L64202DL2000GOI107905) having its registered office at Plate-A, 6th Floor, Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023 (Here in after called RailTel) having agreed to exempt ~~Partner Name (CIN:-)~~ having its registered office at ~~Partner's address~~ (Here in after called "the said Contractor(s)") from the demand, under the terms and conditions of **EOI NO.** made between **RailTel Corporation of India Limited** and ~~Partner Name~~ for (here in after called "the said Agreement") of security deposit for the due fulfilment by the said contractor (s) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for **Rs. /- (In Words)**.

We, ~~Bank Name~~ a banking company incorporated under the Companies Act, 1956 and carrying on Banking Business under The Banking Regulation Act, 1949 and having its Registered Office at ~~Bank's Address~~ and its Central office at ~~Bank's Corporate Office Address~~ (indicate the name of the Bank) here in after referred to as "the Bank") at the request of ~~Partner's Name~~ Contractor(s) do hereby undertake to pay the **RailTel** an amount not exceeding **Rs. /- (In Words)** .. against any loss or damage caused to or suffered or would be caused to or suffered by the **RailTel** by reason of any breach by said Contractor(s) of any of the terms or conditions contained in the said Agreement.

We, ~~Bank Name~~ do here by undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the **RailTel** stating that the amount as claimed is due by way of loss or damage caused to or would be caused to or suffered by the **RailTel** by reason of breach by the said Contractor(s) of any terms and conditions contained in the said Agreement or by the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding **Rs. /- (In Words)**.

We, ~~Bank's Name~~ undertake to pay to the **RailTel** any money so demanded not with standing any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s)/ Supplier(s) shall have no claim against us for making such payment.

We, ~~Bank's Name~~ further agree that the Guarantee here in contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the **RailTel** under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till **RailTel** certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharge this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the **DD-MM-YYYY(Claim Expiry Date.)** We shall be discharged from all liability under this Guarantee thereafter.

We, ~~Bank's Name~~ further agree with the **RailTel** that the **RailTel** shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time or to postpone for any time or from time to time any of the powers exercisable by the **RailTel** against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of **RailTel** or any indulgence by the **RailTel** to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the bank or the Contractor(s) Supplier(s).

~~Bank's Name~~ lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the **RailTel** in writing.

Date : DD-MM-YYYY

Place :

Annexure-7: MAF Format

Manufacturer's Authorization Form (MAF)

(To be submitted in OEM Letterhead)

As per CoR Tender

Tender Ref. No.	GEM/2023/B/3953223
Date of floating	14/09/2023
Floated on portal	GeM e-tender Portal (https://bidplus.gem.gov.in/)

Annexure-8: CONSORTIUM AGREEMENT /MEMORANDUM OF AGREEMENT

(On Stamp Paper of appropriate value)

This Consortium Agreement is executed at on this _ day of ____.

BETWEEN

M/s. , a Company incorporated under the Companies Act, 1956 and having its Registered Office at acting through its Managing Director, duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the „LEAD MEMBER“ which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the ONE Part;

AND

M/s. , a Company having its Office at and Office at
, acting through its Joint President/ MD/.. , duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the (“Participant member”) which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHER PART“

AND

M/s. , a Company having its Office at and Office at
, acting through its Joint President/ MD/.. , duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the (“Participant member”) which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHER PART“

Whereas RailTel Corporation of India Ltd. (hereinafter referred to as „RCIL“) has invite tenders for the “(NAME OF WORK)” in terms of the tender documents issued for the said purpose and the eligibility conditions required that the applicants bidding for the same should meet the conditions stipulated by RCIL for participating in the bid by the Consortium for handling the project for which the tender has been floated by RCIL.

AND WHEREAS in terms of the bid documents the parties jointly satisfy the eligibility criteria laid down for a bidder for participating in the bid process by forming a Consortium between themselves.

AND WHEREAS the parties hereto have discussed and agreed to form a Consortium for participating in the aforesaid bid and have decided to reduce the agreed terms to writing.

NOW THIS CONSORTIUM Agreement hereby WITNESSES:

1. That in the premises contained herein the Lead Member and the Participant Member having decided to pool their technical know-how, working experiences and financial resources, have formed themselves into a Consortium to participate in the tender process for “(NAME OF WORK)” in terms of the tender invited by RailTel Corporation of India Ltd., (RCIL).
2. That the members of the Consortium have represented and assured each other that they shall abide by and be bound by the terms and conditions stipulated by RCIL for awarding the tender to the Consortium so that the Consortium may take up the aforesaid “(NAME OF WORK)” in case the Consortium turns out to be the successful bidder in the bid being invited by RCIL for the said purpose.
3. That the members of the Consortium have satisfied themselves that by pooling their technical know-how and technical and financial resources, the Consortium fulfills the prequalification/ eligibility criteria stipulated for a bidder, to participate in the bid for the said tender process for “(NAME OF WORK)”
4. That the Consortium have agreed to nominate any one of , and as the common representative who shall be authorized to represent the Consortium for all intents and purposes for dealing with the Government and for submitting the bid as well as doing all other acts and things necessary for submission of bid documents such as Tender Application Form etc., Mandatory Information, Financial Bid. Etc., and such other documents as may be necessary for this purpose.
5. That if any change in the membership of the Consortium be required to be made by the members of the Consortium, the same shall be done with the consent of RCIL subject to the conditions as may be stipulated by them in this regard.
6. That in case to meet the requirements of bid documents or any other stipulations of RCIL, it becomes necessary to execute and record any other documents amongst the members of the Consortium, they undertake to do the needful and to participate in the same for the purpose of the said project.
7. That it is clarified by and between the members of the Consortium that execution to this Consortium Agreement by the members of the Consortium does not constitute any type of partnership for the purposes of provisions of the Indian Partnership Act and that the members of the Consortium shall otherwise be free to carry on their independent business or commercial activities for their own respective benefits under their own respective names and styles. This Consortium Agreement is limited in its operation to the specified project.
8. That the Members of the Consortium undertake to specify their respective roles and responsibilities for the purposes of implementation of this Consortium Agreement and

the said project, if awarded to the Consortium, to meet the requirements and stipulations of RCIL.

9. The consortium formed will not be subject to alteration with regard to change in constituting firms and/or reorientation of roles. Any changes, if proposed by Consortium to take advantage of certain developments during evaluation stage will render the bid liable to be **REJECTED**.
10. All partners of the consortium shall be jointly and severally liable to RailTel for the execution of the entire contract in accordance with its terms.
11. Each Consortium member has minimum 20% contribution in the work and role/scope of each member is enclosed.
12. Power of Attorney by all members of the Consortium in favor of the Lead Member is also enclosed.

IN FAITH AND TESTIMONY WHEREOF, THE PARTIES HERETO HAVE SIGNED THESE PRESENTS ON THE DATE, MONTHS AND YEAR FIRST ABOVE WRITTEN

1. ()

Managing Director

For (Name of company)

2. ()

Managing Director

For (Name of company)

3 ()

Managing Director

For (Name of company)

WITNESSES:

1.

2.

Enclosure:

Board resolution of each of the Consortium Members authorizing:

- (i) Execution of the Consortium Agreement, and
- (ii) Appointing the authorized signatory for such purpose.

Annexure-9: Price Bid Format (Financial Bid)

9.1 For Supply

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	130		
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	249		
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	67		
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification	No.	437		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
	attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)				
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	282		
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	12		
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	12		
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE+ Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	14		
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of	No.	19		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
	240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.				
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and 2 X 1 (Min.) SFP Ports with min. PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	2		
11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable as per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.	No.	2		
12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	165		
13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	194		
14	Supply of PTZ Joystick	No.	6		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
15	Supply of 1G Copper SFP module	No.	58		
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	6		
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	6		
18	Supply of Work Station as per specification (Without Monitor)	Set	58		
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	6		
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	6		
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	12		
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	12		
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	6		
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	22		
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	10		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	8		
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	409		
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	21		
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	1		
30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	8		
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	7		
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	439		
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	72		
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	6		
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	5		
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	5		
37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	31720		
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	32465		
39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	28		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	6		
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	70		
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	20		
43	Supply of Intelligent CAT 6 I/C patch cord	No.	70		
44	Supply of CAT6 Shielded Field Termination Plug	No.	1177		
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	110		
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	83660		
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	402		
48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	33		
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	6		
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	6		
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	9		
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	6		
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	6		
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on	No.	367		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
	both end alongwith additional two copper wires, 3 metre length				
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	610		
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	5000		
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	35000		
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	45946		
59	Supply of MCB 16A with box as per make	No.	460		
60	Supply of MCB 32A with box as per make	No.	110		
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	270		
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	270		
63	Supply of Electrical Board (4x4) PVC	No.	320		
64	Supply of Electrical Board (8x6) PVC	No.	320		
65	Supply of 5A switch of ISI marked as per make	No.	1050		
66	Supply of 16A switch of ISI marked as per make	No.	260		
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	5000		
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	5000		
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	500		
70	Supply of ISI marked PVC flexible pipe of 1" Dia (25mm)	Metre	500		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	93180		
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	2500		
73	Supply of Concrete/Cast Iron Route Marker	No.	510		
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	270		
75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	377		
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	439		
77	Supply of Manhole Chamber	No.	75		
78	Supply of HDMI Cable 10M of Industrial Standard	No.	38		
79	Supply of HDMI Cable 15M of Industrial Standard	No.	14		
80	Supply of HDMI Cable 20M of Industrial Standard	No.	14		
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	2550		
82	Supply of GEAPON OLT	No.	6		
83	Supply of GEAPON ONU	No.	12		
84	Supply of Fibre Access Terminal (FAT) box and GEAPON Splitter 1:2/1:4/1:8/1:16/ 1:32/1:64 as required) and other related accessories Complete in all respect	Lot	6		
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	600		
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	600		
87	Supply of Firewall as per specification	No.	6		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
88	Supply of Electrical Distribution Box with all accessories	No.	55		
89	Supply of Executive table	No.	12		
90	Supply of Executive chair	No.	12		
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	6		
Total Price (Rs.)					
GST %					
GST on Total Price (Rs.)					
Total Price including GST (Rs.)(A)					

9.2 For Civil & Other Works

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	101		
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	1177		
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	408		
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	59		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	67		
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	719		
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	379		
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	12		
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	22		
10	Installation, Commissioning, Configuration & Setting to services of Server alongwith redundant Server complete in all respect	Set	6		
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	6		
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	57		
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	6		
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	6		
15	Installation & Configuration of ANPR Software complete in all respect	Set	6		
16	Fixing , Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	439		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	439		
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	78		
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	10		
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	750		
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	25		
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking alongwith Crimping and Testing of RJ 45 Connector complete in all respect	Set	110		
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	32465		
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	32720		
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	10300		
26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	50		
27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	8880		
28	Laying of HDPE Pipe/ GI Conduit / GI pipe through	Metre	14200		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
	Trench / Existing Trench complete in all respect				
29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m)and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg,watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnamtling of PCC, RCC & bitumen road.	Metre	88000		
30	Preparation of RCC/bitumen road as required after laying of HDPE pipe (Similar type as it before) as per DVC specification	Metre	1900		
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	1700		
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	80946		
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	67000		
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing	Metre	20360		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
	Caping / PVC Trunking/Ceiling complete in all respect				
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	1700		
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	439		
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	502		
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	33		
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame alongwith 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	6		
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	6		
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	105		
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	510		
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	270		
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	508		
45	Installation, Termination & Commissioning of GEPON	Set	18		

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)
	ONU/OLT alongwith Splitter and Optical Fibre FAT Box				
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	439		
47	Fixing of electrical socket complete in all respect	No.	540		
48	Fixing of electrical switch complete in all respect	No.	1310		
49	Fixing of electrical Board (4x4) complete in all respect	No.	320		
50	Fixing of electrical Board (8x6) complete in all respect	No.	320		
51	Fixing of DB and termination complete in all respect	No.	55		
52	Fixing of MCB With BOX complete in all respect	No.	570		
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	2550		
54	Micro trenching	Metre	200		
55	Documentation, Testing & Commissioning of Each Location	Set	6		
Total Price (Rs.)					
GST %					
GST on Total Price (Rs.)					
Total Price including GST (Rs.)(B)					

9.3 For AMC

Sl. No.	Description	Unit	Quantity	Unit FOR Price (Rs)	Sub-total Price Excluding GST (Rs.)

1	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at Panchet Project location for 5 years after two years warranty period	Year	5		
2	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at Maithon Project location for 5 years after two years warranty period	Year	5		
3	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at DSTPS location for 5 years after two years warranty period	Year	5		
4	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at CTPS location for 5 years after two years warranty period	Year	5		
5	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at MTPS location for 5 years after two years warranty period	Year	5		
6	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at BTPS location for 5 years after two years warranty period	Year	5		
Total Price (Rs.)					
GST %					
GST on Total Price (Rs.)					
Total Price including GST (Rs.)(C)					

9.4 Summary

Sl. No.	Description	Unit	Quantity	Rate
SUPPLY (A)				
1	Panchet- Total Supply Items	Job	1	
2	Maithon- Total Supply	Job	1	
3	DSTPS- Total Supply	Job	1	
4	CTPS- Total Supply	Job	1	
5	MTPS- Total Supply	Job	1	
6	BTPS-Total Supply	Job	1	
Sub-Total (A)				
CIVIL Works and other associated works Total (B)				

7	Panchet-Total CIVIL Works and other associated works	Job	1	
8	Maithon-Total CIVIL Works and other associated works	Job	1	
9	DSTPS-Total CIVIL Works and other associated works	Job	1	
10	CTPS- Total CIVIL Works and other associated works	Job	1	
11	MTPS- Total CIVIL Works and other associated works	Job	1	
12	BTPS- Total CIVIL Works and other associated works	Job	1	
	Sub-Total (B)			
	Comprehensive AMC Services for Five (05) years after two years warranty period (C)			
13	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at Panchet Project location	Job	1	
14	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at Maithon Project location	Job	1	
15	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at DSTPS location	Job	1	
16	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at CTPS location	Job	1	
17	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at MTPS location	Job	1	
18	Comprehensive Annual Maintenance Charges for the entire IP CCTV based Surveillance System at BTPS location	Job	1	
	Sub-Total (C)			
	TOTAL COST (A+B+C)			

Note: -

- All the above price would be in INR only.
- The above price would include Two years Warranty after Installation and Commissioning..
- The bidder has to compulsorily quote for all items mentioned in the Commercial-bid Tables. In case bidder fails to quote for any of this stage, the bid would be summarily rejected.
- Above is indicative, however the quantity may increase or decrease at the time of placing the purchase order as per actual.
- Tenderer shall quote rates inclusive of Taxes, but there should be break up of basic price and all type of applicable taxes and GST in a separate sheet (to be uploaded with Price-Bid)
- Bidders need to submit the unit wise and item wise price break up excel sheet [Basic price & GST (applicable %)] separately
- The bidder is expected to submit a separate sheet, which includes the details of tax applicable for each component of the SOR, the breakup of price for each item of SOR in terms of Basic Unit Price, GST, Excise duty, Sales Tax, Freight, Forwarding, Packing, Insurance and any other Statuary Taxes/Levies/Charges already paid or

- payable by the supplier shall also be quoted separately.
- Detailed item description and its specification may be referred from CoR Tender as:

Tender Ref. No.	GEM/2023/B/3953223
Date of floating	14/09/2023
Floated on portal	GeM e-tender Portal (https://bidplus.gem.gov.in/)

Annexure-10: Site wise BOQ

PANCHET SUPPLY

Sl. No.	Description	Unit	Quantity
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	0
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	9
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	0
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	0
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	13
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	2
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	2
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE+ Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.	No.	1
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and and 2 X1 (Min.) SFP Ports with min. PoE Power	No.	0

	Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)		
11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable as per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.	No.	0
12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	12
14	Supply of PTZ Joystick	No.	1
15	Supply of 1G Copper SFP module	No.	8
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	1
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	1
18	Supply of Work Station as per specification (Without Monitor)	Set	2
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	1
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	1
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	2
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	0
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	2
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	22
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	0
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	0

30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	1
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	1
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	22
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	22
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	1
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	0
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	0
37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	1000
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	6000
39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	0
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	1
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	50
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	0
43	Supply of Intelligent CAT 6 I/C patch cord	No.	50
44	Supply of CAT6 Shielded Field Termination Plug	No.	24
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	30
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	0
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	22
48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	1
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	1
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	1
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	1
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on both end alongwith additional two copper wires, 3 metre length	No.	40
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	0
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	0
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	6000
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	0

59	Supply of MCB 16A with box as per make	No.	10
60	Supply of MCB 32A with box as per make	No.	10
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	20
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	20
63	Supply of Electrical Board (4x4) PVC	No.	20
64	Supply of Electrical Board (8x6) PVC	No.	20
65	Supply of 5A switch of ISI marked as per make	No.	50
66	Supply of 16A switch of ISI marked as per make	No.	10
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	0
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	0
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	0
70	Supply of ISI marked PVC flxible pipe of 1" Dia (25mm)	Metre	0
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	5000
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	0
73	Supply of Concrete/Cast Iron Route Marker	No.	10
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	20
75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	5
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	22
77	Supply of Manhole Chamber	No.	5
78	Supply of HDMI Cable 10M of Industrial Standard	No.	2
79	Supply of HDMI Cable 15M of Industrial Standard	No.	0
80	Supply of HDMI Cable 20M of Industrial Standard	No.	0
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	50
82	Supply of GEPON OLT	No.	1
83	Supply of GEPON ONU	No.	2
84	Supply of Fibre Access Terminal (FAT) box and GEPON Splitter 1:2/1:4/1:8/1:16/ 1:32/1:64 as required) and other related accessories Complete in all respect	Lot	1
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
87	Supply of Firewall as per specification	No.	1
88	Supply of Electrical Distribution Box with all accessories	No.	5
89	Supply of Executive table	No.	2
90	Supply of Executive chair	No.	2
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	1

PANCHET CIVIL & OTHER WORKS

Sl. No.	Description	Unit	Quantity
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	6
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	24
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	15
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	2
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	0
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	13
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	9
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	2
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	2
10	Installation, Commissioning, Configuration & Setting to services of Server alongwith redundant Server complete in all respect	Set	1
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	1
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	1
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	1
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	1
15	Installation & Configuration of ANPR Software complete in all respect	Set	1
16	Fixing , Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	23
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	22
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	23
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	0
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	50
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	0
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking alongwith Crimping and Testing of RJ 45 Connector complete in all respect	Set	30
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	6000
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	1000
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	0
26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	0
27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	0
28	Laying of HDPE Pipe/ GI Conduit / GI pipe through Trench / Existing Trench complete in all respect	Metre	1000

29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m)and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg,watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnamtling of PCC, RCC & bitumen road.	Metre	5000
30	Preparation of RCC/bitumen road as required after laying of HDPF pipe (Similar type as it before) as per DVC specification	Metre	0
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	0
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	6000
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	6000
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing Caping / PVC Trunking/Ceiling complete in all respect	Metre	0
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	0
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	22
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	22
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	1
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame alongwith 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	1
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	1
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	5
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	10
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	20
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	5
45	Installation, Termination & Commissioning of GEAPON ONU/OLT alongwith Splitter and Optical Fibre FAT Box	Set	3
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	22
47	Fixing of electrical socket complete in all respect	No.	40
48	Fixing of electrical switch complete in all respect	No.	60
49	Fixing of electrical Board (4x4) complete in all respect	No.	20
50	Fixing of electrical Board (8x6) complete in all respect	No.	20
51	Fixing of DB and termination complete in all respect	No.	5
52	Fixing of MCB With BOX complete in all respect	No.	20
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	50
54	Micro trenching	Metre	0
55	Documentation, Testing & Commissioning of Each Location	Set	1

MTPS SUPPLY

Sl. No.	Description	Unit	Quantity
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	16
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	20
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	0
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	0
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	138
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	2
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	2
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE+ Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	4
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.	No.	16
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and 2 X1 (Min.) SFP Ports with min. PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable as	No.	2

	per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.		
12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	31
13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	50
14	Supply of PTZ Joystick	No.	1
15	Supply of 1G Copper SFP module	No.	10
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	1
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	1
18	Supply of Work Station as per specification (Without Monitor)	Set	20
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	1
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	1
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	2
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	8
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	2
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	2
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	164
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	1
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	1
30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	1
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	1
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	164
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	20
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	5
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	5
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	0

37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	5000
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	15000
39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	28
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	1
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	20
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	20
43	Supply of Intelligent CAT 6 I/C patch cord	No.	20
44	Supply of CAT6 Shielded Field Termination Plug	No.	176
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	80
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	25000
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	64
48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	20
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	1
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	2
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	1
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	1
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on both end alongwith additional two copper wires, 3 metre length	No.	100
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	100
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	1000
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	5000
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	10000
59	Supply of MCB 16A with box as per make	No.	90
60	Supply of MCB 32A with box as per make	No.	20
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	50
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	50
63	Supply of Electrical Board (4x4) PVC	No.	60
64	Supply of Electrical Board (8x6) PVC	No.	60
65	Supply of 5A switch of ISI marked as per make	No.	200
66	Supply of 16A switch of ISI marked as per make	No.	50
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	100
70	Supply of ISI marked PVC flxible pipe of 1" Dia (25mm)	Metre	100
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	25000
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	500
73	Supply of Concrete/Cast Iron Route Marker	No.	100
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	50

75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	0
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	164
77	Supply of Manhole Chamber	No.	5
78	Supply of HDMI Cable 10M of Industrial Standard	No.	16
79	Supply of HDMI Cable 15M of Industrial Standard	No.	2
80	Supply of HDMI Cable 20M of Industrial Standard	No.	2
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	500
82	Supply of GEPON OLT	No.	1
83	Supply of GEPON ONU	No.	2
84	Supply of Fibre Access Terminal (FAT) box and GEPON Splitter 1:2/1:4/1:8/1:16/1:32/1:64 as required) and other related accessories Complete in all respect	Lot	1
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
87	Supply of Firewall as per specification	No.	1
88	Supply of Electrical Distribution Box with all accessories	No.	10
89	Supply of Executive table	No.	2
90	Supply of Executive chair	No.	2
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	1

MTPS CIVIL & OTHER WORKS

Sl. No.	Description	Unit	Quantity
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	20
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	176
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	105
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	20
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	0
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	138
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	36
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	2
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	0
10	Installation, Commissioning, Configuration & Setting to services of Server along with redundant Server complete in all respect	Set	1
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	1
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	20
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	1
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	1
15	Installation & Configuration of ANPR Software complete in all respect	Set	1
16	Fixing, Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	167
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	164
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	25
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	5
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	200
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	25
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking along with Crimping and Testing of RJ 45 Connector complete in all respect	Set	80
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	15000
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	6000
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	2100
26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	10
27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	0

28	Laying of HDPE Pipe/ GI Conduit / GI pipe through Trench / Existing Trench complete in all respect	Metre	0
29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m) and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg, watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnamtling of PCC, RCC & bitumen road.	Metre	25000
30	Preparation of RCC/bitumen road as required after laying of HDPE pipe (Similar type as it before) as per DVC specification	Metre	1000
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	500
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	15000
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	5000
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing Caping / PVC Trunking/Ceiling complete in all respect	Metre	15000
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	500
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	164
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	164
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	20
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame along with 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	1
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	1
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	20
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	100
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	50
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	131
45	Installation, Termination & Commissioning of GEPON ONU/OLT alongwith Splitter and Optical Fibre FAT Box	Set	3
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	164
47	Fixing of electrical socket complete in all respect	No.	100
48	Fixing of electrical switch complete in all respect	No.	250
49	Fixing of electrical Board (4x4) complete in all respect	No.	60
50	Fixing of electrical Board (8x6) complete in all respect	No.	60
51	Fixing of DB and termination complete in all respect	No.	10
52	Fixing of MCB With BOX complete in all respect	No.	110
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	500
54	Micro trenching	Metre	50

55	Documentation, Testing & Commissioning of Each Location	Set	1
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MAITHON SUPPLY

Sl. No.	Description	Unit	Quantity
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	0
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	0
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	0
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	324
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	0
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	2
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	2
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE+ Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.	No.	0
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and and 2 X1 (Min.) SFP Ports with min. PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	2

11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable as per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.	No.	0
12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	64
13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
14	Supply of PTZ Joystick	No.	1
15	Supply of 1G Copper SFP module	No.	10
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	1
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	1
18	Supply of Work Station as per specification (Without Monitor)	Set	20
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	1
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	1
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	2
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	4
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	0
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	20
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	0
30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	2
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	2
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	30
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	30
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	0
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	0
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	1
37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	2000
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	11465

39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	0
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	1
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	0
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	0
43	Supply of Intelligent CAT 6 I/C patch cord	No.	0
44	Supply of CAT6 Shielded Field Termination Plug	No.	326
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	0
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	10000
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	30
48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	0
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	1
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	2
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	1
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	1
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on both end alongwith additional two copper wires, 3 metre length	No.	60
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	60
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	0
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	5000
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	5000
59	Supply of MCB 16A with box as per make	No.	90
60	Supply of MCB 32A with box as per make	No.	20
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	50
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	50
63	Supply of Electrical Board (4x4) PVC	No.	60
64	Supply of Electrical Board (8x6) PVC	No.	60
65	Supply of 5A switch of ISI marked as per make	No.	200
66	Supply of 16A switch of ISI marked as per make	No.	50
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	100
70	Supply of ISI marked PVC flexible pipe of 1" Dia (25mm)	Metre	100
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	10000
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	500
73	Supply of Concrete/Cast Iron Route Marker	No.	100
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	50
75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	85
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	30
77	Supply of Manhole Chamber	No.	20

78	Supply of HDMI Cable 10M of Industrial Standard	No.	4
79	Supply of HDMI Cable 15M of Industrial Standard	No.	4
80	Supply of HDMI Cable 20M of Industrial Standard	No.	4
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	500
82	Supply of GEPON OLT	No.	1
83	Supply of GEPON ONU	No.	2
84	Supply of Fibre Access Terminal (FAT) box and GEPON Splitter 1:2/1:4/1:8/1:16/1:32/1:64 as required) and other related accessories Complete in all respect	Lot	1
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
87	Supply of Firewall as per specification	No.	1
88	Supply of Electrical Distribution Box with all accessories	No.	10
89	Supply of Executive table	No.	2
90	Supply of Executive chair	No.	2
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	1

MAITHON CIVIL & OTHER WORKS

Sl. No.	Description	Unit	Quantity
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	10
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	326
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	68
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	20
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	0
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	324
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	0
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	2
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	10
10	Installation, Commissioning, Configuration & Setting to services of Server alongwith redundant Server complete in all respect	Set	1
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	1
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	20
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	1
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	1
15	Installation & Configuration of ANPR Software complete in all respect	Set	1
16	Fixing , Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	22
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	30
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	30
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	1
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	0
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	0
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking alongwith Crimping and Testing of RJ 45 Connector complete in all respect	Set	0
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	11465
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	2000
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	2000
26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	10

27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	0
28	Laying of HDPE Pipe/ GI Conduit / GI pipe through Trench / Existing Trench complete in all respect	Metre	0
29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m)and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg,watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnamtling of PCC, RCC & bitumen road.	Metre	10000
30	Preparation of RCC/bitumen road as required after laying of HDPF pipe (Similar type as it before) as per DVC specification	Metre	500
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	0
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	10000
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	10000
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing Caping / PVC Trunking/Ceiling complete in all respect	Metre	0
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	0
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	30
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	30
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	0
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame alongwith 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	1
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	1
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	20
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	100
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	50
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	85
45	Installation, Termination & Commissioning of GEPON ONU/OLT alongwith Splitter and Optical Fibre FAT Box	Set	3
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	30
47	Fixing of electrical socket complete in all respect	No.	100
48	Fixing of electrical switch complete in all respect	No.	250
49	Fixing of electrical Board (4x4) complete in all respect	No.	60
50	Fixing of electrical Board (8x6) complete in all respect	No.	60
51	Fixing of DB and termination complete in all respect	No.	10

52	Fixing of MCB With BOX complete in all respect	No.	110
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	500
54	Micro trenching	Metre	0
55	Documentation, Testing & Commissioning of Each Location	Set	1

DSTPS SUPPLY

Sl. No.	Description	Unit	Quantity
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	28
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	100
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	13
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	9
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	48
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capcity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	2
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	2
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE+ Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	4
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.	No.	0
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and and 2 X1 (Min.) SFP Ports with min. PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable as per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.	No.	0
12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	20

13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	45
14	Supply of PTZ Joystick	No.	1
15	Supply of 1G Copper SFP module	No.	10
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	1
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	1
18	Supply of Work Station as per specification (Without Monitor)	Set	4
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	1
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	1
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	2
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	0
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	60
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	0
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	0
30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	1
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	1
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	60
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	0
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	0
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	0
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	1
37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	8400
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	0
39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	0
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	1
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	0
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	0
43	Supply of Intelligent CAT 6 I/C patch cord	No.	0
44	Supply of CAT6 Shielded Field Termination Plug	No.	200
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	0
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	15300
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	85

48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	4
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	1
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	1
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	1
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	1
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on both end alongwith additional two copper wires, 3 metre length	No.	86
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	100
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	0
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	9000
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	5000
59	Supply of MCB 16A with box as per make	No.	90
60	Supply of MCB 32A with box as per make	No.	20
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	50
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	50
63	Supply of Electrical Board (4x4) PVC	No.	60
64	Supply of Electrical Board (8x6) PVC	No.	60
65	Supply of 5A switch of ISI marked as per make	No.	200
66	Supply of 16A switch of ISI marked as per make	No.	50
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	100
70	Supply of ISI marked PVC flxible pipe of 1" Dia (25mm)	Metre	100
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	10000
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	500
73	Supply of Concrete/Cast Iron Route Marker	No.	100
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	50
75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	85
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	60
77	Supply of Manhole Chamber	No.	20
78	Supply of HDMI Cable 10M of Industrial Standard	No.	4
79	Supply of HDMI Cable 15M of Industrial Standard	No.	4
80	Supply of HDMI Cable 20M of Industrial Standard	No.	4
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	500
82	Supply of GEAPON OLT	No.	1
83	Supply of GEAPON ONU	No.	2
84	Supply of Fibre Access Terminal (FAT) box and GEAPON Splitter 1:2/1:4/1:8/1:16/1:32/1:64 as required) and other related accessories Complete in all respect	Lot	1
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
87	Supply of Firewall as per specification	No.	1

88	Supply of Electrical Distribution Box with all accessories	No.	10
89	Supply of Executive table	No.	2
90	Supply of Executive chair	No.	2
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	1

DSTPS CIVIL & OTHER WORKS

Sl. No.	Description	Unit	Quantity
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	15
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	200
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	71
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	5
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	13
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	57
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	128
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	2
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	5
10	Installation, Commissioning, Configuration & Setting to services of Server alongwith redundant Server complete in all respect	Set	1
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	1
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	4
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	1
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	1
15	Installation & Configuration of ANPR Software complete in all respect	Set	1
16	Fixing , Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	61
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	60
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	0
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	1
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	200
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	0
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking alongwith Crimping and Testing of RJ 45 Connector complete in all respect	Set	0
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	0
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	8400
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	2000
26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	10
27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	3700

28	Laying of HDPE Pipe/ GI Conduit / GI pipe through Trench / Existing Trench complete in all respect	Metre	5000
29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m)and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg,watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnantling of PCC, RCC & bitumen road.	Metre	8000
30	Preparation of RCC/bitumen road as required after laying of HDPF pipe (Similar type as it before) as per DVC specification	Metre	100
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	400
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	9000
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	10000
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing Caping / PVC Trunking/Ceiling complete in all respect	Metre	3000
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	700
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	60
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	85
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	4
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame alongwith 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	1
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	1
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	20
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	100
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	50
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	85
45	Installation, Termination & Commissioning of GEPON ONU/OLT alongwith Splitter and Optical Fibre FAT Box	Set	3
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	60
47	Fixing of electrical socket complete in all respect	No.	100
48	Fixing of electrical switch complete in all respect	No.	250
49	Fixing of electrical Board (4x4) complete in all respect	No.	60
50	Fixing of electrical Board (8x6) complete in all respect	No.	60
51	Fixing of DB and termination complete in all respect	No.	10
52	Fixing of MCB With BOX complete in all respect	No.	110
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	500
54	Micro trenching	Metre	50
55	Documentation, Testing & Commissioning of Each Location	Set	1

CTPS SUPPLY

Sl. No.	Description	Unit	Quantity
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	81
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	100
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	50
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	4
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	26
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	2
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	2
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE+ Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	4
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.	No.	0
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and 2 X 1 (Min.) SFP Ports with min. PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable as per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.	No.	0

12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	22
13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	50
14	Supply of PTZ Joystick	No.	1
15	Supply of 1G Copper SFP module	No.	10
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	1
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	1
18	Supply of Work Station as per specification (Without Monitor)	Set	4
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	1
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	1
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	2
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	0
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	4
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	110
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	0
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	0
30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	2
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	1
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	110
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	0
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	0
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	0
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	1
37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	10500
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	0
39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	0
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	1
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	0
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	0
43	Supply of Intelligent CAT 6 I/C patch cord	No.	0

44	Supply of CAT6 Shielded Field Termination Plug	No.	263
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	0
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	15000
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	131
48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	4
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	1
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	2
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	1
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	1
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on both end alongwith additional two copper wires, 3 metre length	No.	73
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	200
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	4000
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	10000
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	5000
59	Supply of MCB 16A with box as per make	No.	90
60	Supply of MCB 32A with box as per make	No.	20
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	50
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	50
63	Supply of Electrical Board (4x4) PVC	No.	60
64	Supply of Electrical Board (8x6) PVC	No.	60
65	Supply of 5A switch of ISI marked as per make	No.	200
66	Supply of 16A switch of ISI marked as per make	No.	50
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	100
70	Supply of ISI marked PVC flexible pipe of 1" Dia (25mm)	Metre	100
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	20000
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	500
73	Supply of Concrete/Cast Iron Route Marker	No.	100
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	50
75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	131
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	110
77	Supply of Manhole Chamber	No.	20
78	Supply of HDMI Cable 10M of Industrial Standard	No.	4
79	Supply of HDMI Cable 15M of Industrial Standard	No.	4
80	Supply of HDMI Cable 20M of Industrial Standard	No.	4
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	500
82	Supply of GEPON OLT	No.	1
83	Supply of GEPON ONU	No.	2

84	Supply of Fibre Access Terminal (FAT) box and GEAPON Splitter 1:2/1:4/1:8/1:16/1:32/1:64 as required) and other related accessories Complete in all respect	Lot	1
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
87	Supply of Firewall as per specification	No.	1
88	Supply of Electrical Distribution Box with all accessories	No.	10
89	Supply of Executive table	No.	2
90	Supply of Executive chair	No.	2
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	1

CTPS CIVIL & OTHER WORKS

Sl. No.	Description	Unit	Quantity
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	30
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	263
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	78
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	4
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	50
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	30
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	181
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	2
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	5
10	Installation, Commissioning, Configuration & Setting to services of Server alongwith redundant Server complete in all respect	Set	1
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	1
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	4
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	1
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	1
15	Installation & Configuration of ANPR Software complete in all respect	Set	1
16	Fixing , Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	112
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	110
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	0
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	1
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	200
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	0
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking alongwith Crimping and Testing of RJ 45 Connector complete in all respect	Set	0
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	0
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	10500
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	2100
26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	10
27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	5000

28	Laying of HDPE Pipe/ GI Conduit / GI pipe through Trench / Existing Trench complete in all respect	Metre	5200
29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m)and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg,watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnamtling of PCC, RCC & bitumen road.	Metre	20000
30	Preparation of RCC/bitumen road as required after laying of HDPF pipe (Similar type as it before) as per DVC specification	Metre	100
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	400
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	20000
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	20000
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing Caping / PVC Trunking/Ceiling complete in all respect	Metre	0
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	500
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	110
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	131
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	4
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame alongwith 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	1
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	1
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	20
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	100
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	50
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	131
45	Installation, Termination & Commissioning of GEPON ONU/OLT alongwith Splitter and Optical Fibre FAT Box	Set	3
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	110
47	Fixing of electrical socket complete in all respect	No.	100
48	Fixing of electrical switch complete in all respect	No.	250
49	Fixing of electrical Board (4x4) complete in all respect	No.	60
50	Fixing of electrical Board (8x6) complete in all respect	No.	60
51	Fixing of DB and termination complete in all respect	No.	10
52	Fixing of MCB With BOX complete in all respect	No.	110
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	500

54	Micro trenching	Metre	50
55	Documentation, Testing & Commissioning of Each Location	Set	1

BTPS SUPPLY

Sl. No.	Description	Unit	Quantity
1	Supply of 2MP High Resolution IP Infra-red Pan Tilt Zoom Camera with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached, with Nema4x enclosure (Min.: 32X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	5
2	Supply of 4MP or better High Resolution IP Infra-red Pan Tilt Zoom Camera and with 512 GB SDXC card Slot capacity and all accessories including Power Supply Adapter as per specification attached ,with Nema4x enclosure (Min.: 30X Zoom, IR range of 200 metre & including outdoor PVC Box 4"x6") (Please note 512 GB SDXC card should be populated)	No.	20
3	Supply of 2MP High Resolution Dome Camera with built in IR 40 mtr. Range alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	4
4	Supply of 2MP High Resolution Bullet Camera with built in IR range 40 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	100
5	Supply of 5MP High Resolution Bullet Camera with built in IR range 30 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (Including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be Populated)	No.	57
6	Supply of 2MP High Resolution Bullet LPR/ANPR (Automatic Number Plate Recognition) Camera with built in IR range 70 mtr alongwith 512 GB SDXC card Slot capacity and all accessories as per specification attached with Nema4x enclosure (including outdoor PVC Box 4"x6")(Please note 512 GB SDXC card should be populated)	No.	2
7	Supply of Layer 3 Managed Switch with min. 24 X 1G SFP Ports and 4 X 1/10G SFP+ Ports (Please note all the SFP Ports should be Populated, Suitable as per site survey)	No.	2
8	Supply of Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports and 4 X 1/10 G (Min.) SFP+ Ports with minimum PoE Power Budget of 370W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	2
9	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min. 24 X 10/100/1000 Base-T PoE Ports, 4 X 1G SFP Ports with minimum PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey). If 24 port switch not available, Please consider 8 port and 16 port switch against 24 Port switch.	No.	2
10	Supply of Layer 2 Managed PoE+ switch with min. 16 X 10/100/1000 Base-T PoE Ports and 2 X 1 (Min.) SFP Ports with min. PoE Power Budget of 240 W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	0
11	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 16 X 10/100/1000 Base-T PoE Ports and 4 X 1 (Min) SFP ports with min POE budget of 240 W or better (Please note all the SFP ports should be populated, suitable	No.	0

	as per site survey). If 16 Port switch is not available, please consider 2 X 8 port switch against 16 Port switch.		
12	Supply of Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 2 X 1 G SFP Ports with min. PoE Power Budget of 120W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	28
13	Supply of Industrial Grade Layer 2 Managed PoE+ switch with min 8 X 10/100/1000 Base-T PoE+ Ports and 4 X 1 G SFP Ports with min. PoE Power Budget of 240W or better (Please note all the SFP ports should be Populated, Suitable as per site survey)	No.	37
14	Supply of PTZ Joystick	No.	1
15	Supply of 1G Copper SFP module	No.	10
16	Supply of Data Storage (including all Hardware & Software and accessories) for 90 days recording & 180 days log for each locationwise complete in all respect as per specification	Set	1
17	Supply of Server alongwith redundant server with all sorts of Hardware, Software and Cabling as per specification complete in all respect as per specification	Set	1
18	Supply of Work Station as per specification (Without Monitor)	Set	8
19	Supply of Video Monitoring, Recording & Management Software suit for all cameras including base license, Camera license, alarm, map & additional features as per specification	Set	1
20	Supply of Network Monitoring Software with all types of hardware solutions including latest servers, licences & all accessories including cabling etc.	Set	1
21	Supply of LPR/ANPR license, associate accessories & Software etc as per specification	Set	2
22	Supply of 32" FHD IPS Commercial Digital Display Panel including all accessories	No.	0
23	Supply of 43"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
24	Supply of 55"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	8
25	Supply of 65"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
26	Supply of 75"4K UHD IPS Commercial Digital Display Panel including all accessories	No.	0
27	Supply of 1 KVA UPS with built in battery/external as per specification	No.	53
28	Supply of 2 KVA UPS with built in battery/external as per specification	No.	0
29	Supply of 3 KVA UPS with built in battery/external as per specification	No.	0
30	Supply of 6 KVA rack mounted Online UPS alongwith battery bank & rack with minimum 1 hours backup	No.	1
31	Supply of 5 KVA Air Cooled Automatic Servo Controlled Voltage Stabilizer	No.	1
32	Supply of Customized Outdoor pole mount enclosure(rack) with provision of Surge Protection Device, MCCP including PDU, Pole mounted clamp and other accessories complete in all respect as per specification	Set	53
33	Supply of 9U Wall Mounted Network Rack with all accessories	No.	0
34	Supply of 12U Wall Mounted Network Rack with all accessories	No.	0
35	Supply of 22U Floor Mounted Network Rack with all accessories	No.	0
36	Supply of 42U Floor Mounted Network Rack with all accessories	No.	2

37	Supply of CAT6, U/UTP,4 Pair, AWG23, Double Jacket, LSZH/PE, ECCS Armoured Cable	Metre	4820
38	Supply of CAT6 UTP23 AWGLSZH,ETL and UL listed, Cable	Metre	0
39	Supply of CAT6, 12 Port Fully Loaded Patch Panel	No.	0
40	Supply of CAT6 Intelligent 24 Port Fully Loaded Patch Panel alongwith Intelligent components	No.	1
41	Supply of CAT6, LSZH, Patch Cord Length 1 meter	No.	0
42	Supply of CAT6, 4 Connector Patch Cord Length 2 meter	No.	0
43	Supply of Intelligent CAT 6 I/C patch cord	No.	0
44	Supply of CAT6 Shielded Field Termination Plug	No.	188
45	Supply of Cat 6 I/O, Face Plate & Back Box & RJ-45 Connector	Set	0
46	Supply of 12 Core SM 9/125 Outdoor Fibre Optic Armoured Cable	Metre	18360
47	Supply of 12 Fibre DIN Rail Mount with LC type of connector including with pigtail and other accessories	No.	70
48	Supply of Fibre LIU 24 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	4
49	Supply of Fibre LIU 48 Port Rack Mount Sliding Fully Loaded complete in all respect	No.	1
50	Supply of Intelligent 1U 96 fibre frame including all accessories complete in all respect	No.	1
51	Supply of 24 RJ-45 Port Analyzer Device including all accessories complete in all respect	No.	1
52	Supply of Automated Infrastructure Management Solution with Hardware, Software & all accessories etc. complete in all respect	Set	1
53	Supply of Handheld Monitoring Device with fiber reader accessories complete in all respect	No.	1
54	Supply of I/C Intelligent Optical Fibre Patch Cord having fiber plug Interface with two external pins on both end alongwith additional two copper wires, 3 metre length	No.	8
55	Supply of Optical F/O Patch Cord,LC, Duplex, SM, G657A1/G657A2,PC, LSZH, 5 metre	No.	150
56	Supply of 1.1 KV PVC Insulated FRLS 3C x 1.5 Sq mm. Copper LT Power cable	Metre	0
57	Supply of 1.1 KV PVC Insulated FRLS 3C x 2.5 Sq mm. Copper LT Power cable	Metre	0
58	Supply of 1.1 KV PVC Insulated FRLS 3C x 4 Sq mm. Copper LT Power cable	Metre	20946
59	Supply of MCB 16A with box as per make	No.	90
60	Supply of MCB 32A with box as per make	No.	20
61	Supply of 5A Socket Multi Plug of ISI marked as per make	No.	50
62	Supply of 16A Socket Multi Plug of ISI marked as per make	No.	50
63	Supply of Electrical Board (4x4) PVC	No.	60
64	Supply of Electrical Board (8x6) PVC	No.	60
65	Supply of 5A switch of ISI marked as per make	No.	200
66	Supply of 16A switch of ISI marked as per make	No.	50
67	Supply of 1" (25mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
68	Supply of 1.5" (38mm) ISI marked PVC Conduit Pipe with all accessories	Metre	1000
69	Supply of 2" (50mm) ISI marked PVC Conduit Pipe with all accessories	Metre	100
70	Supply of ISI marked PVC flexible pipe of 1" Dia (25mm)	Metre	100
71	Supply of ISI marked HDPE pipe of 40mm dia alongwith accessories	Metre	23180
72	Supply of ISI marked GI Pipe 2" (50mm) of Standard Quality	Metre	500
73	Supply of Concrete/Cast Iron Route Marker	No.	100
74	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers	No.	50

75	Supply of Fiber Optic Splice Closure, Dome, Mechanical Seal type LS, 48 Fibers (Underground)	No.	71
76	Supply of 8 Mtrs Customize tubular GI pole alongwith Lightning Arrestor as per spec. complete in all respect	No.	53
77	Supply of Manhole Chamber	No.	5
78	Supply of HDMI Cable 10M of Industrial Standard	No.	8
79	Supply of HDMI Cable 15M of Industrial Standard	No.	0
80	Supply of HDMI Cable 20M of Industrial Standard	No.	0
81	Supply of ISI Marked PVC Casing for Electrical wiring	Metre	500
82	Supply of GEPON OLT	No.	1
83	Supply of GEPON ONU	No.	2
84	Supply of Fibre Access Terminal (FAT) box and GEPON Splitter 1:2/1:4/1:8/1:16/ 1:32/1:64 as required) and other related accessories Complete in all respect	Lot	1
85	Supply of 1"(25mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
86	Supply of 1.5"(38mm) ISI marked GI Conduit Pipe with all accessories	Metre	100
87	Supply of Firewall as per specification	No.	1
88	Supply of Electrical Distribution Box with all accessories	No.	10
89	Supply of Executive table	No.	2
90	Supply of Executive chair	No.	2
91	Supply of LAN Automation Solution including Hardware, Software, Licenses & all accessories etc. as per SOW complete in all respect	Lot	1

BTPS CIVIL & OTHER WORKS

Sl. No.	Description	Unit	Quantity
1	Site Survey of the Power Houses which include all outdoor locations for CCTV installation (route lengthwise)	KM	20
2	Site Survey of the Power Houses which include all indoor locations for CCTV installation (per camera wise)	No.	188
3	Fixing, Installation, Testing & Commissioning of Network Switch complete in all respect	No.	71
4	Fixing, Installation & Integration of Commercial IPS UHD Display complete in all respect	No.	8
5	Fixing, Installation, Testing & Integration of Dome camera complete in all respect	No.	4
6	Fixing, Installation, Testing & Integration of Bullet camera complete in all respect	No.	157
7	Fixing, Installation, Testing & Integration of PTZ camera complete in all respect	No.	25
8	Fixing, Installation, Testing & Integration of ANPR Camera complete in all respect	No.	2
9	Integration of existing Camera with newly Installed VMS at each location of DVC	No.	0
10	Installation, Commissioning, Configuration & Setting to services of Server alongwith redundant Server complete in all respect	Set	1
11	Installation, Commissioning, Integration, Configuration & Setting to services of Data Storage complete in all respect	Set	1
12	Installation, Commissioning, Integration, Configuration & Setting to services of Work Station complete in all respect	Set	8
13	Installation, Commissioning, Integration, Configuration & Setting to services of VMS complete in all respect	Set	1
14	Installation, Commissioning, Integration, Configuration & Setting to services of NMS complete in all respect	Set	1
15	Installation & Configuration of ANPR Software complete in all respect	Set	1
16	Fixing , Installation, Testing & Commissioning of UPS /Voltage Stabilizer complete in all respect	No.	54
17	Assembling & Fixing of Outdoor rack complete in all respect	No.	53
18	Assembling & Fixing of Wall mount rack complete in all respect	No.	0
19	Assembling & Fixing of Floor mount rack complete in all respect	No.	2
20	Fixing & laying of 10/15/20 Mtr HDMI cable through Casing/PVC tray	Metre	100
21	Fixing, Marking, Testing and Commissioning of Jack Panel	No.	0
22	Fixing, Termination, Testing and Commissioning of IO Box including Back box & Face plate with Marking alongwith Crimping and Testing of RJ 45 Connector complete in all respect	Set	0
23	Laying of Indoor CAT6 UTP Cable through Channel/ Raceway/ Cable Tray/Ceiling/wall/HDPE pipe complete in all respect	Metre	0
24	Laying of Outdoor CAT6 Armoured Cable through HDPE Pipe/ GI Conduit/Wall complete in all respect	Metre	4820
25	Laying of PVC Conduit/ Metal Flexible through wall/ Ceiling/ Cable tray complete in all respect	Metre	2100

26	Supply, Erection & Fixing of GI BOX single channel through concrete cutting & Plastering back complete in all respect	Lot	10
27	Laying of HDPE Pipe/ GI Conduit / GI pipe through Wall / Raceway / Cable Tray complete in all respect	Metre	180
28	Laying of HDPE Pipe/ GI Conduit / GI pipe through Trench / Existing Trench complete in all respect	Metre	3000
29	Laying of HDPE Pipe/ GI Conduit/GI pipe through excavated all kind of soil (depth upto 1m)and getting out the excavated soil and then backfilling the area with excavated soil, sand & brick flat soling as required, in layers not exceeding 20cm in depth , including consolidating each deposited layer by rammimg,watering, etc and disposing of surplus excavated soil as directed, within a lead of 50m in all kind of soil alongwith disnamtling of PCC, RCC & bitumen road.	Metre	20000
30	Preparation of RCC/bitumen road as required after laying of HDPF pipe (Similar type as it before) as per DVC specification	Metre	200
31	Laying of 100mm dia GI pipe (as per site survey) by jack pushing method to cross the road/railway track including supply of GI pipe of approved brand and all consumables as per direction of Engineer-in-charge.	Metre	400
32	Laying of Power Cable through PVC Conduit / GI Conduit / HDPE pipe / GI Raceway / GI Pipe / Ceiling / Wall complete in all respect	Metre	20946
33	Laying of Outdoor OFC Cable through HDPE Pipe/ GI Conduit / GI Raceway / Cable Tray complete in all respect	Metre	16000
34	Laying of Indoor OFC Cable through PVC Conduit / Metal Flexible / Cable Tray / Casing Caping / PVC Trunking/Ceiling complete in all respect	Metre	2360
35	Laying of Overhead Optical Fiber Cable with all accessories	Metre	0
36	Fixing & Termination of Outdoor Enclosure box on pole including all accessories complete in all respect	Set	53
37	Fixing & Termination of 12 Port LIU including marking & splicing of pigtail complete in all respect	No.	70
38	Fixing & Termination of 24/48 Port LIU including marking & splicing of pigtail complete in all respect	No.	4
39	Installation, Termination & Commissioning of Intelligent 96 Fibre frame alongwith 24 RJ-45 Port Analyzer Device Connected with all panels complete in all respect	Set	1
40	Commissioning & checking of all 12 nos. core including OTDR & preparation of OTDR Report complete in all respect	Set	1
41	Installation of Manhole chambers 3ft x 3ft x 3ft along with cover	No.	20
42	Installation, Termination & Commissioning of OFC Route Marker-Concrete/Cast Iron	No.	100
43	Installation, Termination & Commissioning of Small Joint enclosure box alongwith splicing & marking	No.	50
44	Installation, Termination & Commissioning of Joint Enclosure Box (Underground) alongwith splicing & marking	No.	71
45	Installation, Termination & Commissioning of GEPON ONU/OLT alongwith Splitter and Optical Fibre FAT Box	Set	3
46	Erection of pole with RCC foundation including painting of pole, Concrete aggregate maintenance free earthing Earthing of the pole alongwith fixing of lightning Arrester	No.	53
47	Fixing of electrical socket complete in all respect	No.	100

48	Fixing of electrical switch complete in all respect	No.	250
49	Fixing of electrical Board (4x4) complete in all respect	No.	60
50	Fixing of electrical Board (8x6) complete in all respect	No.	60
51	Fixing of DB and termination complete in all respect	No.	10
52	Fixing of MCB With BOX complete in all respect	No.	110
53	Fixing of PVC Casing for Electrical Wiring complete in all respect	Metre	500
54	Micro trenching	Metre	50
55	Documentation, Testing & Commissioning of Each Location	Set	1
