

**“Tender For Physical Security Infrastructure Work CIPCDAC PUNE”**  
**CDACP/PS-Re/24-25/423**

**Centre for Development of Advanced Computing  
A Scientific Society of Ministry of Electronics &  
Information Technology,  
Government of India**

**Office Address: Innovation Park, Panchavati, Pashan Road, Pune - 411008.**  
**Tel: +91-20-25868086 / 25503673-675, Fax: +91-20-25694004**  
**[www.cdac.in](http://www.cdac.in)**

**TENDER FOR**

**“Physical Security Infrastructure Work, CIP, CDAC, PUNE”**

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**CDACP/PS-Re/24-25/423**

**Part-I / TECHNICAL BID**  
**VOLUME: I/II**

**LIST OF IMPORTANT DATES**

**Name of Work:** Physical Security Infrastructure Work, CIP, CDAC, PUNE.

SL No	Description	Dates
01	Completion Period for work	180 days from the date of award of work including holidays and rainy days
02	Mode of submission of tender	Online through <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a>
03	Date of Issue of Notice Inviting Bid	Date: - 27/11/2024
04	Period of availability of Bidding Documents From e-procurement portal	From: Date:- 27/11/2024
		To : Date :- 31/12/2024 Upto 15:00Hrs
05	Deadline for Receiving Bids online	Upto: Date :- 31/12/2024 Upto 15:00 Hrs
06	Time, Date and place for opening online Technical Bids	Date :- 31/12/2024 at 1530Hrs
07	Clarification of queries (Online Mode)	Queries Receiving Up to 16/12/2024 till 1200 Hrs
08	Bid submission start date	26.12.2024 at 0900 hrs.
09	Place of opening financial bids	ONLINE through CPPP.
10	Bid Validity	180 days from the date of opening of bid
11	Officer inviting Bids/Tender Inviting Authority	CDAC, Innovation Park, Panchavati, Pashan Road, Pune - 411008
12	Pre Bid Meeting	Offline - 17/12/2024 AT 11.00 Hrs (CDAC, Innovation Park, Panchavati, Pashan Road, Pune - 411008

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**NOTICE INVITING TENDER (NIT)  
(E-Procurement)**

**Tender Reference No.:** CDACP/PS-Re/24-25/423

**Date:** 19/11/2024

**Introduction**

C-DAC,Pune plans to upgrade **Physical Security Infrastructure** in its CIP premises in Pachavati, Pashan,Pune.

Centre for Development of Advanced Computing (C-DAC) invites item rate tenders in electronic tendering system, for “Physical Security Infrastructure Work, CIP, CDAC, PUNE.” The tenders shall be available in website (<https://eprocure.gov.in/eprocure/app>) on dates as mentioned above, “List of Important Dates.”

The nomenclature used hereinafter Tender and/or Bid is one and the same and has the same meaning. Similarly, the nomenclature used hereinafter Tenderer, Bidder, Contractor, Service Provider, Successful Bidder, Agency, OEMetc. are the same and have the same meaning.

**Contact information**

Materials Management Group (MMG)

Centre for Development of Advanced Computing (C-DAC)

Innovation Park, Panchavati Pashan Road,

Pune - 411008, Maharashtra India

E-mail: [mmg@cdac.in](mailto:mmg@cdac.in)

**Site Visit Contact Details:-**

Satyabrata Mishra (Jt. Director) (OfficeLandline No. 020 2550 3694/Mob:-7506939839 )

“Tender For Physical Security Infrastructure Work CIPCDAC PUNE”

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Centre for Development of Advanced Computing(C-DAC)invitesitem rate tenders in electronic tendering system, for “ Physical Security Infrastructure Work, CIP, CDAC, PUNE”.Thetenders shall be available in the website (<https://eprocure.gov.in/eprocure/app>) on dates as mentioned above, “List of Important Dates.”

The tenderdocument is also available for viewing on the “Notices and Tenders” link of the C-DAC website <https://cdac.in>.Bids to this tender will be accepted only through ONLINE mode through the website <https://etenders.gov.in/eprocure/app>. No other mode of bid will be considered and accepted. For applying Online, the tenderer/bidder should get itself registered at <https://etenders.gov.in/eprocure/app>.

Bid submission and System Requirement manual are also available at <https://etenders.gov.in/eprocure/app>

S.No	Name of works	Period of Completion (in days)	Cost of Tender Document (Non Refundable)	Earnest Money Deposit( Rs.)
01	PhysicalSecurity Infrastructure Work, CIP, CDAC, PUNE.	180 Days from the award of work	Rs. (5,000 + GST@18%= 5,900.00 )	Rs.8 Lakh

Intending bidders may download tender documents from e-procurement portal of our website <http://https://etenders.gov.in/eprocure/app> from the date & time mentioned above. The technical bid and bid documents duly filled and digitally signed in all respect may be submitted on-line through our e-portal within date and time (as per server clock) on as mentioned under “List of Important Dates”.

C-DAC does not take any responsibility for the delay caused due to non-availability of Internet connection or traffic jam etc. for on-line bidding.

Cost of bid document for on-line bid for work is shown in the table above. The amount shall be depositedin the form of Demand draft in favour of “Centre for Development of Advanced Computing” & Payable at Pune.

Earnest Money Deposit shall be deposited in the form of Account payee Demand Draft, Banker’s Cheque or Bank Guarantee for the full amount from Nationalized/ Scheduled Pvt. bank in favour of C-DACPune payable at Pune valid for 150 days from last day of submission in favour of C-DAC Limited.

In the case of Bank Guarantee, Bank Guarantee shall be sent to C-DAC the by issuing bank directly under registered post (A/D).

Earnest Money Deposit and Tender Fee can be deposited Online through RTGS/NEFT - Details of Bank account no. with IFSC Code etc. are as under. Payment by DD in favour of CDAC payable at Pune from the last day of submission.

Name of the Firm	Centre For Development of Advanced
Address	C-DAC Innovation Park, Panchavati,
Bank Name	IDBI Bank
Branch Address	Gokhale Road, Near Symbiosis Atur Centre
Bank Account No.	60010010004258
Type of Account	Saving A/c
MICR Code	411259027
IFSC Code	IBKL0000390

The bidders are required to submit (a) Online Payment of bid security/earnest money should be made through RTGS/NEFT/UPI in above mentioned bank details in favour of C-DAC payable at Pune and (b) Original bid security/earnest money in approved form or documentary evidence of deposited through RTGS/NEFT/UPI quoting UTR shall upload duly digitally signed by the person Authorized to sign the bid, failing which the bids will be declared non-responsive.

Names of the technically qualified bidders on the basis of information furnished in the checklist and in “My Document” uploaded by concerned bidders after technical evaluation and verification will be displayed in the portal. The Technically qualified bidders will be intimated for the date, time and venue for opening of financial Bids opening. List of Financial comparison charts of bidders will be displayed in the portal. No separate intimation will be given for this, unless the above date is changed. In case of change of date, due intimation will be given online. No individual intimation will be given. In case, due to any reason the scheduled dates for opening of technical and financial parts as mentioned above are holidays or due to any reason the office remains closed or due to any acts of God it becomes unapproachable (solely at the discretion of tender inviting authority), the next working day will be applicable while the previous specified time will remain the same.

Centre for Development of Advanced Computing (C-DAC) reserves the right to reject or cancel any or all pre-qualification documents and bid document without assigning any reasons whatsoever.

**EligibilityCriteria:-**

The intending Bidder should fulfill the following minimum eligibilitycriteria: -

1. The bidding firm/agency shall submit the documents pertaining to
  - a) Covering letter (Annexure-A)
  - b) Authority letter(Annexure-B)
2. The bidding firm / agency should have submitted tender fees (Rs.5900/-) and EMD of Rs. 8 Lakh (Eight Lakh) only
3. The bidder should be an entity registered in India for at least 10 years in the field of Physical Security Works(CCTV&Access Control), before the date of publication of this tender document, under appropriate Indian Laws. Certificate for the same, issued by the competent authority should be submitted along with the bid
4. **PAN Card & GST Registration:** -Bidder must have valid PAN Card & GST Registration as on the last date of tender submission. The PAN card and GST registration must be in the name of Bidder only. (Submit Copies)
5. **EPF Registration:** Bidder must have valid EPF as on the last date of tender publication. (Submit Copy)
6. The bidder firm should be ISO 9001:2008 (latest)& ISO 27001 (latest)certified as on date of publication of tender.
7. **Turnover:** Average Annual Financial Turnover on construction works during the last three years, ending 31<sup>st</sup> March of the previous financial year i.e. 2022-23, should be at least Rs. Six (6)Crore.Turnover certificate duly certified by a Chartered Accountant along with UDIN issued by ICAI is also to be submitted. Applicant has to attach the Audited Balance sheet along with profit & loss statement for last three years. The turnover certificate and Balance Sheet must be of Bidder only. Supporting documents of holding and subsidiary or parent company will not be considered.  
**Profitability:** The applicant should be a profit (net) making firm and should not have incurred any loss in last threeFinancial Years i.e. 2020-21, 2021-22 & 2022-23.
8. **Joint Venture/Consortium:** Joint Ventures and Consortium are not permitted to bid.
9. **Work Experience:** Bidder should have the experience ofcumulative similar completed works costing not less than the amount equal to Rs.Six(6) Crore during last 5 years ending last day of month previous to the one in which tenders are invited.

**Similar works mean:**

“Similar work” refers to a work involving Successfully completed “**Building/Data Centre/Airport Physical Security work (CCTV &Access Control etc.)**”.The bidder

shall submit Completion Certificate(s) mentioning name, nature of work(s), value(s) of the job(s), date(s) of commencement, stipulated date(s) of completion and actual date(s) of completion duly certified by officer of level of Executive Engineer or higher level or equivalent along-with LOI(s)/W.O(s) from respective Owner(s)/Client(s).

10. The Bidder must have completed supply, installation, testing and integration & commissioning of at least one CCTV Surveillance works of Rs. One(1) Crore during last 5 years ending last day of month previous to the one in which tenders are invited. **(Submit the copy of work order & completion certificate)**
11. The Bidder must have completed supply, installation, testing and integration & commissioning of at least one Access Control works of Rs.0.5 Crore during last 5 years ending last day of month previous to the one in which tenders are invited.  
**(Submit the copy of work order & completion certificate)**
12. **Human Resource Strength:** -The firm should have at least 50 employees on firm direct payroll. All 50 employees should be employed with the bidder as on date of Bid publication. PF challans for such employees for last one month prior to month of bid publication need to be submitted. Bidder should submit certificate issued by authorized signatory or Head of Human resources of the bidder, on bidder's letter head and copies of valid PF challan in the name of said employees need to be submitted in support of this criteria.
13. **Technical Resource Strength:** -Bidder must have minimum Two (2) no. of qualified B.E/B.Tech (Network & Electrical Engineer-One Each) professionals, with minimum five years' post qualification experience in Building CCTV/Access Control Work, employed in the bidder's payroll. These two (2) employees should be employed with the bidder as on date of Bid publication. Copies of B.E/B.Tech Certificates along with PF challans for such employees for last month prior to month of bid publishing need to be submitted. Bidder should submit certificate issued by authorized signatory or Head of Human resources of the bidder, on bidder's letter head and copies of valid PF challan in the name of said employee in support of this condition.
14. The firm should have support office presence in Pune Area. Necessary documentary proof such as Electricity bill/Water bill/Telephone Bill/Shop Act etc. in the name of firm showing address proof has to be submitted. Third party arrangement is not acceptable. Any rental agreement in lieu for office presence has to be registered agreement prior to the date of tender publishing.
15. A summary of the projects related to Physical Security covering all the details must be enclosed with the Technical Bid.
16. Only the principal manufacturers(OEM) for CCTV/Access Control or their authorised System Integrators are allowed to bid for the items as mentioned in the tender document, both are not allowed to bid simultaneously.

17. If the bidder is not a principal manufacturer/OEM, the undertaking/s (in original) from the respective OEMs/principal manufacturers (on the letterhead), as per format given in **Annexure-C** must be submitted for the components CCTV, Access Control Software, VMS Video Management Software, Visitor Management Software, X-ray Baggage scanner, Boom Barrier and Turnstile etc.
18. The principal manufacturers/ original equipment manufacturer (OEM) of CCTV, Access Control, VMS (Video Management Software, X-ray Baggage scanner, Boom Barrier and Turnstile should have service center in the state of site location. Documentary evidence for the same to be provided.
19. Bidder has to submit the Site Visit report along-with Geotagging photographs of self-mentioning with GPS coordinate, date and time and submit the same in online technical bid document. Representatives of the firm are allowed with company ID cards during site visit. Site Visit is mandatory. The bidder has to visit the site to assess the Site condition, transport conditions and working conditions at site on date as mentioned above and submit Site visit undertaking (**Annexure -D**).
20. The bidder must comply with the provisions of Office Memorandum: F/No/6/18/2019-PPD dated 23rd July, 2020, issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Govt. and subsequent orders issued from time to time in this regard (**Declaration-Annexure-E**).
21. The Bidder should not have been blacklisted or Debarred in any State Govt./Municipal Corporations/Central Govt./any State Govt. Organizations, Urban Local Body and/or its Undertaking company during last 10 years from the date of NIT publication. Bidder has to submit a notarized self-declaration with the technical bid in respect of the above.
22. Bidder shall submit the documents and Data / specifications sheets pertaining to the quoted items in selection sheet. (CCTV cameras, VMS (Video Management Software), Access Control Software, Visitor Management Software, Servers, X-ray Baggage scanner, Boom Barrier and Turnstile etc.
23. OEM / Bidder shall declare that, the quoted products should not be under end of life and that the end of support should be beyond the next 5 years from the date of Commissioning. Declaration to be submitted duly certified by the bidder on their letterhead duly signed and stamped.
24. OEM / Bidder shall declare that, the quoted products are brand new and not re-furnished and repaired products. Declaration to be submitted duly certified by the bidder on their letterhead duly signed and stamped.
25. Bidder needs to provide Single point of contact and also share the support and escalation matrix with details like eMail IDs and Phone nos. Declaration to be submitted duly certified by the bidder on their letterhead duly signed and stamped.



26. It is obligatory on part of the Bidder to sign, stamp and submit all pages of this document including any additions, changes, modifications, Pre-Bid meeting Minutes, addendum and amendments/corrigendum issued etc in technical bid.

Note:-

- A. Drawings will be shared only with those bidders who sign & submit the NON-DISCLOSURE AGREEMENT as per CDAC format.
- B. C-DAC is free to get documents verified and the agency shall have no objection to it. In case if it is found at any stage that the agency has made any false information, it will be disqualified and blacklisted.
- C. Fraudulent Act:  
The Contractor shall submit all the genuine documents with respect to its credential such as work experience, bank Guarantee and other documents to C-DAC to qualify in the tender. The contractor agrees that the contractor shall not indulge in any fraudulent activity and at any point in time including after being successful bidder, if any fraudulent act shall have been committed by the contractor then C-DAC shall have full rights to forfeit the EMD, Security deposit, performance Guarantee, whatsoever without any notice to the Contractor.
- D. Interested bidders may contact the officials mentioned in the tender for a site visit and/or for seeking any details regarding execution of proposed work. Any corrigendum/addendum/errata in respect of the above tender shall be made available only at our official web site [www.cdac.in](http://www.cdac.in) and <https://eprocure.gov.in/eprocure/app>

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## INSTRUCTIONS TO BIDDERS

### General:

#### **1. Qualification of the Bidder**

- 1.1 All bidders shall provide Forms of Bid and Qualification information as necessary.
- 1.2 All bidders shall include the following information and upload documents on the CPP portal with their bids, Qualification Information unless otherwise stated: -
  - (a) Undertaking in the letterhead of the firm with due sign and seal regarding the correctness of the information furnished with bid documents shall be uploaded duly digitally signed by the person authorized to sign the bid.
  - (b) Undertaking in the letterhead of the firm with due sign and seal regarding past contractual performance shall be uploaded duly digitally signed by the person authorized to sign the bid.
  - (c) All Undertakings on the letter head of the firm with due sign and seal shall be uploaded duly digitally signed by the person authorized to sign the bid
  - (d) Power of attorney of the authorized signatory signing the bid shall be uploaded duly digitally signed by the person authorized to sign the bid.
  - (e) Letter of Transmittal on the letterhead of the firm with due sign and seal shall be uploaded duly digitally signed by the person authorized to sign the bid.
  - (f) Copies of original documents defining the constitution, place of registration, and principal place of business.
  - (g) Turnover for each of the last five years.
  - (h) Reports on the financial standing of the Bidder, such as profit and loss statements duly signed by auditors for the past five years;
  - (i) Copy of GST registration certificate and acknowledgement of upto date filed return.
  - (j) Copy of EPF registration certificate and latest EPF challan.
  - (k) All signed documentary proofs in support of all eligibility criterias.
- 1.3 Even though the bidders meet the above qualifying criteria, they are subjected to be disqualified if they have:
  - (i) Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and / or record of submission of any false / fake document(s).
  - (ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

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- (iii) Participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the C-DAC.

### 2.0 Cost of Bidding

#### 2.1 Preparation of Bids:

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

#### 2.2 Documents Comprising the Bid

##### A- Technical Bid-

- 1) **EMD & Tender document cost:-** Scanned Copy of Demand draft drawn in favour of “C-DAC” payable at Pune towards **EMD & Tender document cost.** Or Online Payment in Bank of India (details as mentioned above on Page no. 07. )
- 2) **Declaration**
  - a) Scanned copy of Affidavit by the bidder as per Proforma. All undertakings on the letterhead of the firm with due sign and seal shall be uploaded duly digitally signed by the person Authorized to sign the bid.
  - 3) Scanned copy of Power of attorney of authorized signatory signing the bid or Power of attorney of authorized signatory signing the bid shall be uploaded duly digitally signed by the person Authorized to sign the bid.
  - 4) In case of Non submission of Tender Fee and EMD, prospective bidder's bids will be summarily rejected.
  - 5) All details as per proforma and documentary proof for eligibility criteria. In case of non submission of all these documents, bid is liable to be rejected.

##### 6) Integrity Pact

The bidder is required to enter into an Integrity Pact with C-DAC. For this, the bidder shall submit the scanned copy of signed, stamped and notarised Integrity Pact on Rs. 100 stamp paper, as part of technical bid, failing which, the Proposal submitted by the concerned bidder will be summarily rejected. The original document should be couriered to C-DAC. The format for the Integrity Pact is provided in **Annexure H**.

##### **Details of IEM is provided below:**

- 1) Shri. M P Johnson - Email ID- johnsonmp1961@gmail.com

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2) Shri. Vijay Kumar Singh Email ID - vijaykumarsingh@hotmail.com

### **B - Financial bid - (Finance Cover)**

- i) Financial/Commercial Bid shall be uploaded in BOQ format of CPPP.
- ii) All cells/items have to be quoted compulsorily. If any cell is found to be blank or quoted abnormally low, CDAC reserves the right to reject the bid.

### **C - My Document in Portal**

Scanned copies in **Prescribed Formats and all supported documents required as per all Annexures and Proformas given in the tender documentare** to be attached in “My Document” in pdf format file duly digitally signed by the bidder. Copy of GST registration certificate and acknowledgement of upto date filed return shall be attached thereto.

The tenders shall be strictly as per the conditions of the contract. Tenders with any additional condition(s)/modifications shall be rejected.

**NOTE:** - a) All the documents should be digitally signed.

2.3 **Bid Validity:-** The offer should be valid for 180 (One hundred Eighty) days from the last date of opening of tenders. In exceptional circumstances, prior to expiry of the original time limit, the C-DAC may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders’ responses shall be made in writing or by email/cable. A bidder will not be required or permitted to modify his bid, but will be required to extend the validity of his earnest money for a period of the extension.

2.4 **The Earnest Money may be forfeited:**

- a) If the Bidder withdraws the Bid after bid opening (technical bid) during the period of Bid validity;
- b) In the case of a successful Bidder, if the Bidder fails to furnish the required Performance Security & Sign the Agreement
- c) The Bid without EMD shall be considered incomplete and summarily rejected. Bidders are required to submit the declaration form as per the performa XIII.

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### **3.0 Online Submission of Bids**

#### **3.1 Bidding through E-Tendering System:**

- (a) The bidding under this contract is electronic bid submission through website <https://etenders.gov.in/eprocure/app>. Detailed guidelines for viewing bids and submission of online bids are given on the website. Any citizen or prospective bidder can logon to this website and view the Invitation for bids and can view the details of work for which the bid is invited. The prospective bidder can submit bid online; however the bidder is required to have enrolment /registration in the website and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token. The DSC can be obtained from any authorised certifying agencies. The bidder should register in the website <https://etenders.gov.in/eprocure/app> using the relevant option available. Then the digital signature registration has to be done with the e-token, after logging into the site. After this the bidder can login the site through secured login by entering the password of the e-token & the user id/password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise, the bid will be rejected.
- (b) The completed bid comprising of documents, should be uploaded on the website given above through e-tendering along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of bid security in case it is provided in the form of DD.

#### **3.2 Deadline for Submission of Bids**

- (a) Complete Bids in two parts as mentioned above must be received on CPPP portal Online not later than the date and time indicated in the Bid Data Sheet and also copy of online Payment of EMD, Cost of tender document, Affidavit as mentioned in NIT.
- (b) C-DAC may extend the deadline for submission of bids by issuing an amendment, in which case all rights and obligations of C-DAC and the bidders, previously subject to the original deadline will then be subject to the new deadline.

#### **3.3 Modification/Withdrawal/Late Bids:**

- (a) The electronic bidding system would not allow any late submission of bids after due date & time as per server time.
- (b) Bidders may modify their bids by uploading their request for modification before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of tender document. For bid modification and consequential re-submission, the bidder is not

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required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. The bidders may withdraw his bid by uploading their request before the deadline for submission of bids, however, if the bid is withdrawn, the re-submission of the bid is not allowed.

- (c) No bid shall be modified or withdrawn after the deadline of submission of bids.
- (d) Withdrawal or modification of a bid between the deadline for submission of bids and the expiration of the original period of bid validity as mentioned elsewhere above or as extended pursuant to tender inviting authority's requirement may result in the forfeiture of the bid security.

### **4.0 Bid Opening and Evaluation: -**

- 4.1 (a) C-DAC inviting bids or its authorized representatives will open the bids online and this could be viewed by the bidders also online. In the event of the specified date for the opening of bids being declared a holiday for C-DAC, the bids will be opened at the appointed time on the next working day.
- (b) The file containing the Part I of the bid will be opened first.
- (c) In all cases, the amount of bid security, cost of bid documents, processing fee for e-tender and validity of the bid shall be scrutinized. Thereafter, the bidders' name and such other details as C-DAC may consider appropriate, will be notified as Part I bid opening summary by the authority inviting bids at the online opening.
- (d) Evaluation of Part I of bids with respect to bid security, qualification information and other information furnished in Part I of the bid, shall be taken up, and a list will be drawn up of the qualified bidders whose Part II of bids will be eligible for opening.
- (e) The result of evaluation of Part I of the Bids shall be made public on e-procurement following which on next working day from the date of making public the result of evaluation of Part I of the Bids part II or the price bid of the qualified bidders will be opened.
- (g) C-DAC shall inform, the bidders, who have qualified during evaluation of Part I of bids, of the date, time of online opening of Part II of the bid, if the specified date of opening of financial bid is changed. In the event of the specified date being declared a holiday for C-DAC, the bids will be opened at the appointed time and location on the next working day.
- (h) Part II of bids of only these bidders will be opened online, who have qualified in Part I of the bid. The bidders' names, the Bid prices, the total

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amount of each bid, and such other details as C-DAC may consider appropriate will be notified online by C-DAC at the time of bid opening.

Financial proposal with any counter conditions or ambiguous remarks shall be rejected.

### **4.2 Process to be Confidential**

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

Clarification of Bids and Contacting C-DAC: -

- (a) No Bidder shall contact C-DAC on any matter relating to its bid from the time of the bid opening to the time the contract is awarded.
- (b) Any attempt by the bidder to influence the C-DAC's bid evaluation, bid comparison or contract award decision may result in the rejection of his bid.

### **4.3 Examination of Bids and Determination of Responsiveness**

- (a) During the detailed evaluation of “Technical Bids”, C-DAC will determine whether each Bid (a) meets the eligibility and Qualifying criteria (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the bidding documents. During the detailed evaluation of the “Financial Bids”, the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings.
- (b) A substantially responsive “Financial Bid” is one, which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the bidding documents, C-DAC's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids. No conditional bid will be accepted in any form.

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- (c) If a “Financial Bid” is not substantially responsive, it will be rejected by C-DAC, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

### **4.4 Correction of Errors**

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

### **4.5 Evaluation and Comparison of Bids**

- (a) C-DAC will evaluate and compare only the bids determined to be substantially responsive.
- (b) In evaluating the bids, C-DAC will determine for each bid the evaluated bid price by adjusting the bid price by making corrections, if any.
- (c) If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer’s estimate of the cost of work to be performed under the contract, C-DAC may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, C-DAC may require that the amount of the performance security set forth to be increased at the expense of the successful Bidder to a level sufficient to protect C-DAC against financial loss in the event of default of the successful Bidder under the Contract. The amount of the increased performance security shall be decided at the sole discretion of C-DAC, which shall be final, binding and conclusive on the bidder.
- (d) To assist in the examination, evaluation and comparison of bids, C-DAC may, at its discretion, ask any bidder for providing clarification of his bid, including breakdown of the unit rates. The request for clarification and the response shall be in writing or by cable/email but no change in the price or substance of the bid shall be sought, offered, permitted. If clarification is not provided within the stipulated time period, the bid will be declared non-responsive.



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### 5.0 Award of Contract

#### 5.1 Award Criteria

C-DAC will award the Contract to the Bidder whose Bid has been determined as follows:-

- i) The contract of the project will be awarded to the bidder who be the commercially lowest bidder i.e. L1
- ii) In case of tie in commercial bids, the bidder with higher turnover in last financial year(2022-23) will be awarded the work.

#### 5.2 C-DAC’s Right to accept any Bid and to reject any or all Bids

C-DAC reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the C-DAC’s action.

#### 5.3 Notification of Award and Signing of Agreement.

- a. bidder whose Bid has been accepted will be notified of the award by C-DAC prior to expiration of the Bid validity period by cable, fax, letter, e-mail or facsimile confirmed by registered letter. This letter (hereinafter and in the Part I *General Conditions of Contract* called the “Letter of Acceptance”) will state the sum that C-DAC would pay to the Contractor in consideration of the execution (hereinafter and in the Contract called the “Contract Price”) till the completion period.
- b. The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security.
- c. The Agreement will incorporate all agreements and required terms and conditions, between C-DAC and the successful Bidder. It will be signed by C-DAC and the successful Bidder after the performance security is furnished. Successful bidder shall sign the Non-Disclosure Agreement in favour of C-DAC.

#### 5.4 Corrupt or Fraudulent Practices

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

Corrupt & fraudulent practice and Fraud prevention policy - C-DAC will reject a proposal for award, if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with C-DAC. Any central Government agency, and/or any other state agencies, if it at any time determines that the bidder has engaged in corrupt or fraudulent practices in competing for the contract, or in execution of the work related to contract, if C-DAC determines

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that the Contractor has engaged incorrupt, fraudulent, collusive, coercive, or obstructive practices, in competing for or in executing the Contract, then C-DAC may, after giving 14 days’ notice to the contractor, terminate the Contractor’s engagement under the Contract and expel him from the work.

### **6.0 Performance Guarantee:-**

Within 15 days from the date of issue of LOA / LOI, the successful bidder shall submit Performance Guarantee amounting to 5% (Five percent) of the awarded value of work in the form of DD Account payee, Banker’s Cheque or Bank Guarantee in favour of C-DAC, Payable at Pune or Bank Guarantee from the Nationalized /Scheduled Bank of equivalent value. No interest will be paid under any circumstances. The Performance Bank Guarantee shall remain valid till completion of project/taking over by C-DAC/client whichever is later. An amount is to be deposited equivalent to 0.01% per day of the amount of Performance guarantee for extended /delayed period of submission of Performance guarantee. In no case the extension will be granted for more than 15 days. In case of non-submission of Performance guarantee within stipulated / extended period, it will be presumed that successful bidder is not interested in the work and EMD submitted will be forfeited without any notice and shall be disqualified from bidding for any contract with you for a period of one year from the date of notification.

In case of Bank Guarantee, Bank Guarantee shall be sent to C-DAC by issuing bank directly under registered post (A/D).

This Performance Guarantee initially be submitted with the validity till scheduled completion period as per tender document plus minimum 6 months beyond that. but in case of extension of completion due to any reason, it is the responsibility of the agency to get it extended one month prior to its expiry without any claim on it, in case of failure, C-DAC may get it en-cashed without giving any notice.

On receipt of the performance guarantee in the form of DD/BG & duly confirmed from issuing branch the EMD will be refunded. EMD deposited in the form of Banker’s Cheque /Demand draft will be refunded.

The Contractor shall submit genuine and valid Bank Guarantee to C-DAC. The Contractor agrees that the contractor shall not indulge in any fraudulent activity and in any point of time including after being successful bidder, if any fraudulent act shall have been committed by the contractor then C-DAC shall have full rights to forfeit the EMD, Security deposit, performance Guarantee, whatsoever without any notice to the Contractor apart from taking action as deemed fit under terms and condition of the contract including termination of the awarded

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work.

### 7. RETENTION MONEY:-

Retention Money will be deducted from the successful contractor at the rate of 10 % from the Gross value of each R/A bills till it reaches 5% of the contract value. No interest will be paid on the Security Deposit under any circumstances. The total retention money will be refunded only after expiry of defect liability period of one year. However, after successful completion of work, retention money can be released against bank guarantee from the Nationalized / Scheduled Bank as per CDAC approved format.

8. On acceptance of tender, the name of the authorized representative(s) of the contractor who would be responsible for taking instructions from Engineer-in-charge or his authorized representative shall be intimated by the contractor within 07 days from the date of issue of telegram/letter/telex/fax/email of intents by C-DAC.
9. The tenderer shall not be permitted to tender for works if his near relative is posted as an Accountant or an Assistant Engineer or any higher ranks in the project office or concerned office of the C-DAC. The contractor shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any of the officers in C-DAC. Any breach of this condition by the tenderer would render him liable to the withdrawal of the work awarded to him and forfeit of Earnest Money and Security Deposit. This may also debar the contractor from tendering for future works under C-DAC.

### 10. TAXES AND DUTIES.

- 10.1 The contract price is inclusive of all taxes.
- 10.2 **The contract price will remain firm till the end of contract** even in case of any change in rate of tax or any provision relating levy of tax resulting in increase in burden of tax on the contractor. The contractor shall NOT be entitled to receive ANY compensation for such increase in quantum of tax on the contractor.
- 10.3 Contractor must be registered under Goods and Service tax (GST) laws, and copy of the registration certificate of the same shall be submitted to C-DAC.
- 10.4 Apart from the registration as mentioned at 10.3 above contractors shall also obtain all other necessary registrations required under any other Local/State/Union Government Statute, for the execution of this contract, if any.
- 10.5 Contractor must submit as a compliance of GST Laws, Tax invoice, as per applicable rules and regulations under the GST Act(s), failing which GST amount will be recovered by C-DAC without any recourse or prior notice from the next invoices/security Deposit/Bank Guarantees and/or available dues with C-DAC.

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- 10.6 The contractor/service provider shall be responsible for issuing of Tax Invoices, filing of statutory return and deposit of statutory taxes within the time limit as prescribed in law. Any interest/Penalty/taxes (non-availment of Input tax credit due to mismatch to GSTR2) which is required to be paid by C-DAC due to default by the Contractor/service provider to comply with the above-mentioned activity/provisions as prescribed in laws, rules and regulations shall be recovered from the Contractor/Service provider and adjustment shall be made when mismatch is attended and solved and credit is extended to C-DAC.
- 10.7 Apart from compliance mentioned at 10.6 above, in the event of nonpayment/default in payment of taxes and duties and any other statutory compliances, under any other Local/State/Union Government Statute, C-DAC reserves the right to withhold the dues/payment of contractor and make payment to Local/State/Union Government authorities or to Labourers, as may be applicable.
- 10.8 It is clearly understood that the contractor is fully aware of all GST Laws and his Liabilities and responsibilities under the said laws including but not restricted to correct HSN/SAC code, applicable rate of taxes of GST or otherwise on which his liability has to be paid and discharged. C-DAC shall have no liability or responsibility for any penalty or proceedings or any other liability levied or leviable on the contractor because of lower deduction or any other such non-compliance of the contractor.
- 10.9 Bidders will examine the various provisions of the central Goods and Service Tax Act,2017 (CGST)/ Goods and Service tax Act(IGST)/Union Territory Goods and Service Tax Act,2017(UTGST)/respective state’s State Goods and Service tax Act(SGST) also, as notified by Central/State Government and as amended from time to time and applicable taxes before bidding. Bidders will ensure that full benefit of input tax Credit (ITC) likely to be availed by them is duly considered while quoting rates.
- 10.10 In case of any law requires C-DAC to pay tax on the contract price on reverse charge basis, the amount of tax deposited by C-DAC would be considered as per Income Tax Act, GST Laws or any other law as applicable.
- 10.11 Stamp duty and registration charges, if any, payable on the executed contract document, shall be borne by the contractor.
11. **Time for completion of project:-** Total work is to be completed within **180 Days** including rainy season and holidays from the date of award.
12. The tenderer shall be deemed to have gone through the various conditions and clauses of the tender and visited the site before quoting their rates, once they make an offer for this work. No claim shall be entertained on this account.

**MEMORANDUM**

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S.No	Description	Reference	Values/Description to be applicable for relevant clause(s)
1.	Name of Work	As per e-NIT	“Physical Security Infrastructure Work, CIP, CDAC, PUNE.”
2.	Client/Owner	As per e-NIT	Centre for Development of Advanced Computing
3.	Type of Tender	As per e-NIT	Item rate
4.	Earnest Money deposit	As per e-NIT	<b>Rs. 8 lakhs(Rupees Eight lakhs Only)</b>
	<p>BID to be submitted in the form of Insurance Surety Bonds, Account payee Demand Draft, Fixed Deposit Receipt, Banker’s Cheque or Bank Guarantee or online payment can be made for the full amount as above or minimum of <b>Rs. 8,00,000 /-</b> issued from Nationalized/Scheduled pvt. Bank as per Memorandum attached with tender document or online payment through RTGS/NEFT in <u>above mentioned bank details</u> C-DAC payable at Pune. In case of Bank Guarantee, Bank Guarantee shall be sent to C-DAC by issuing bank directly under registered post (A/D).</p>		
5.	Time for completion	As per e-NIT	Total work is to be completed within 180 days including the rainy season and holidays
6.	Validity of Tender	As per e-NIT	180 (one hundred eighty) days
7.	Performance Guarantee	As per e-NIT	A Performance Guarantee cum Security Deposit amounting to 5% of the contract value to be submitted within 15 days from the date of issuance of the work order. The validity of the Performance Bank Guarantee (PBG) will be 72 months from the date of submission. This period includes the work execution period, warranty period, and claim period. Upon expiry of the PBG validity, it will be returned.
8.	Retention Money	As per e-NIT	Retention Money will be deducted from the successful contractor at a rate of 10% from the gross value of each running bill until it accumulates to 5% of the total work execution

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			<p>value in the Final Work Execution bill. No interest will be paid on the retention amount. The total retention money will be refunded only after the expiry of the defect liability period of one year, following the successful installation, commissioning of the entire solution, and acceptance by CDAC.</p> <p>Note: - This 5% retention money can be released during Final Work Execution Bill Processing subject to submission of an additional bank guarantee for an equivalent amount from a Nationalized or Scheduled Bank. This BG against retention money will be returned after successful completion of one year of Defect Liability period following the successful installation, commissioning of the entire solution, and acceptance by CDAC.</p>
9.	Defect liability period/Comprehensive Warranty of Products	As per e-NIT	60 Months (Sixty Months from the date of handing over of works to Owner/C-DAC.

# “Tender for Physical Security Infrastructure Work CIP CDAC PUNE”

## GENERAL CONDITIONS OF CONTRACT

### 1.0 GENERAL

The Contract means the documents forming the tender and acceptance thereof and the agreement executed between the competent person on behalf of C-DAC and the contractor, together with the documents referred to therein including these conditions, the annexures, appendices etc., the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

- 1.1 **Centre for Development of Advanced Computing**, hereinafter called ‘C-DAC’ proposes to get the works executed as mentioned in the Contract on behalf of Owner/ Client.
- 1.2 The work will be executed as per drawings “GOOD FOR CONSTRUCTION” to be prepared including revision if any by the contractor and approved by CDAC within 15 days of the award of order by C-DAC.
- 1.3 In the contract, the following expressions shall, unless the context otherwise requires, have the meaning, hereby respectively assigned to them.

### 1.4 DEFINITIONS

- a. **ENGINEER-IN-CHARGE** means the PROJECT MANAGER or an officer nominated by C-DAC who shall, for and on behalf of C-DAC, supervise and be in-charge and report the progress of the work to C-DAC from time to time.
- b. **WORKS OR WORK:** The expression works or work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
- c. **CONTRACTOR** means the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
- d. **DRAWINGS** mean the drawings referred to in the Bill of Quantities, specifications and any modifications of such drawings or such other drawings as may from time to time be furnished or approved by C-DAC.
- e. **SITE** means the lands and other places on, under, in or through which the works are to be executed or carried out and any other lands or places provided by C-DAC or used for the purpose of the agreement.

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- f. **APPROVAL** means approved in writing including subsequent written confirmation of previous verbal approval.
- g. **WRITING** means any manuscript typed written or printed statement under or over signature and/or seal as the case may be.
- h. **MONTH** means English Calendar month ‘Day’ means a Calendar Day of 24 Hrs each.
- i. **CONTRACT VALUE** means the sum for which the tender is accepted as per the letter of intent.
- j. **LANGUAGE:** All documents and correspondence in respect of this contract shall be in English Language.
- k. **BILL OF QUANTITIES** or **SCHEDULE OF QUANTITIES** means the priced and completed Bill of Quantities or Schedule of Quantities forming part of the tender.
- l. **OWNER** means C-DAC who has awarded the work to Contractor as implementing agency.
- m. **TENDER** means the Contractor’s priced offer to C-DAC for the execution and completion of the work and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter of Intent or Award letter. The word TENDER is synonymous with Bid and the word TENDER DOCUMENTS with “Bidding Documents” or “offer documents”.
- n. The headings in the clauses/ conditions of tender documents are for convenience only and shall not be used for interpretation of the clause/ condition.
- o. Words imparting the singular meaning only also include the plurals and vice versa where the context requires. Words imparting persons or parties shall include firms, companies and other organizations having legal capacities.

### 2.0 SITE VISIT AND COLLECTING LOCAL INFORMATION

Before tendering, the tenderer/bidders shall visit the site, its surroundings to assess and satisfy themselves about the local conditions such as the working and other constraints at site, approach to the site, availability of water & power supply, application of taxes, cess duties and levies as applicable, nature of Site condition, & any other relevant information required by them to execute complete scope of work.

The tenderer may obtain all necessary information as to risks, weather conditions, contingencies & other circumstances (insurgencies etc.), which may influence or affect their tender prices. Tenderer shall consider all site conditions and get satisfied himself in all respect before quoting his rate and no claim or extra charges whatsoever in this regard shall be entertained / payable by the C-DAC at a later date.

### 2.1 ACCESS BY ROAD



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Non-availability of access roads or approach to site, for the use of the contractor shall in no case condone any delay in the execution of work nor be the cause for any claim for compensation.

### **2.2 HANDING OVER & CLEARING OF SITE**

- 2.2.1 If required, the contractor has to do site clearance, enabling work, barricading, shifting/ realignment of existing utility services etc. at his own cost as per the direction of Engineer-in-charge and the contractor shall not be entitled for any extra payment whatsoever in this regard.
- 2.2.2 Necessary arrangements including its maintenance are to be made by the contractor for temporary diversion of flow of the existing drain and road, as the case may be. The existing drain, road would be demolished, wherever required, with the progress of work under the scope of proposed project. The existing Road and Drain, which are not in the alignment of the said project but are affected and/ or need to be demolished during execution for smooth progress of the project, shall be rehabilitated to its original status and condition (including black topping) by the contractor at his own cost. The cost to be incurred by contractor in these regards shall be deemed to be included in the quoted rates of the Bill of Quantities items and contractor shall not be entitled for any extra payment whatsoever, in these regards.
- 2.2.3 The information about the public utilities (whether over ground or underground) like electrical/ telephone/ water supply lines, OFC Cables, open drain etc. is the responsibility of contractor to ascertain the utilities that are to be affected by the works through the site investigation and collection of information from the concerned utility owners.
- 2.2.4 The contractor shall be responsible to obtain necessary approval from the respective authorities for shifting/ re-alignment of existing public utilities. C-DAC shall only assist the contractor for liaising in obtaining the approval from the concerned authorities. Take all measures reasonably required by the various bodies to protect their services and property during the progress of works. It shall be deemed to be the part of the contract and no extra payment shall be made to the contractor for the same. Shifting/ re-alignment of public utilities should be done without disturbing the existing one. New service lines should be laid and connected before dismantling the existing one.
- 2.2.5 Shifting/ re-alignment of existing public utilities shall be done by the contractor as per technical requirement of respective bodies or as per direction of Engineer-in-Charge. Shifting/ re-alignment of public utilities include all materials, labours, tools and plants and any other expenses whatsoever for the same. The cost to be incurred in this regard shall be deemed to be included in his quoted rates of BOQ items and the contractor shall not be entitled for any extra payment, whatsoever,

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in this regard. In case any of these services are shifted by the State Govt/ local authorities themselves for which deposit as per their estimates is to be made to them, the contractor shall deposit the same and the contractor shall be paid only at the rates quoted by them in BOQ for quantity specified in the BOQ, if such items are included in the BOQ irrespective of amount paid by him to the State Govt./ local authorities for execution of these works. In case such provision is not made in the BOQ or the quantity exceeds those specified in the BOQ, the same is deemed to be included in the rates quoted by him for other items in BOQ and nothing extra shall be payable to contractor on this account.

### **3.0 SCOPE OF WORK**

3.1 The scope of work covered in this tender shall be as per the Bill of Quantities, specifications, drawings, instructions, orders issued to the contractor from time to time during the work. The drawings for this work, which may be referred for tendering, provide general idea only about the work to be performed under the scope of this contract. These may not be the final drawings and may not indicate the full range of the work under the scope of this contract. “GOOD FOR CONSTRUCTION” drawings will be prepared by the contractor and get it approved by the Engineer-in-charge of C-DAC and accordingly be executed according to any additions/ modifications/ alterations/ deletions made from time to time, as required by any other drawings that would be issued to the contractor progressively during execution of work. It shall be the responsibility of the contractor to incorporate the changes that may be in this scope of work, envisaged at the time of tendering and as actually required to be executed.

3.2 The quantities of various items as entered in the “BILL OF QUANTITIES” are indicative only and may vary depending upon the actual requirement. The contractor shall be bound to carry out and complete the stipulated work irrespective of the variation in individual items specified in the bill of quantities.

### **4.0 VALIDITY OF TENDER**

The tender for the works shall remain open for acceptance for a period of **180 days** from the last date of opening of tenders. The earnest money will be forfeited without prejudice to any right or remedy, in case the contractor withdraws his tender during the validity period or in case he changes his offer to his benefits, which are not acceptable to C-DAC. The validity period may be extended on mutual consent.

### **5.0 ACCEPTANCE OF TENDER**

5.1 C-DAC reserves to itself the authority to reject any or all the tenders received without assigning any reason. C-DAC reserves the right to disqualify any bidder

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should it be deemed so necessary at any stage on the grounds of national security. The acceptance of a tender shall be effective w.e.f. the date on which the telegram/ e-mail, letter of intent of acceptance of the tender is put in the communication by C-DAC. C-DAC also reserves the right to Split the work among two or more parties at lowest negotiated rate without assigning any reason thereof. The contractor is bound to accept the portion of work as offered by C-DAC after split up at the quoted/-negotiated rates.

- 5.2 C-DAC reserve the rights to restrict the bidder(s) for opening the price bid in case there are number of packages in the vicinity and the C-DAC does not want to award more than its specified number of packages as matter of strategy to one bidder, the bid in such case will be returned unopened as mentioned in the “Tender document” in such case. Order of Opening of bids shall be in order of decreasing value of packages.

### **6.0 SET OF CONTRACT DOCUMENTS**

1. Notice Inviting tender
2. Corrigendum(s) and Addendum (s).
3. Pre-qualification documents
4. General Conditions of contract
5. Special conditions and formats(if any)
6. BOQ/schedule of rates
7. Technical Specifications
8. Tender drawings

### **7.0 EARNEST MONEY DEPOSIT**

- 7.1 Earnest Money Deposit of amount as mentioned in “Memorandum to Form of Tender” required to be submitted along with the tender shall be in the form of NEFT/RTGS in mentioned account or Account payee Demand Draft, or Bank Guarantee, payable at place as mentioned in “NIT/ Instructions to Tenderer” in favor of C-DAC Limited from any Nationalized / scheduled Bank of India, or Bank Guarantee in enclosed format from any Nationalized / Scheduled Bank as per list annexed. The EMD shall be valid for minimum period of 150 days (One hundred and fifty days) from last day of submission of Tender.

**In case of Bank Guarantee, Bank Guarantee shall be sent to C-DAC by issuing bank directly under registered post (A/D).**

- 7.2 EMD Declaration shall accompany the offer and placed in the sealed envelope cover of the offer as detailed in the Instruction to tenderer. Any tender not accompanied with the requisite Earnest Money Deposit Declaration along with Letter of Acceptance shall be rejected and such tenderer(s) will not be allowed to attend the opening of bids. Conditional tenders will be summarily rejected.

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- 7.3 The EMD will be returned to all unsuccessful or technically unqualified tenderers after opening of price bid and to the technically qualified tenderers other than lowest (L-1) within ten (10) days of the Award of the Contract to successful bidder. EMD of successful tenderer shall be refunded after submission of Performance Guarantee/ initial security deposit duly confirmed from issuing bank.
- 7.4 Once the tenderer has given an unconditional acceptance to the tender conditions in its entirety, he is not permitted to put any remark(s)/conditions(s) (except unconditional rebate on price, if any) in/ along-with the tender.
- 7.5 In case the condition 7.4 mentioned above is found violated at any time after opening of tender, the tender shall be summarily rejected and C-DAC shall, without prejudice to any other right or remedy, be at liberty to forfeit the full said Earnest Money absolutely.
- 7.6 No interest shall be payable by C-DAC on the said amount covered under EMD/Other security deposits.

### **8.0 PERFORMANCE GUARANTEE**

Within 15 days from the date of issue of LOA / LOI, the tenderer shall submit Performance Guarantee amounting to 5% (Five percent) of the awarded value of work in the form of Account payee Demand Draft, or Bank Guarantee from the Nationalized /Scheduled Bank of equivalent value. No interest will be paid under any circumstances. The Performance Bank Guarantee shall remain valid till completion of project/taking over by client whichever is later. An amount is to be deposited equivalent to 0.01% per day of the amount of Performance guarantee for extended /delayed period of submission of Performance guarantee. In no case the extension will be granted for more than 15 days. In case of non-submission of Performance guarantee with in stipulated / extended period, it will be presumed that successful bidder is not interested in the work and EMD submitted will be forfeited without any notice. Shall be disqualified from bidding for any contract with bidder for a period of one year from the date of notification.

**This Performance Guarantee initially be submitted with the validity till scheduled completion period as per tender document plus minimum 2 months claim months beyond that period.**

On receipt of the performance guarantee in the form of DD/BG & duly confirmed from issuing branch the EMD will be refunded. EMD deposited in the form of Banker's Cheque /Demand draft will be refunded.

- 9.0 The Contractor shall submit genuine and valid Bank Guarantee to C-DAC. The Contractor agrees that the contractor shall not indulge in any fraudulent activity and in any point of time including after being successful bidder, if any fraudulent

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act shall have been committed by the contractor, then C-DAC shall have full rights to forfeit the EMD, Security deposit, performance Guarantee, whatsoever without any notice to the Contractor apart from taking action as deemed fit under terms and condition of the contract including termination of the awarded work.

### **10.0 MOBILISATION OF MEN, MATERIALS AND MACHINERY:**

- 10.1 All expenses towards mobilization at site and de-mobilization including bringing in equipment, work force, materials, dismantling the equipment's, clearing the site etc. shall be deemed to be included in prices quoted and no separate payment on account of such expenses shall be entertained.
- 10.2 It shall be the responsibility of the Contractor to provide, operate and maintain all necessary construction equipment's, scaffoldings and safety, gadget, lifting tackles, tools and appliances to perform the work in a workman like and efficient manner and complete all jobs as per the specifications and within the schedule time of completion of work. Further, contractor shall also be responsible for obtaining temporary electric and water connection for all purposes. The contractor shall also make standby arrangement for water & electricity to ensure un-interrupted supply.
- 10.3 It shall be the responsibility of the contractor to obtain the approval for any revision and/ or modification of work desired by him from C-DAC before implementation. Also such revisions and/or modifications if accepted / approved by the C-DAC shall be carried at no extra cost to C-DAC.
- 10.4 The procurement and supply in sequence and at the appropriate time of all materials and consumable shall be entirely the contractor's responsibilities and his rates for execution of work shall be inclusive of supply of all these items.
- 10.5 It is mandatory for the contractor to provide safety equipment's and gadgets to its all workers, supervisory and technical staff engaged in the execution of the work while working. The cost of the above equipment's/ gadgets is deemed to be included in the rates quoted by the contractor for the items & works as per Bill of Quantities and contractor shall not be entitled for any extra cost in this regard. The above norm is to be strictly complied with at site. In case the contractor is found to be deficient in providing Safety Equipment's/ Gadgets in the opinion of Engineer-in-charge, the Engineer-in-charge at his option can procure the same at the risk & cost of contractor and provide the same for the use of worksite and shall make the recoveries from the bills of the contractor for the same. The decision of the Engineer-in-charge shall be final and binding on contractor in this regard.
- 10.6 All designs and drawings shall be supplied by Contractor for execution of work at his own cost and get it certified from C-DAC prior execution of the work. However, it shall be the duty and responsibility of contractor to bring to the notice of the

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C-DAC in writing as to any variation, discrepancy or any other changes required and to obtain revised drawings and designs and / or approval of the C-DAC in writing for the same.

- 10.7 One copy of contract documents including drawings furnished to the contractor shall be kept at the site and the same shall at all reasonable times be available for inspection.
- 10.8 All materials and equipments etc. once brought by the contractor within the project area, will not be allowed to be removed from the premises without the written permission of C-DAC. Similarly, all enabling works built by the contractor for the main work undertaken by him, shall not be dismantled and removed without the written authority of C-DAC.

### **11.0 TDS DEDUCTION FROM PAYMENTS**

TDS under Income Tax and GST TDS under GST shall be deducted from all payments made to the contractor including advances in accordance with the Income Tax Act & GST Act prevailing from time to time.

### **12.0 RATES TO BE FIRM**

- 12.1 The item rates quoted by the tenderer shall be firm and fixed for the entire period of completion and till handing over of the work.
- 12.2 The contractor shall be deemed to have inspected the site, it's surrounding and acquainted with the nature of the ground, accessibility of the site and full extent and nature of all operations necessary for the full and proper execution of the contract, space for storage of materials, supply and use of labour, materials, equipment and laws, rules and regulations, if any, imposed by the local authorities.
- 12.3 The rates and prices given in the bill of quantities are for completed and finished items of works and complete in all respects. It will be deemed to include all equipments required for work, labour, supervision, materials, transport, all temporary works, erection, maintenance, contractor's profit and establishment/overheads, together with preparation of designs & drawings pertaining to casting yard, shop drawing, fabrication drawing (if required) etc. all general risk, taxes, royalty, duties, cess, and other levies, insurance liabilities and obligations set out or implied in the tender documents and contract.
- 12.4 If any temporary/ permanent structure is encountered or safety of such structure in the vicinity is endangered due to execution of the project, the contractor has to protect the structures by any means as per the directions of the Engineer - in - Charge. If any damage caused to any temporary or permanent structure(s) in the vicinity is caused due to execution of the project, the contractor has to make good the same by any means as per directions of the Engineer - in - Charge. The contractor should inspect the site of work from this point of view.

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### **13.0 INSURANCE OF WORKS ETC.**

Contractor is required to take **contractor’s all risk policy** or erection all risk policy (as the case may be) from an approved insurance company in the joint name with C-DAC and bear all costs towards the same for the full period of execution of works including the defect liability period for the full amount of contract against all loss of damage from whatever cause arising other than excepted risks for which he is responsible under the terms of the contract and in such manner that the C-DAC and the contractor are covered during the period of construction of works and/or also covered during the period of defect liability for loss or damage:

- a. The work and the temporary works to the full value of such works.
- b. The materials, equipments and scaffolding materials and other things brought to the site for their full value.

Whenever required by C-DAC, the contractor shall produce the policy or the policies of insurance and the receipts for payment of the current premiums.

### **14.0 INSURANCE UNDER WORKMEN COMPENSATION ACT**

Contractor is required to take insurance cover under the Workmen Compensation Act, 1923 amended from time to time from an approved insurance company and pay premium charges thereof. Wherever required by C-DAC the contractor shall produce the policy or the policies of Insurance and the receipt of payment of the current premiums.

### **15.0 THIRD PARTY INSURANCE**

Contractor is required to take third party insurance cover for an amount of 5% (five percent) of contract value from an approved insurance company for insurance against any damage, injury or loss which may occur to any person or property including that of C-DAC, arising out of the execution of the works or temporary works. Wherever required by C-DAC the contractor shall produce the policy or the policies of Insurance and the receipt of payment of the current premiums. In case of failure of the contractor to obtain contractor's all risk policy, insurance under Workmen Compensation Act and third-party insurance as described above within one month from the date of commencement of work, running account payments of the contractor shall be withheld till such time the contractor obtains the aforesaid insurance covers.

If the Contractor could not effect a comprehensive insurance cover against risks which he may be required to effect under the terms of the contract, then he shall give his attention to get the best insurance cover available and even in case of effecting a wider insurance cover than the one which the subsidiary of the General

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Insurance Company could offer, such an insurance is ought to be done after the C-DAC’s approval, by or through the subsidiary of the General Insurance Company.

### **16.0 INDEMNITY AGAINST PATENT RIGHTS**

The contractor shall fully indemnify C-DAC from and against all claims and proceedings for or on account of any infringement of any patent rights, design, trademark or name or other protected rights in respect of any construction plant, machine, work or material used for in connection with the works or temporary works.

The Contractor shall fully indemnify C-DAC from and against all costs, damages, expenses, claims, proceedings for or on account of any infringement of any of the terms and conditions of this Tender Document by or on behalf of the Contractor.

### **17.0 LABOUR LAWS TO BE COMPLIED BY THE CONTRACTOR**

The contractor shall obtain a valid license under the Contract Labour (R & A) Act 1970 and the Contract Labour Act (R&A) Central Rules 1971 and amended from time to time, and continue to have a valid license until the completion of the work including defect liability period. The contractor shall also abide by the provision of the Child Labour (Prohibition and Regulation) Act-1986 and amended from time to time. Any failure to fulfill this requirement shall attract the penal provisions of this contract arising out the resultant for non-execution of the work before the commencement of work.

17.1 No labour below the age of 18 years shall be employed on the work.

### **18.0 LABOUR SAFETY PROVISION**

The contractor shall be fully responsible to observe the labour safety provisions.

### **19.0 OBSERVANCE OF LABOUR LAWS**

19.1 The contractor shall be fully responsible for observance of all labour laws applicable including local laws and other laws applicable in this matter and shall indemnify and keep indemnified C-DAC against effect or non observance of any such laws. The contractor shall be liable to make payment to all its employees, workers and sub-contractors and make compliance with labour laws. If C-DAC or the client/ owner is held liable as “Principal Employer” to pay contributions etc. under legislation of Govt. or Court decision in respect of the employees of the contractor, then the contractor would reimburse the amount of such payments, contribution etc. to C-DAC and/ or same shall be deducted from the payments, security deposit etc. of the contractor.

### **20.0 LAW GOVERNING THE CONTRACT**

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Seal and Signature of the Agency / Contractor

Seal and Signature  
C-DAC



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The Indian Laws for the time being in force shall govern this contract.

### **21.0 LAWS, BY LAWS RELATING TO THE WORK**

The contractor shall strictly abide by the provisions, for the time being in force, of law relating to works or any regulations and bylaws made by any local authority or any water & lighting agencies or any undertakings within the limits of the jurisdiction of which the work is proposed to be executed. The contractor shall be bound to give to the authorities concerned such notices and take all approvals as may be provided in the law, regulations or bylaws as aforesaid, and to pay all fees and taxes payable to such authorities in respect thereof.

### **22.0 EMPLOYMENT OF PERSONNEL**

22.1 The contractor shall employ only Indian Nationals as his representatives, servants and workmen after verifying their antecedents and loyalty. He shall ensure that no personnel of doubtful antecedents and any other nationality in any way are associated with the works.

22.2 C-DAC shall have full power and without giving any reason to the contractor, immediately to get removed any representative, agent, servant and workmen or employees on account of misconduct negligence or incompetence or whose continued employment may in his opinion be undesirable. The contractor shall not be allowed any compensation on this account.

### **23.0 TECHNICAL STAFF FOR WORK**

The contractor shall employ at his cost the adequate number of technical staff during the execution of this work depending upon the requirement of work. For this purpose, the numbers to be deployed, their qualification, experience as decided by C-DAC shall be final and binding on contractor. The contractor shall not be entitled for any extra payment in this regard. The technical staff should be available at site, whenever required by C-DAC to take instructions.

### **24.0 MEASUREMENTS OF WORKS**

Measurements of works shall be done as per BOQ. CPWD Manual will be followed in case of any confusion.

### **25.0 PAYMENTS GUIDELINES: -**

25.1 The contractor shall prepare computerized bills using the program as approved by Engineer-in-Charge as per prescribed format/ pro-forma. The Contractor shall submit five numbers of hard copies. he payment due to the contractor shall be made within 30 days of getting the measurements verified from the Engineer-in-Charge or his subordinate OR representative

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of PMC and/or representative of CDAC and certification of bill by the Engineer-in-Charge of PMC and/or representative of CDAC.

- 25.2 All running payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed and / or accepted by C-DAC and shall not preclude the recovery for bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the Contract, or any part thereof, in this respect, or the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of the C-DAC under these conditions or any of them as to the final settlement and adjustments of the accounts or otherwise, or in any other way vary/ affect the contract. The contractor shall submit the final bill within three months of the completion of work, otherwise C-DAC's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on contractor.
- 25.3 Each Running Bills should be accompanied by two sets of at-least 5 (five) photographs as per direction of Engineer-in-charge taken from various points depicting status of work as on Report/ Bill date along with Monthly Progress Report for the concerned month in the pro-forma to be given/ approved by Engineer-in-Charge. Intermittent progress Photographs as and when required shall also be provided by the Contractor at his own cost as per direction of Engineer-in-Charge. No payment of running account bill shall be released unless it is accompanied by progress photographs and Monthly Progress Report as above.
- 25.4 All payments shall be released by C-DAC online through RTGS/NEFT to the bank details given by the contractor.

### **26.0 WORK ON SUNDAYS, HOLIDAYS AND DURING NIGHT**

For carrying out work on Sunday and Holidays or during night, the contractor will approach the Engineer-in-Charge or his representative at least two days in advance and obtain his permission. The Engineer-in-Charge at his discretion can refuse such permission. The contractor shall have no claim on this account whatsoever. If work demand, the contractor shall make arrangements to carry out the work on Sundays, Holidays and in two, three shifts with the approval of Engineer-in-Charge at no extra cost to C-DAC.

### **27.0 NO IDLE CHARGES TOWARDS LABOUR OR P&M ETC.**

No idle charges or compensation shall be paid for idling of the contractor's labour, staff or P&M etc. on any ground or due to any reason whatsoever. C-DAC will not entertain any claim in this respect.

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### **28.0 WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS AND ORDERS ETC.**

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work assigned by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings.

The contractor shall comply with the provisions of the contract and execute the works with care and diligence and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

### **29.0 DIRECTION FOR WORKS**

29.1 All works to be executed under the contract shall be executed under the directions and subject to approval in all respects of the Engineer-in-Charge of C-DAC who shall be entitled to direct at what point or points and in what manner the works are to be commenced and executed.

29.2 The Engineer-in-Charge and his representative shall communicate or confirm their instructions to the contractor in respect of the execution of work during their site inspection in a ‘Works Site Order Book’ maintained at the site office of Engineer-in-Charge. The contractor or his authorized representative shall confirm receipt of such instructions by signing against the relevant orders in the book.

### **30.0 ORDER OF PRECEDENCE OF DOCUMENTS**

In case of difference, contradiction, discrepancy, dispute with regard to Conditions of

Contract, specifications, Drawings, Bill of quantities and rates quoted by the Contractor and other documents forming part of the contract, the following shall prevail in order of precedence.

- i. Agreement along with statement of agreed variations and its enclosures,
- ii. Special Conditions of Contract.
- iii. General Conditions of Contract.

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- iv. Letter of Intent, Letter of Award, Work Order
- v. Bill of Quantity / Schedule of Quantities
- vi. Standard Technical specifications (General, Additional and Technical Specification) as give in Tender documents.
- vii. Drawings.
- viii. CPWD Standard specifications (as specified in Technical Specification of the Tender) update with correction slips issued up to last date of receipt of tenders.
- ix. Relevant B.I.S. Codes.

### **31.0 TIME SCHEDULE & PROGRESS**

- 31.1 Time allowed for carrying out all the works as entered in the tender shall be as mentioned in the Tender conditions. The Date of start of contract shall be reckoned 10 days after the date of issue of letter/FAX/E-mail of intent/acceptance of tender. Time shall be the essence of the contract and contractor shall ensure the completion of the entire work within the stipulated time of completion.
- 31.2 The contractor shall also furnish within 10 days of date of receipt of letter of Intent, a CPM network/ PERT chart/ Bar Chart (in MS Project) along with quarterly milestones and resources plan for man, material & machinery to achieve the milestones for completion of work within stipulated time. This will be duly got approved from Concerned Zonal/UNIT office of C-DAC. This approved Network/ PERT Chart shall form a part of the agreement. Achievement of milestones as well as total completion has to be within the time period allowed.
- 31.3 Contractor shall mobilize and employ sufficient resources for completion of all the works as indicated in the agreed BAR CHART/Network. No additional payment will be made to the contractor for any multiple shift work or other incentive methods contemplated by him in his work schedule even though the time schedule is approved by the Engineer-in-Charge.
- 31.4 During the currency of the work the contractor is expected to adhere to the time schedule on miles stone and total completion and this adherence will be a part of Contractor’s performance under the contract. During the execution of the work contractor is expected to participate in the review and updating of the Network/ BAR CHART undertaken by the C-DAC. These reviews may be undertaken at the discretion of C-DAC either as a periodical appraisal measure or when the quantum of work order on the contractor is substantially changed through deviation orders or amendments. The review shall be held at site or any of the offices of C-DAC/ owner / consultant at the sole discretion of C-DAC. The contractor will adhere to the revised schedule thereafter. The approval to the revised schedule resulting in a

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completion date beyond the stipulated date of completion shall not automatically amount to a grant of extension of time to the contractor.

- 31.5 The contractor shall send completion report with as built drawings (3 sets) with soft CAD copies and maintenance schedule to the office of Engineer-in-Charge, of C-DAC in writing within a period of 30 days of completion of work.

### **32.0 WATER AND ELECTRICITY**

The contractor will be provided nearest Water & Electrical power point free of cost for the work purpose only and contractor has to make necessary connection from these points.

### **33.0 SCHEDULE OF QUANTITIES / BILL OF QUANTITIES/ QUANTITY VARIATION**

- 33.1 The work under this contract shall be carried out as per BOQ cum rate schedule. In case the description /specification as per BOQ are found to be incomplete, CPWD specifications shall be followed. Quantities mentioned in the rate schedule are approx. only and liable for variation due to change of scope of work/variation in schedule of quantities, changes in design etc. The tenderers shall undertake to execute actual quantities as per advice of C-DAC engineer and accordingly the final contract price shall be worked out on the basis of quantities actually executed at site in payments will also be regulated for the same.
- 33.2 All items of work in the bill of quantities/ schedule of quantities shall be carried out as per the CPWD manual, drawings and instructions of the Engineer-in-Charge of C-DAC and the rates shall include for supply of required materials including proper storage, consumables, skilled & unskilled labour, supervision and tools, tackles, plant & machinery complete as called for in the detailed specifications and conditions of the contract. The Contractor without the approval of the C-DAC shall execute no item, which is not covered in the bill of quantities. In case any Extra/Substituted item is carried out without specific approval, the same will not be paid.
- 33.3 If the rates for the extra items are not available in the BOQ then CPWD shall be followed as per the instruction of C-DAC Engineer-in Charge.

### **34.0 INDIAN STANDARDS**

Wherever any reference is made to any IS in any particular specifications, drawings or bill of quantities, it means the Indian Standards editions with the amendments current at the last date of receipt of tender documents.

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### **35.0 WORKS TO BE OPEN TO INSPECTION**

All works executed or under the course of execution in pursuance of this contract shall at all times be open to inspection and supervision of the C-DAC. The work during its progress or after its completion may also be inspected, by the authorized person of C-DAC. The compliance of observations/ improvements as suggested by the inspecting officers of C-DAC shall be obligatory on the part of the Contractor at the cost of contractor.

### **36.0 NO COMPENSATION FOR CANCELLATION/ REDUCTION OF WORKS**

If at any time after the commencement of the work, C-DAC shall for any reason whatsoever is required to abandon the work or does not require the whole work thereof as specified in the tender to be carried out, C-DAC on the report of Engineer-in-Charge shall give notice in writing of the fact to the contractor, who shall have no claim to any payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out or fore-closure, neither shall he have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated. Provided that the contractor shall be paid the charges on the cartage only of materials actually and bonafide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment or curtailment of the work or any portion thereof and then taken back by the contractor, provided however, that the Engineer-in-Charge shall have in all such cases the option of taking over all or any such materials at their purchase price or at local current rates whichever may be less. In the case of such stores having been issued by C-DAC and returned by the Contractor to C-DAC, credit will be given to him by C-DAC on the report of the Engineer-in-Charge at rates not exceeding those at which they were originally issued to him after taking into consideration any deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of the Engineer-in-Charge shall be final.

### **37.0 SITE CLEARANCE**

37.1 The contractor shall ensure that the working site is kept clean and free of obstructions for easy access to job site and also from safety point of view. Before handing over the work to the C-DAC the contractor shall remove all temporary structures like the site offices, stores etc., scaffolding rubbish, left over materials tools and plants, equipments etc., clean and grade the site to the entire satisfaction of the Engineer-in-charge. If this is not done the same will be got done by C-DAC at the risk and cost of the contractor.

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37.2 The contractor shall clean all floors, remove cement/ lime/ paint drops and deposits, clean joinery, glass panes etc., touching all painter's works and carry out all other necessary items of works to make the premises clean and tidy before handing over the building, and the item/percentage rates quoted by the contractor shall be deemed to have included the same.

### **38.0 SET-OFF OF CONTRACTOR'S LIABILITIES**

C-DAC shall have the right to deduct or set off the expenses incurred or likely to be incurred by it in rectifying the defects and/or any claim under this agreement against the Contractor from any or against any amount payable to the contractor under this agreement including security deposit and proceeds of performance guarantee.

### **39.0 ALTERATION IN SPECIFICATION, DESIGN & DRAWING**

39.1 The Engineer-in-Charge shall have power to make any alterations in, omissions from, additions to or substitutions for, the original specifications, drawings, designs and instructions that may appear to him to be necessary during the progress of the work, and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions, or substitutions shall not invalidate the contract and any altered, additional or substituted work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work. The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work, and the certificate of the Engineer-in-Charge shall be conclusive as to such proportion. Over and above this, a further period to the extent of 25 percent of such extension shall be allowed to the contractor. The rates for such additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order:

- i) The rates for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.
- ii) If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates for a nearest similar item of work as are specified in the contract for the work. In case of composite tenders where two or more schedule of quantities/ bill of quantities form part of the contract, the rates shall be derived from the nearest similar item in the schedule

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of quantities / bill of quantities of the particular part of work in which the deviation is involved failing that from the lowest of the nearest similar item in other schedule of quantity. The opinion of the Engineer-in-Charge as to whether or not the rate can be reasonably so derived from the item in this contract will be final and binding on the contractor.

iii) If the altered, additional or substituted work includes any work for which no rate is specified in the contract for the work and which cannot be derived in the manner specified in sub para (i) and (ii) from the similar class of work in the contract then such work shall be carried out at the rates entered in the Schedule of rates **DSR- 2021 or latest revision shall be considered.**

iv) If the rates for the altered, additional or substituted work cannot be determined in the manner specified in sub-clauses (i) to (iii) above, then the contractor shall, within 7 days of the date of receipt of order to carry out the work, inform the Engineer-in-Charge of the rate which it is his intention to charge for such class of work, supported by analysis of the rate or rates claimed, and the Engineer-in-Charge shall determine the rate or rates on the basis of prevailing market rates of the material, Labour, T&P etc. plus 15% (Fifteen percent) to cover the contractors supervision, overheads and profit and pay the contractor accordingly. The opinion of the Engineer-in-Charge as to the current market rates of materials and quantum of labour involved per unit of measurements will be final and binding on the contractor.

However, the Engineer-in-Charge, by notice in writing, will be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea of non-settlement of rates of items falling under the clause.

### **40.0 COMPENSATION FOR DELAY AND REMEDIES**

40.1 If the contractor fails to maintain the required progress in terms of relevant clause of Special Conditions of Contract, to complete the work and clear the site on or before the end date mentioned in contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the C-DAC on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below or such smaller amount as the Engineer in charge (whose decision in writing to that effect shall be final and binding) may decide on the amount of tendered value of the work for every completed day / week (as applicable) that the progress remains below that specified in the relevant clause in Special Conditions of Contract or that the work remains



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incomplete. This will also apply to items or group of items for which a separate period of completion has been specified.

- i) Completion period (as originally stipulated) not exceeding 3 month @ 1% per day
- ii) Completion period (as originally stipulated) exceeding 3 months @ 1% per week

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with C-DAC. In case of Delay from CDAC side, the corresponding delay period due to CDAC will not be considered for delay compensation/penalty calculation. Any delay due to any Natural Disaster will be considered as per Force Majeure Clause.

### **40.2 CANCELLATION / DETERMINATION OF CONTRACT IN FULL OR PART**

Subject to other provisions contained in this clause C-DAC may, without prejudice to its any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

- i) If the contractor having been given by C-DAC/Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workmanlike manner shall omit to comply with the requirement of such notice for a period of seven days thereafter; or
- ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from C-DAC; or
- iii) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by C-DAC; or
- iv) If the contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of

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the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by C-DAC; or

- v) If the contractor shall offer or give or agree to give to any person in C-DAC service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any action in relation to the obtaining or execution of this or any other contract from C-DAC; or
- vi) If the contractor shall obtain a contract with C-DAC as a result of wrong tendering or other non-bona-fide methods of competitive tendering; or
- vii) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administrative of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors; or
- viii) If the contractor being a company, shall pass a resolution or the Court shall make an order for the winding up of the company, or a receiver or manager on behalf of the debenture holders or otherwise shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager; or
- ix) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days; or
- x) If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of the labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without and prior written approval of C-DAC.
- xi) When the contractor has made himself liable for action under any of the cases aforesaid, C-DAC may without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to C-DAC, by a notice in writing, cancel the contract as a whole or only such items of work in default from the Contract.

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- xii) If the Contractor submits non-genuine and invalid or fraudulent/forged document, Bank Guarantee etc. to C-DAC without prejudice to any other right or remedy which shall have accrued hereafter to C-DAC, by notice in writing cancel the contract as whole or only such items of work in default from the contract.

### **41.0 DEFECTS LIABILITY PERIOD**

The contractor shall be responsible for the rectification of defects in the works for a period of **sixty months** from the date of taking over of the works by the Owner/ Client. Any defects discovered and brought to the notice of the contractor forthwith shall be attended to and rectified by him at his own cost and expense. In case the contractor fails to carry out these rectifications, the same may without prejudice to any other right or remedy available, be got rectified by C-DAC at the cost and expense of the contractor.

### **42.0 FORCE MAJEURE**

Any delay in or failure of the performance of either party hereto shall not constitute default hereunder to give rise to any claims for damages, if any to the Extent such delay or failure of performance is caused by occurrences such as acts beyond its control including but not limited to the acts of God or the public enemy, expropriation, compliance with any order or request of Government authorities, acts of war, rebellions, sabotage fire, floods, strikes, or riots (other than contractor's employees). Only extension of time shall be considered for Force Majeure conditions as accepted by C-DAC. No adjustment in contract price shall be allowed for reasons of force majeure.

### **43.0 ARBITRATION -**

In case any dispute arises between C-DAC and successful bidder with respect to this TENDER, including its interpretation, implementation or alleged material breach of any of its provisions both the Parties hereto shall endeavor to settle such dispute amicably. If the Parties fail to bring about an amicable settlement within a period of 30 (thirty) days, dispute shall be referred to the sole arbitrator mutually appointed by both parties. If the sole arbitrator is not appointed mutually by both the parties, then the competent Court shall have jurisdiction for appointment of sole arbitrator. Arbitration proceedings shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and Rules made there under, or any legislative amendment or modification made thereto. The venue and seat of the arbitration shall be Pune. The award given by the arbitrator shall be final and binding on the Parties. The language of arbitration shall be English. The common cost of the arbitration proceedings shall initially be borne equally by the Parties and finally by the Party against whom the

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award is passed. Any other costs or expenses incurred by a Party in relation to the arbitration proceedings shall ultimately be borne by the Party as the arbitrator may decide. Courts in Pune only shall have the exclusive jurisdiction to try, entertain and decide the matters which are not covered under the Arbitration and conciliation Act.

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## SPECIAL CONDITIONS OF CONTRACT (SCC)

### 1. Prices

- (a) Bidder must quote in INR only.
- (b) The price quoted shall be considered firm and no price escalation will be permitted (except Govt. Statutory Levies).
- (c) The bidder should exercise utmost care to quote the correct percentage of applicable GST on each item.
- (d) The orders/ contract will be placed with applicable GST rate as quoted by the bidder.
- (e) The prices quoted must be inclusive of packing, forwarding, insurance, loading/un-loading and all incidental charges till destination and completion of total scope of work.
- (f) The responsibility, cost and risk of the consignment shall rest with the bidder till receipt of goods is acknowledged by C-DAC. However, such receipt/ acknowledgement shall not be treated as acceptance of goods.

NOTE: C-DAC is not eligible for any GST concession for this procurement and C-DAC shall not provide any GST Concessional Certificate against this order.

### 2. Software Licenses: (if applicable)

The software licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned with-out any additional cost during the warranty period.

### 3. Completeness Responsibility:

Notwithstanding the scope of work, supply and or services stated in bid document, any equipment or material, engineering or technical services which might not be even specifically mentioned under the scope of supply of the bidder and which are not expressly excluded therefrom but which, in view of the bidder, are necessary for the performance / execution of work in accordance with the specifications are treated as to be included in the bid and has to be performed by bidder. The items which are over & above the scope of supply specified in the Schedule of Requirements may be marked as “Optional Items”.

## “Tender for Physical Security Infrastructure Work CIP CDAC PUNE”

### 4. Performance Bank Guarantee:

The successful bidder will be required to furnish the Performance Guarantee towards the items supplied, in the form of a Bank Guarantee in INR equivalent to 10% amount of the order value, as per the format attached to this document (Annexure - D).

This bank guarantee should be submitted within 7 days from the date of placement of order by CDAC. The performance security shall remain valid for a period of 60 days beyond the date of completion of contractual obligations as specified in the order including warranty. The Performance Security will be returned/ refunded within two weeks of completion of contractual obligations. The Bank Guarantee shall remain valid for the consolidated onsite comprehensive warranty period of 5 years plus 2 months (total 62 months) with onsite warranty support along with 4 hours response time and NBD resolution of complete solution. The PBG must be negotiable at a branch of issuing bank in Pune. In case of no warranty claims towards the items under warranty, the PBG will be returned on completion of warranty period.

C-DAC reserves the right to invoke the Performance Bank Guarantee submitted by bidder, in case of the following:

- a) The items supplied by bidder fail to achieve the performance as stipulated in this document or
- b) The bidder fails to provide the warranty and other services in scheduled time frame, as stipulated in this document or
- c) The bidder delays to provide the warranty services as stipulated in this document.

### 5. Warranty

- (a) The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- (b) The supplier further warrants that all Goods supplied under this contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the supplier.
- (c) The supplier should ensure that all features of the proposed solution are functional without requirement of any additional procurement of Hardware, Software, Subscriptions and Licenses from day one.
- (d) The warranty should be comprehensive on site, basis. In case of any defect, fault occurring in the items supplied, during warranty period, the supplier shall arrange to repair /replace same free of cost.

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- (e) The warranty period shall start from the date of demonstration of final solution and acceptance by CDAC.
- (f) All items including both Hardware and Software, respective subscriptions, supply shall include 5 (Five) years onsite comprehensive warranty with NBD support and call logging (single point of contact) mechanism based on telephonic, e-mail/chat support. The bidder should also provide escalation matrix for warranty support.
- (g) Bidder and OEM should ensure 4 hours' response time and resolution time of within 48 hrs. from the time of call logging covering all parts & labour starting from the date after the successful installation, during the warranty period covering all parts & labour.
- (h) During the warranty period, bidder will have to undertake preventive and comprehensive maintenance of the entire hardware components, firmware, equipment, support and accessories supplied by the bidder at the place of installation of the equipment.
- (i) Collecting of faulty Hardware from the site and provisioning the replacement of Hardware under warranty at onsite shall be the responsibility of the supplier.
- (j) In case of fault arising in any hardware, the said faulty hardware. New hardware in place will have to be provided by the supplier.

### 6. Acceptance Criteria:

The acceptance criteria shall be as stipulated in Clause 10 of Section-IV of this document.

### 7. Payment Terms:

- a) No advance payment will be made.
- b) Payment shall be released ONLY if Performance Guarantee cum security deposit is submitted.
- c) Running Bills: -
  - I. 50% payment of Bill of Quantity line item amount shall be released within 30 days only after supply by vendor and acceptance of the items by CDAC.
  - II. Balance 50% of the Bill of Quantity line-item amount will be released within 30 days after installation / commissioning, integration, training, testing, demonstration of the functionalities as stipulated in Section - IV of this tender.
  - III. Retention Money will be deducted from the successful contractor at a rate of 10% from the gross value of each running bill until it accumulates to 5% of the total work execution value in the Final Work Execution bill. No interest will be paid on the retention amount. The total retention money

## “Tender for Physical Security Infrastructure Work CIP CDAC PUNE”

will be refunded only after the expiry of the defect liability period of one year, following the successful installation, commissioning of the entire solution, and acceptance by CDAC.

**Note:** - This 5% retention money can be released during Final Work Execution Bill Processing subject to submission of an additional bank guarantee for an equivalent amount from a Nationalized or Scheduled Bank. This BG against retention money will be returned after successful completion of one year of Defect Liability period following the successful installation, commissioning of the entire solution, and acceptance by CDAC.

- d) Payment for Onsite Resident Engineer will be released on quarterly prorata basis after satisfactory services certified by CDAC.
- e) The payments shall be remitted through NEFT/RTGS only and applicable TDS will be deducted.

### 8. Timely servicing /rectification of defects during warranty period

- After having been notified of the defects/service requirement during the warranty period, seller has to complete the required service/rectification within the next business day (NBD).
- If the seller fails to complete the service/rectification within the defined time limit, a penalty of 0.5% of the unit price of the line item for the product shall be charged as penalty for each week of delay by the vendor.
- Seller can deposit the penalty with the buyer directly else the buyer shall have the right to recover all such penalty amount from the PBG.
- Cumulative penalty cannot exceed more than 10% of the contract value after which the buyer shall have the right to get the service/rectification



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done from alternate sources at the risk and cost of the seller besides the forfeiture of the PBG.

- Seller shall be liable to reimburse the cost of such service/rectification to the Buyer.
- The Buyer also reserves the right to forfeit the PBG of the seller during the delivery phase in the event the seller is unable to meet contractual obligations.
- All services and equipment should have an uptime of 99.671%. For any downtime more than that, acceptable required replacement should be provisioned beforehand.

### 9. Shipping Documents:

The invoice shall be raised in the name of:  
Centre for Development of Advanced Computing (C-DAC)  
Innovation Park, PANCHAVATI, Pashan Road, PUNE 411008  
Maharashtra, INDIA

The name, address and details of contact person of C-DAC will be informed to the successful bidder.

### 10. Penalty for delayed delivery /Services

C-DAC reserves the right to levy penalty @ of 0.5% of order value per week of delay beyond the scheduled deliveries / execution of the order successfully (which includes installation, configuration, satisfactory report of residence engineer from C-DAC on quarterly basis), subject to maximum of 5% of the order value.

C-DAC reserves the right to cancel the order in case the delay is more than 10 weeks.

The delay in delivery and/or installation not attributed to supplier viz. delay in site preparation, delay in submission of required documents or approvals (by C-DAC) etc. and the conditions arising out of Force Majeure will not be considered for the purpose of calculating penalties.

### 11. Jurisdiction:

Subject to the provisions of the Arbitration, the disputes, legal matters, court matters if any shall be subject to PUNE jurisdiction only.

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### 12. Risk and Ownership:

All risks, responsibilities; liabilities pertaining to goods in transit and/or delivered at site shall remain with selected bidder till they are accepted by C-DAC.

The successful bidder will make own arrangements to secure and safeguard the goods delivered at site, at their own cost. C-DAC may coordinate with the client for getting help for these arrangements.

Upon 90% of payment and post successful acceptance testing, C-DAC shall become owners of goods ordered but all risks, responsibilities; liabilities thereof in all goods shall remain with selected OEM/bidder till installation, commissioning, integration, and training of all goods to the end user. Part deliveries shall not be treated as deliveries. Only full deliveries of all items ordered will be considered as delivery.

### 13. Limitation of Liability:

The liability of the Bidder / Contractor arising out of breach of any terms/conditions of the tender / contract /work order and addendums/ amendments thereto, misconduct, wilful default will be limited to the total order value. However, liability of the bidder in case of breach of any relevant Law/ Act, injury, damage caused to the personnel/property for any reasons attributed to the bidder, will be at actuals.

C-DAC shall not be liable to Bidder / Contractor for any lost profits or business opportunities, loss of use, loss of revenue, loss of goodwill, business interruption, loss of data, or any other indirect, special, incidental, or consequential damages under any theory of liability, whether based in contract, tort, negligence, product liability, or otherwise.

(END OF SECTION III)

### SCOPE OF WORK

## “Tender for Physical Security Infrastructure Work CIP CDAC PUNE”

### SECTION - IV: SCHEDULE OF REQUIREMENTS / SCOPE OF WORK AND ACCEPTANCE

C-DAC premise at Innovation Park, Panchavati, Pashan Pune is a multi-story building [Basement-02 Numbers + (G+5) Floors +Terrace Canteen area] and has two main entrance gates facing road for vehicles/people entry/exit. The building has approximately 1500 members (employee, contractors, students, visitors) of various categories working in the building. Average number of visitors in the building is 100 per day. C-DAC Pune conducts half yearly and yearly courses which requires access provisioning to the premise for 300+ students. C-DAC also conducts periodic events such as Tech-Show, Annual Day Celebration, Ministry-level events which include large number of visitors. For attendance, C-DAC employees use ISO/IEC 14443 compliant SCOSTA-based smart card along with fingerprint. Although C-DAC promotes a culture of free movement, some areas/zones in the premise needs security. Following is the list of systems which are envisaged to be implemented as a turnkey project for the same.

- Access Control System
- Visitor Tracking System
- Vehicle Movement Tracking System
- Surveillance System
- X-Ray Baggage Inspection System
- Integration with existing HRMS systems
- Solution capable of integration in Single integrated portal for all the Systems
- Centralized Monitoring

Integration with CDAC System:

- Vendor has to provide API access for all database operations, functionality and access to devices.
- Vendor has to provide Comprehensive API documentation.
- Vendor has to provide Full and unrestricted license to access and use the API for integration with the CDAC system or other software.
- Vendor has to provide Integration support during the commissioning and support period. CDAC will integrate the access control system with existing HRMS.
- Floor to Floor connection between Switches and also server to switch connection has to be done through Fibre cable only.

Different Colour Used for Network Cabling.

Note:

- Drawing is shared to the bidders who have submitted NDA (Non Disclosure Agreement)

## “Tender for Physical Security Infrastructure Work CIP CDAC PUNE”

### 1. Access Control System:

An access control system is envisaged to control access to secure areas. This section describes the requirements expected from the proposed access control system.

The system should have multiple authentication mechanisms such as RFID card, biometric, face recognition, fingerprint, smartphone and any combination of these. Smartphone App should facilitate unlocking of the door through a click. One should be able to securely unlock the door by tapping the phone or through close proximity. One should be able to securely unlock the door remotely.

The proposed solution should be a turnkey project. The access control system should grant access through access-controlled doors to only authorized personals. The bidder should design and provision the access control system and cards in such a way that the user needs to use a single SCOSTA RFID card which should work with both the access control and existing attendance system. Bidders may collect sample card by submitting formal email request to mmg@cdac.in

The proposed system should include all mounting hardware, computer hardware, cameras, software, accessories, and other necessary equipment to provide a turnkey installed system.

#### *Access Control System zones*

Access control system in C-DAC is envisioned of following zones.

- Access control system for the premise perimeter zone
- Access control system for cabins/enclosed zones
- Access control for highly secure zones
- Access control for public zones

#### *Access Control System for the premise perimeter zone*

The identified entrance and exit points of the premise shall be controlled through boom barriers and turnstiles at entry and exit gates. The system shall have good aesthetics and provide acceptable vehicle throughput. The boom barriers shall operate through ANPR. Turnstiles shall operate through access control card reader.

#### *Access Control System for cabins / enclosed zones*

Entry to a cabin is controlled by an electromagnetic controlled door. To enter into a cabin, a person has to authenticate by tapping the RFID card. Only when the person is authorized, the door is opened and the person is allowed access to the

## “Tender for Physical Security Infrastructure Work CIP CDAC PUNE”

cabin. To exit from a cabin, a person has to push a designated button to open the door.

An access control system for cabin/enclosed zone is envisaged to contain at least the following components.

- A reader to read RFID card of the person.
- An electromagnetic lock to lock/unlock the door.
- A push button to exit from the cabin.

### *Access Control System for highly secure zone*

This is similar to the first type except that a person needs to authenticate even to exit from the secure zone. An access control system for highly secure zones is envisaged to contain at least the following components.

- Two readers (for ingress and egress) to read RFID card of the person.
- An electromagnetic lock to lock/unlock the door.

### *Monitoring System for public zones*

A system is required to monitor persons going-in and coming-out. This shall be covered by IP surveillance system.

Note:

- All the carpentry and alignment work for access control doors is in vendor scope. Vendor has to consider and include Door Auto Closer for wooden and metal doors under the scope of work.

## **2. Visitor Tracking System**

A Visitor Tracking System based on UHF RFID cards is envisaged which shall support visitor management features. The system shall support the creation and management of visitor appointments. The visitor management feature shall serve as a replacement for paper-based visitor log books and shall support the organization and tracking of visitors.

This application will make the process of visitor's entries, check-in and check-out from paper work to an organized digital framework.

The system shall support visitor management web portal that shall allow creation and management visits and visitors via a standard web browser. The system shall support, among others, the following features.

- Single/multi visitor group visit appointment scheduling

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- Visitor registration/enrolment with information such as personal details, purpose of visit, employee to meet, live photograph, identity proof (Aadhaar/PAN/Passport/Driving license)
- On successful enrolment, an RFID card is issued to the visitor
- Visitor check-in/check-out,
- Email/SMS notification of events which include, among others, the visit scheduled/modified/cancelled, visitor’s arrival/departure, etc.
- Allow concerned member to take action such as to permit/deny/modify the visit
- Manage unplanned visits and anonymous visitors
- At the end, the issued RFID card is returned back to the operator.
- End of a visit
- Integrate the system with Access Control System for necessary authorization
- Raise necessary alarms / video display when a visitor is arrived on a floor on which (s)he is not authorized.
- Display unit at each floor has to be placed on the table of the security personnel.
- Generate/export/import reports on both the scheduled and the completed visits.
- Two numbers of UHF Readers shall be placed on each floor lobby area in front of Lifts. The placing has to be as per OEM recommendation for maximum detection of visitor identity

### 3. Vehicle Movement Tracking System

An ANPR-based vehicle entry solution is envisaged for Vehicle Movement Tracking System. The ANPR System shall enable monitoring of vehicle flow at the entry, exit and parking in its premise. The system shall support real-time detection of vehicles, recording each vehicle, reading its number plate, database lookup from central server and triggering of alarms/alerts based on the vehicle status and category as specified by the database. The system usage shall be privilege driven using password authentication.

- The System Integrator (SI) shall install the ANPR cameras at identified locations (identified based on field survey). The system shall automatically capture the license number plate of the vehicle at these locations.
- The SI shall design, supply and install the ANPR camera system, all camera accessories such as IR illuminators, camera housing and mounting shall be installed by the SI. The SI shall supply all of the necessary equipment for the camera and local processing system, including but not limited to computers,

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local storage and ancillary camera equipment, camera poles, warning signs and shall make the final connections to the camera.

- The SI shall be responsible for providing all the necessary IT infrastructure for detection, analysis, storage and retrieval of the number plate information.
- Vehicle Categories
  - Vehicles are segregated in following broad categories.
    - Employee vehicles
    - Student’s vehicles
    - Contractor’s vehicles
    - Transportation vehicles
    - Visitor vehicles

#### 4. IP-based CCTV Surveillance System

The surveillance system is intended to improve the security of C-DAC Pune premise with state-of-the-art IP based CCTV surveillance system. The system shall capture, record and preserve the images and videos of the movements of the people inside and also outside the premise. The system shall be based on non-proprietary open standard based integrated solution. The purpose of surveillance system is to assist security in monitoring unwanted incidences or unacceptable activities within the coverage area of the premise. Surveillance cameras and its dependent infrastructure should have face recognition capability. Information obtained through video monitoring will be used exclusively for security, disciplinary and public policy enforcement and/or law enforcement purpose. Access to video monitoring footage and other data is limited to only the designated staff. Video monitoring of the campus will be conducted in a manner consistent with all existing policies. The infrastructure shall include Video Management Software (VMS) along with suitable recorder with High Available storage meant for Video recording and analytics purpose.

A face recognition application software system is to be included which provides advanced security monitoring by enhancing traditional video surveillance with real-time identity recognition capabilities. The system leverages IP cameras connected over the network, feeding live video to a centralized software platform that analyzes facial data. The bidder needs to study the existing HRMS and SCOSTA employee ID cards and integrate the solution with the existing HRMS application by using the existing SCOSTA employee ID cards.

#### 5. X-Ray Baggage Inspection System

X-Ray Baggage Screening System shall be located at the specified location(s) of the premise to screen baggage of the person before permitting entry to the person

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in the premise. The proposed system should include all mounting hardware, computer hardware, cameras, software, accessories, and other necessary equipment to provide a turnkey installed system.

### **6. Single Integrated Portal in a single Dash board for all the Systems and Centralized Monitoring**

A single integrated portal shall be provided through which all other systems such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system and x-ray baggage inspection system can be accessed, monitored, controlled and managed. All functions and services available when operating the system individually should be made available through this portal. Security personnel shall be able to monitor, control, coordinate and manage all systems in the entire building centrally from a designated workplace in premise. A video wall along with operator workstations shall also be provisioned at this place.

### **7. Integration with existing LDAP, Fire System, HRMS Systems**

System should be integrated with C-DAC's existing services such as HRMS, LDAP, SSO, fire system, power supply, etc. Automatic import of employee details and automatic deactivation of access rights on employee profile deactivation in LDAP. All components such as Access Control System, Visitor Tracking System, Vehicle Movement Tracking System, Surveillance System and X-Ray Baggage Inspection System should be integrated with each other to provide a unified view/dashboard. One should be able to take details from one component and should track the person, vehicle, baggage in other components.

### **8. Technical Specifications**

Subject to the stipulations given in Section-IV above, the bidder should supply, install, program, and configure, test, commission the items as detailed in 'Section-V: Technical Specification'.

### **9. Acceptance Criteria**

- a. Hardware should be from original manufacturers and should be shipped in original packing with OEM part numbers.
- b. All supplied Hardware should go through POST for at least 24 hrs.
- c. The Bidder will be required to obtain a successful installation and commissioning certificate from C-DAC, after the activities covering installation, initial programming and configuration, and testing are completed. This will cover all internal and external integrations. This also



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- included demonstration of features, capability of the products listed in the specifications of the product in RFP.
- d. Bidder shall showcase the appropriate licenses (on the respective OEM site) mentioned in the RFP.
  - e. Bidder shall share the workorder placed on the OEM for back-to-back support of 5 years for the quoted items after the date of commissioning.
  - f. The Bidder, duly supported by the OEM, shall provide appropriate training on the supplied hardware and software, including the demonstrated initial configurations at the time of commissioning, to the C-DAC teams comprising the L1, L2, and L3 Operations and Maintenance (OAM) staff to be deployed at the site.
  - g. Server configuration (BIOS, Firmware, Hyperthreading, IPMI etc.)
  - h. Bidder shall execute all the points mentioned under Scope of Work as given in Section IV.

### 10. General Scope of Work

- a. General Scope will be applicable to all the quoted items (software, hardware, and services).
- b. The Bidder will ensure that all stages covering installation, initial programming and configuration, and testing are fully documented and endorsed by the OEM.
- c. Bidder shall ensure that the items supplied are as per the Tender specifications, combined with changes stipulated in Corrigenda issued (if any).
- d. Bidder shall ensure that the items are received in good condition at the delivery location in presence of C-DAC official and record the same.
- e. Bidder shall maintain the inventory of the supplied items and maintain the associated Barcodes, Licenses, Software etc.
- f. Bidder shall ensure the deployment, configuration of all items as per the requirement submitted by C-DAC.
- g. Bidder is responsible to showcase the integration of all software and hardware supplied towards the Tender.
- h. Bidder shall complete the entire installation, configuration, integration and commissioning of all hardware and software supplied at the site within one month.
- i. Bidder shall participate and demonstrate the functionalities with failover from the perspective of network, security components, and other components supplied as per RFP.
- j. Periodic upgradation of all software and firmware as advised by the OEM or by the Government of India Cybersecurity agencies. For this purpose, the Bidder should provide all patches and upgrades in removable media and apply them from within the premise controlled by C-DAC. This will include updating

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- of configuration, policies, signatures and threat feeds etc. of the relevant hardware and software components.
- k. To maintain all supplied items in a good state of health and operations.
  - l. The Bidder would need to perform site visit to understand the coverage and placement of devices.
  - m. The project shall be implemented on a turnkey basis. The materials in BOM are listed at a broad level. The bidder needs to understand the requirements and the whole activity and update C-DAC with any suggestions and modifications (if any) before bidding.
  - n. The project shall be implemented on a turnkey basis. The materials in BOM are listed at a broad level. Miscellaneous items such as junction boxes, video splitters, face plates, required cables with necessary lengths etc. should be procured by the bidder to the satisfaction of C-DAC and the cost of the same is assumed to be included in the initial quoted bid.
  - o. Bidder shall inform C-DAC at the beginning of all the necessary and required dependencies and the respective point of contacts along with how they will be resolving them.
  - p. Bidder shall inform C-DAC at the beginning of the whole project plan including timelines, milestones, resources, manpower, risk mitigations, etc.
  - q. Bidder should submit the necessary security audit certificate such as VAPT of the software/application.
  - r. Software/Application shall not be considered accepted until reviewed and approved as accepted by C-DAC.
  - s. Bidder need to configure and deploy the devices, sensors and Controllers as per the network and security requirement.
  - t. Any customization reported by C-DAC in 1 year post deployment should be incorporated within 15 days of reporting.

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### 11.Detailed Scope of Work

- a. Bidder is responsible to showcase the integration of all Software and Hardware supplied as part of this RFP.
- b. Bidder shall demonstrate functionality for various components.
- c. Bidder shall submit the detailed plan about the project execution including intermediate milestones and the completion timelines.
- d. The implementation shall be on a turnkey basis.
- e. Bidder is encouraged to survey the site before submitting the proposal, however a prior appointment may be fixed with circle security department for conducting the site survey.
- f. Understanding of underlying Network details (details will be shared with the L1 bidder)
- g. All the licenses shall be supplied and applied in offline mode.
- h. Perform the required network, electrical and civil work on a turnkey basis with due approval from CDAC of the proposed changes and to maintain the aesthetics of the workplace.
- i. Need to route the cables from the supplied devices to the respective rack level switches (both Copper and Fibre)
- j. Perform the cabling and rack dressing.
- k. Providing necessary support during the Warranty period towards replacement of faulty Hardware, Configuration of devices and supplied Software's.
- l. Bidder need to appoint a single point of contact and provide the details for raising of tickets. Please note that support and services offered shall be confined to the site and there is “NO” provision of online access to any system, device and software.
- m. Bidder need to provide call registration model like ticketing system with escalation matrix. Shall provide an url /portal to track the status of the raised tickets.
- n. During the warranty support period, the bidder shall have tie up with the respective OEM for Backend support for the entire set of Infrastructure.
- o. The bidder shall furnish documentary proof of backend support including software upgrades, availability of spares, availability of hardware/ software modules required for scalability for a period of 05 years from the respective OEMs of the products offered (As per format given in **Annexure C**).
- p. The tie up with OEM of the Hardware equipment installed at the site should cover:
  - 1) 24 x 7 x 365 Onsite Support for all supplied hardware equipment with 4 hours response and NBD resolution.
  - 2) Provision to log complaints/ open support cases directly with OEM. For this purpose, the required details should be shared with C-DAC along with component IDs for all components covered under warranty/maintenance.
  - 3) Root Cause Analysis of all failures - a preliminary report shall be submitted within 24 hours of the failure and a detailed technical analysis report on

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the root cause from OEM shall be submitted within one week from the date of failure.

- 4) On-site support of OEM for Troubleshooting in case of critical failures, especially for the failures extending beyond the permissible downtime.
- q. Bidder shall provide an onsite dedicated-RE (Residence Engineer-Diploma /BE/B.Tech with five years experience in CCTV and Access control) at site on 9/6 basis -Monday to Saturday (Sunday Leave). Payment will be released on quarterly prorata basis after satisfactory services.
- r. RE is responsible towards:
  - 1) Proactive monitoring of supplied equipment / devices.
  - 2) Tracking of all tickets / incidents raised and co-ordinate with the Bidder & OEM to rectify / replace the faulty component.
  - 3) Performance finetuning.
  - 4) Co-ordinate with the site Operations team.
  - 5) Responsible to perform functionality related drills as per the schedule.
  - 6) Submit daily report on health of the systems.
  - 7) Shall obtain permission from the Operations Head towards any changes in the configuration, updates, replacement of parts, devices, software etc.
  - 8) Shall inform the new Serial number, License and other details to the Operations Head to update inventory.
- s. Bidder needs to provide satisfactory certificate of Residence Engineer from C-DAC on quarterly basis. If C-DAC found the Residence Engineer unsatisfactory, Bidder should replace him/her within one working day, failing which a penalty, as mentioned in Clause 10 of Section III, is applicable to bidder.
- t. Change of RE shall be taken-up only with the permission of C-DAC. Bidder shall provide ONE onsite dedicated RE (Residence Engineer-Diploma /BE/B.Tech with five years experience in CCTV and Access control) at site on 9/6 basis Monday to Saturday (Sunday Leave). Payment will be released on quarterly proratabasis aftersatisfactory services

**(End of Section - IV)**

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Technical Specifications

**SECTION-V: TECHNICAL SPECIFICATIONS**

- ACS-01

Access Control Software/System Features			
Sr. No.	Desired Feature	Compliance (Yes/No)	Supporting Doc, Pg.No.
	Authentication through card, pin and biometric (fingerprint) or any combination of the same		
1	<p><b>System Requirements:</b>                      The system must authenticate and authorize individuals using the following methods:</p> <ul style="list-style-type: none"> <li>• Artificial Intelligence-based face detection and recognition</li> <li>• RFID cards</li> <li>• PIN</li> <li>• Biometric (fingerprint)</li> </ul> <p>It should be possible to configure any combination of these methods for authorization.</p> <p><b>Face Detection and Recognition Requirements:</b></p> <ul style="list-style-type: none"> <li>• Minimum accuracy: 99%</li> <li>• IR-enabled functionality</li> <li>• Capability to recognize live human faces only (not fake faces, such as images)</li> <li>• Face recognition distance: 0.3 to 3 meters</li> <li>• Support for mask detection</li> <li>• Certifications: UL/FCC/BIS/CE</li> </ul>		
2	For short-range RFID cards, SCOSTA-based (ISO 14443 compliant) RFID cards shall be used to grant access.		
	Centralized Control and support of Role-based functionality		
3	Administrator should be able to control and monitor the system through a centralized access control software. Software should provide all management and operational control centrally from a single dashboard.		
4	System shall be capable of, among other things, to manage controlled doors such as add a door, remove a door, update access policies for a door, monitor the objects, display current state of the objects in the system, display log of all activities on an object, etc.		

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5	System shall provide the facility to manage access policies such as which cards/fingerprint-signature are authorized based on various parameters such as card, employee number, department, time of the day, holiday, etc.		
6	System shall have the ability to block a person based on parameters such as card, fingerprint, department, name, etc.		
7	System should have role-based functionalities such as administrator may have full control, report-viewer may have privilege to access the reports and normal user may have the privilege to view his own data.		
8	System should provide the facility to change access rights but only through authorized personnel.		
9	The software must have capability to integrate with third-party systems.		
10	System shall support multiple monitor displays providing the ability to configure an operator’s application layouts to open in separate instances of the monitoring station to enhance the performance of multiple displays.		
<b>Reports and Alerts</b>			
11	System shall provide the facility to generate different (customizable) kinds of reports such as entry and exit, who accessed on a range of date/time period, etc.		
12	System shall have the facility to generate and export reports in Excel, CSV, PDF format for a given day, week, month, custom-range-of-dates.		
13	System should have the facility to email the reports automatically to concerned (configurable) members.		
14	System shall have necessary user tracking facilities such as to know how many and which members are present in the cabin/premise at any given point of time.		
15	System shall have the facility to raise alerts for events such as door open/close, access grant/deny, door held, door forced, tampering, device online/offline, etc.		
<b>Storage / Scalability / Logs</b>			
16	System shall log all activities for reporting or auditing purpose.		
17	System shall store at least 90 days of transactions/events post which the same should be able to be archived. System shall provide sufficient storage for the same.		

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18	System shall be scalable and should have room for expansion in future.		
19	Access control log shall be available only to authorized personnel.		
20	The events and log should be stored in an un-editable, tamperproof and secure way.		
<b>Certifications / Security / Encryption / System Hardening</b>			
21	System should have necessary applicable certifications such as CE and FCC/BIS/UL/ROHS/TUV or equivalent.		
22	Communication among controllers and the host system should be encrypted with at least AES 128 Bit and TLS 1.3.		
23	All the PC/servers systems shall be protected by server-client based anti-virus software.		
24	All firmware and software should be at the recent most secure stable version as suggested by the respective OEM/manufacture.		
25	Apply appropriate measures from OEM's/manufacture's system hardening guide.		
26	Remove all default, installer or temporary user accounts and passwords used during installation that are not part of end-user's final operational requirements.		
27	Assign new passwords that are substantially different from factory default passwords to user accounts.		
<b>Integration</b>			
28	System should be integrated with C-DAC's existing services such as HRMS, LDAP, BMS, fire system, power supply, etc.		
29	Integrate with other components such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system, etc.		
30	System shall keep itself in sync with LDAP, shall automatically import employee details from C-DAC's LDAP and shall automatically deactivate access rights if an employee leaves the organization.		
<b>Tailgating / Failsafe / Fail Secure / Emergency / Safety features</b>			
31	System should have the provisions to prevent tailgating/piggybacking by means of an alarm/display.		
32	In case of network failure, the individual door controllers shall continue to control the entry and exit of the personnel as expected.		
33	The system shall be capable to work in offline mode (unavailability of network connectivity). All		

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	activities/transactions should be stored locally in door controller and upon resumption of network connectivity it should be sent to the server.		
34	Overriding features should be available to take care of unexpected circumstances such as auto release of entry lock openings in case of (medical/fire/etc.) emergency.		
35	System should have necessary safety features such as automatically open when power is off		
<b>Licensing</b>			
36	The software licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned with-out any additional cost during the warranty period. These licenses should be transferable to C-DAC at a future date.		

• ACS-02

<b>Access Controller</b>				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Processor Type	Intelligent Microprocessor-based Microcontroller		
2	Connectivity to central server	Minimum bandwidth of 100 Mbps or higher for access controller.		
3	Number of readers that can be connected	At least 4 door and 8 readers and/or slave controllers		
4	Reader types supported	OSDP, Wiegand, RS485 or equivalent		
5	Reader technologies supported	Multi-Technology, Proximity, Smart card, Fingerprint		
6	Card holder database	At least 30000 card holders		
7	Transaction storage	Minimum 100000 transactions		
8	Access decision time on a fully loaded system	Within 300 ms		
9	Trusted Execution Environment (TEE)	Yes		
10	Support of AntiPassback	Local and Global Anti-Passback		



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11	Communication between reader and controller	OSDP, Wiegand, RS485 or equivalent		
12	Network Protocol	IPv4		
13	Network encryption	128-bit AES or better		
14	Security	Encryption of database is desirable		
15	Operating Temperature	0-50° C (32-122° F)		
16	Operating Relative Humidity	5-80% RH non-condensing		
17	Power Requirement	12/24 VDC 3A per RS-485 port		
18	Certifications (Access Control, Burglar Alarm, EMI, EMC)	UL 294, UL 1076, FCC, CE, EN or equivalent		
19	Required mounting accessories such as wall mounting, lock, etc.	Included		

• ACS-03

Reader: Card, Fingerprint, Pin or any combination thereof				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Authentication mode support	MIFARE / SCOSTA card, Fingerprint, Pin or any combination thereof		
2	Keypad	Alphanumeric backlit keypad Screen touch		
3	PC communication	Ethernet (TCP/IP)		
4	Reader to Controller communication	OSDP, Wiegand, RS485 or equivalent		
5	Smart card read capability	<ul style="list-style-type: none"> <li>• Read of contactless smart card of 13.56 MHz using ISO 14443</li> <li>• Read range: Proximity</li> </ul>		
6	Card Supported standards	ISO/IEC 14443A, ISO/IEC 14443B, NFC, ISO/IEC 15693, ISO/IEC 18092		
7	Fingerprint sensor type	Optical (with scratch proof high performance)		
8	Fingerprint module	Optical 500 dpi or better		
9	Fingerprint sensing area (mm)	15.5mm X 19mm		
10	Event buffers	Minimum 2,00,000		

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11	Fingerprint template	10000 (ISO 19794-2, ISO19794-4)		
12	Fingerprint templates per reader Face Recognition templates per reader Backup	Fingerprint: 5000 active users or more Face-Recognition: 5000 active users or more Backup: The solution has to maintain at least 1 year data backup.		
13	No of password templates	5000 active users or more		
14	Card ids per reader	5000 active users or more		
15	Transaction capacity	100,000 records or more		
16	Validation / rejection signal	Audio buzzer and visual		
17	Anti passback	Supported		
18	Clock	Realtime clock (RTC) and auto sync with server every day		
19	Connectivity	I/O interface, RS 485, TCP/IP, USB		
20	Display	Minimum 2.5-inch LED display with time and date on readers. Both In and Out readers shall display time.		
21	FAR (False Acceptance Ratio) for fingerprint detection	$\leq 0.001\%$		
22	FRR (False Rejection Ratio) for fingerprint detection	$\leq 0.1\%$		
23	Ingress protection	IP65 or above		
24	Tamper proof	Required. Alarm should be generated in case of reader tamper or door forced		
25	Mounting accessories	Required		
26	Enclosure	Fingerprint reader whenever installed shall be provided with FRP canopy fully covering top, bottom and sides by at least 150mm on all sides.		

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27	Suitability	Suitable for manufacturing industry / dust environment. Shall be able to read existing SCOSTA cards which are currently used in C-DAC		
28	Operating temperature	0 degree to 50 degree centigrade for indoor		
29	Operating humidity	10 to 90 relative humidity non condensing		
30	Certifications	CE, ISI, RoHS, FCC, UL 294, BIS or equivalent		
31	Success / failure indication	Indicating lights to display success / failure for access card or fingerprint authentication		
32	Power supply	12V DC		

• ACS-04

Access Control Server				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Processor	Dual core Intel I7 or better		
2	Memory	16GB DDR4 or better		
3	Hard Disk Drive	1TB SATA or better		
4	Network Interface	Integrated Gigabit Ethernet Controller		
5	Audio Controller	Integrated High Definition Audio		
6	Power Supply	240W, 100-240VAC 50/60Hz		
7	Monitor Display Size	24 inch		
8	Ports	1 HDMI, 1 VGA, 3 USB Ports, Ethernet 10/100/1000 Base-T Ports Or better		
9	Operating System	Windows Server 2019, SE, 64bit		
10	Antivirus Feature	Advanced antivirus, antispysware, desktop firewall, intrusion prevention which can be managed by a central server		
11	Necessary accessories	Keyboard and Mouse inclusive		
12	Network Rack	Separate 9U racks are required at each hub rooms, two basements'		

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		floors, and canteen floor for localised distribution. Refer GEN-07		
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• ACS-05

Card Printer				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Type	Color printing		
2	Print Speed	190 to 225 cards / hour		
3	Feeder Capacity	100 cards Slot for non-RFID cards		
4	Output hopper capacity	100 cards		
5	Card thickness	20-50 mil		
6	Ribbon capacity	250 - 300 prints / roll		
7	Display	Printer notifications: feeder empty / almost empty, cleaning alerts, ribbon finished, almost finished		
8	Operating Systems	Compatible with Windows (32/64 bits): XP SP3, Vista, Windows 7,8,10,11		
9	Warranty	Five Years		
10	Service	Three years host swap printer replacement All parts, labor and loaner provision		
11	Cleaning kit	20 pack of cleaning cards and swabs for each printer		

• VTS-01

Visitor Tracking System Features			
Sr. No.	Desired Features	Compliance (Yes/No)	Supporting Document, Page No.
	Visitor Check-in		

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1	In Check-in process, the visitor will provide his personal information, mobile number, photo proof and id proof. These details are saved in database and will be used to inform the concerned person. It will also be used in future when that visitor visits again. Information about the visitor may be retrieved based on his/her mobile number		
2	<ul style="list-style-type: none"> <li>○ Visitor Registration/Enrolment <ul style="list-style-type: none"> <li>▪ User/ security employee manually add the entry of visitor’s personal information such as first name, last name, mobile number, email id and organization name along with meeting details such as person to meet, purpose of visit, time/duration of visit etc.</li> <li>▪ Open camera for photo: Once personal information is added, visitor is asked to take his photograph with id proof. Visitor holds his id proof while capturing his photo. This photo is saved with user’s personal information.</li> <li>▪ Visitor should be able to register himself/herself remotely</li> <li>▪ Single/multi visitor group visit appointment scheduling</li> <li>▪ Manage unplanned visits and anonymous visitors.</li> <li>▪ On successful enrolment, an RFID card is issued to the visitor</li> </ul> </li> </ul>		
<b>Check-In Entries</b>			
3	Security Employee: Security employee should be able to see all the check-in of any date. These check-in data will have status like pending, rejected, approved. They should also be able to see the check-out data. If required, security-in-charge should be able to verify details of the visitors.		
4	Employee with whom the meeting is scheduled: Necessary email/SMS notification of events which include, among others, the visit scheduled /modified/ cancelled, visitor’s arrival/departure, etc. for (configurable) concerned members. The employee who received the meeting request should be able to see all the meetings scheduled with him/her. (S)He should be able to approve/reject/modify the same.		
5	HoD/HR:		

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	HoD/HR gets notified of any approved visits. They should be able to see the list of all the check-in with the name of the person who approved the check-in.		
<b>Pre-Approval of Visitors</b>			
6	<ul style="list-style-type: none"> <li>○ Visitor’s entry</li> </ul> <p>An employee may schedule a visit by providing necessary details of the visitor. On visitor’s arrival, security employee verifies his/her visit. Visitor may be searched using his/her mobile number. If the visit is a pre-approved visit, an RFID card is issued to the visitor, otherwise, s/he goes through the check-in process.</p>		
7	<p>Visitor validation in pre-approval</p> <p>Visitor is allowed to check-in between a configurable time limit (say 30 minutes) before scheduled time to a configuration time limit (say 40 minutes) after scheduled time. If the visit is pre-approved and visitor reaches before 30 minutes and after 40 minutes of scheduled time, his pre-approval entry will be declined.</p> <p>Visitor is allowed to check-in before and after the scheduled time with a gap of configurable time limit. For example, he may visit 30-minutes before or after the scheduled visit time</p>		
<b>OTP Verification</b>			
8	<ul style="list-style-type: none"> <li>○ OTP Verification <ul style="list-style-type: none"> <li>▪ OTP-based verification is used to authenticate mobile numbers of visitors during registration.</li> </ul> </li> </ul>		
<b>Photo Display System at each Floor</b>			
9	<ul style="list-style-type: none"> <li>○ Photo display system at designated locations <ul style="list-style-type: none"> <li>▪ A fully functional RFID card-based photo display system which is integrated with existing access control system. When the visitor comes in proximity of the reader, the system should display whether the visitor is authorized to visit this floor along with other registered information</li> <li>▪ At each floor, a 24-inch Video Display system should be mounted near the desk of the security personnel. The display system should clearly indicate whether the arrived visitor is authorized or unauthorized on that floor.</li> </ul> </li> </ul>		
<b>Check-Out</b>			
10	<ul style="list-style-type: none"> <li>○ At the time of exit, security employee needs to do the check-out of the visitor during which visitor needs to handover the issued RFID card. To retrieve visitor</li> </ul>		

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	<p>details, her/his mobile number or the RFID card number may be used. Application verifies the provided information and matches it with the existing information and if matches, the check-out process is granted.</p> <ul style="list-style-type: none"> <li>○ Should have provisions to record and show case the list and serial numbers of the items which are allowed to carry in/out.</li> </ul>		
<b>Automatic Detection of Unauthorized Access</b>			
11	Whenever the visitor arrives at a floor, the system shall automatically detect arrival of the visitor and to find whether (s)he is authorized to visit that floor		
12	System shall raise necessary alarm and display photo of the visitor in case the visitor arrives at a floor for which (s)he is not authorized		
<b>Reports and Alerts</b>			
13	System shall provide the facility to generate different (customizable) kinds of reports such as entry and exit, who accessed on a range of date/time period, etc.		
14	System shall have the facility to generate and export reports in Excel, CSV, PDF format for a given day, week, month, custom-range-of-dates.		
15	System shall have the facility to email the reports automatically to concerned (configurable) members.		
16	System shall have the option to save custom reports for subsequent use.		
17	System shall have necessary user tracking facilities such as to know how many and which members are present in the cabin/premise at any given point of time.		
18	System shall have the facility to raise alerts for events such as when visitor arrives at a floor for which he is not authorized.		
<b>Storage / Scalability / Logs</b>			
19	System shall log all activities for reporting or auditing purpose.		
20	System shall store at least 90 days of transactions/events post which the same should be able to be archived. System shall provide sufficient storage for the same.		
21	System shall be scalable and should have room for expansion in future.		
22	Access control log shall be available only to authorized personnel.		

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23	The events and log should be stored in an un-editable, tamperproof and secure way.		
Certifications / Security / Encryption / System Hardening			
24	System should have necessary applicable certifications such as CE and FCC/BIS/UL/ROHS/TUV or equivalent.		
25	Communication among controllers and the host system should be encrypted with at least AES 128 Bit and TLS 1.3.		
26	All the PC/servers systems shall be protected by server-client based anti-virus software.		
27	All firmware and software should be at the recent most secure stable version as suggested by the respective OEM/manufacturer.		
28	Apply appropriate measures from OEM's/manufacturer's system hardening guide.		
29	Remove all default, installer or temporary user accounts and passwords used during installation that are not part of end-user's final operational requirements.		
30	Assign new passwords that are substantially different from factory default passwords to user accounts.		
Integration			
31	System should be integrated with C-DAC's existing services such as HRMS, LDAP, firesystemetc.		
32	Integrate with other components such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system, etc.		
33	System shall keep itself in sync with LDAP, shall automatically import employee details from C-DAC's LDAP and shall automatically deactivate access rights if an employee leaves the organization.		
Tailgating / Failsafe / Fail Secure / Emergency / Safety features			
34	System should have the provisions to prevent tailgating/piggybacking by means of an alarm/display.		
35	In case of network failure, the individual door controllers shall continue to control the entry and exit of the personnel as expected.		
36	The system shall be capable to work in offline mode (unavailability of network connectivity). All activities/transactions should be stored locally in door controller and upon resumption of network connectivity it should be sent to the server.		



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37	Overriding features should be available to take care of unexpected circumstances such as auto release of entry lock openings in case of (medical/fire/etc.) emergency.		
38	System should have necessary safety features such as automatically open when power is off		
<b>Licensing</b>			
39	The software licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned with-out any additional cost during the warranty period. These licenses should be transferable to C-DAC at a future date.		

• VTS-02

<b>UHF Long range reader</b>				
	<b>Parameters</b>	<b>Desired Technical Specification</b>	<b>Compliance (Yes/No)</b>	<b>Supporting Document, Page No.</b>
1	Frequency	UHF 865 MHZ to 867 MHZ		
2	Communication	Ethernet/ Serial communication (EIA standard RS 232 C)		
3	RF Power maximum	1 W - transmitted & 4 W - EIRP (Equivalent Isotropically Radiated Power)		
4	Reading Distance	With the Transceiver mounted typically at a height of 6 m above the road surface, the coverage of the antenna shall not exceed a diameter of 3.6m.		
5	Antenna	Circularly Polarized		
6	Protocol	EPC Gen 2, ISO 18000-6C and shall comply with the general conformance requirements of the standard		
7	Visual Diagnostics	The Transceiver shall have LED indicators for sense, transmit Fault and Power which shall be visible clearly to the operator on ground while the system is operational.		

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8	Environmental	IP 65 or better for outdoor units		
9	Relative Humidity	95% Condensing		
10	Upgradeability	The firmware should be upgradable to support future protocols.		
11	Transaction Capability	Reading of Tag & EPC memory for at least 2 Tags per second for a moving person		
12	Enclosure	Light weight enclosure for the RFID Transceiver and circularly polarized Antenna		
13	Automatic Person Identification wearing the card	The communication sequence between the Transceiver and Tag shall conform to ISO 18000-6C.		

• VTS-03

UHF based Passive RFID Tag for Visitors				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Supported Transponders	ISO18000-6B ISO18000-6C EPC GEN2		
2	Frequency Range	Standard ISM 902 928MHz or ISM 865 867MHz		
3	Operation Mode	Fixed Frequency or FHSS Software Programmable		
4	Memory Capacity	The tag should support ISO18000-6B protocol standard 2KBits storage capacity, 1728 Bits (216bytes) writable user area;MR6730B metal supports EPC C1 GEN2 (ISO18000-6C), with96Bits writable EPC Code area, 512Bits writable user area,and32Bits password area.		
5	Reading Rate	Software Programmable, Average Reading per 64Bits <10ms		
6	Reading Range	Upto 12 m related to reader and antenna		
7	Operating Temperature	0° to 65°C		

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• VMTS-01

Vehicle Movement Tracking System Features			
Sr. No.	Desired Features	Compliance (Yes/No)	Supporting Document, Page No.
	Centralized ANPR System		
1	System should work with both four-wheelers and two wheelers		
2	The system should automatically detect a vehicle approaching the installed location and leaving the installed location.		
3	On detection of vehicle approach, the system should activate the license plate video capture cameras.		
4	The system shall automatically detect the license plate in the captured video feed in real-time.		
5	The system shall perform OCR (Optical Character Recognition) of the license plate characters (English alpha -numeric characters in standard fonts)		
6	The system shall store image of vehicle and license plate and enter the license plate number in database along with vehicle photo, date, timestamp, location and site.		
7	System should be able to detect and recognize the English alpha numeric license plate in all standard fonts and formats.		
8	The system processing should be real time i.e. instant.		
9	The system should be able to process and read number plates of vehicles with speed even up to 30 km/hr.		
10	The system should store video clip of the vehicle approaching and leaving the location.		
11	The system should have option to configure site locations and data management settings.		
12	The Central Management Module shall run on the ANPR Central Server in control room.		
13	The system should work in both day and night conditions with good accuracy.		
14	The system should have option to update vehicle status in specific category by authorized personnel e.g.: On retrieval of stolen vehicle, system entry should be changed from “Stolen” to “Retrieved”.		
15	System should provide an option for advanced users to tune the system parameters.		
16	The system should have option to input certain license plates according to category like “Wanted”, “Suspicious”, “Stolen”, ”		

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	Expired” etc. by authorized personnel. On successful recognition of the number plate, system should be able to generate automatic alarm to alert the control room for vehicles which have been marked as “Wanted”, “Suspicious”, “Stolen”, “Expired”. System should have provision/ expansion option to add more categories for future need.		
<b>Integration</b>			
17	System should be integrated with C-DAC’s existing services such as HRMS, LDAP, fire system, power supply, etc.		
18	Integrate with other components such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system, etc.		
19	System shall keep itself in sync with LDAP, shall automatically import employee details from C-DAC’s LDAP and shall automatically deactivate access rights if an employee leaves the organization.		
<b>Searching</b>			
20	The system shall enable easy and quick retrieval of snapshots, video and other data for post incident analysis and investigation.		
21	The system should provide advanced and smart searching facility of license plates from the data base. There should be an option of searching number plates almost matching with the specific number entered (up to 1- and 2-character distance).		
<b>Driver image capture module</b>			
22	The system should have the capability to capture Driver image from the side on trigger of a sensor and capture a good quality image of the driver in both day and night. The system shall have an artificial external illumination focusing on the driver side		
<b>System performance</b>			
23	The system should work in both day and night conditions with good accuracy.		
24	The system should have a minimum 95% plus vehicle plate detection accuracy.		
25	The system should have an accuracy of at least 70% vehicle number plate recognition capability for printed license plates in standard format and fonts (both day and night time).		
<b>Reports and Alerts</b>			
26	System shall provide the facility to generate different (customizable) kinds of reports such as		

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	<ul style="list-style-type: none"> <li>• Report of vehicle flow at each of the installed locations for a range of time/days and for last day, last week, last month.</li> <li>• Report of vehicles in the detected categories at each of the installed locations for a range of time/days and for last day, last week, last month.</li> <li>• Report of vehicle inside the premise for a range of time/days and for last day, last week, last month.</li> </ul>		
27	System shall have the facility to generate and export reports in Excel, CSV, PDF format for a given day, week, month, custom-range-of-dates.		
28	System shall have the facility to email the reports automatically to concerned (configurable) members.		
29	System shall have the option to save custom reports for subsequent use.		
30	System shall have necessary user tracking facilities such as to know how many and which members are present in the cabin/premise at any given point of time.		
31	System shall have the facility to raise alerts for events such as unauthorized vehicle		
<b>Storage / Scalability / Logs</b>			
32	System shall log all activities for reporting or auditing purpose.		
33	System shall store at least 90 days of transactions/events post which the same should be able to be archived. System shall provide sufficient storage for the same.		
34	System shall be scalable and should have room for expansion in future.		
35	Access control log shall be available only to authorized personnel.		
36	The events and log should be stored in an un-editable, tamperproof and secure way.		
<b>Certifications / Security / Encryption / System Hardening</b>			
37	System should have necessary applicable certifications such as CE and FCC/BIS/UL/ROHS/TUV or equivalent.		
38	Communication among controllers and the host system should be encrypted with at least AES 128 Bit and TLS 1.3.		
39	All the PC/servers systems shall be protected by server-client based anti-virus software.		
40	All firmware and software should be at the recent most secure stable version as suggested by the respective OEM/manufacturer.		

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41	Apply appropriate measures from OEM’s/manufacturer’s system hardening guide.		
42	Remove all default, installer or temporary user accounts and passwords used during installation that are not part of end-user’s final operational requirements.		
43	Assign new passwords that are substantially different from factory default passwords to user accounts.		
<b>Integration</b>			
44	System should be integrated with C-DAC’s existing services such as HRMS, LDAP, BMS, fire system, power supply, etc.		
45	Integrate with other components such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system, etc.		
46	System shall keep itself in sync with LDAP, shall automatically import employee details from C-DAC’s LDAP and shall automatically deactivate access rights if an employee leaves the organization.		
<b>Tailgating / Failsafe / Fail Secure / Emergency / Safety features</b>			
47	System should have the provisions to prevent tailgating/piggybacking by means of an alarm/display.		
48	Overriding features should be available to take care of unexpected circumstances such as auto release of entry lock openings in case of (medical/fire/etc.) emergency.		
49	System should have necessary safety features such as automatically open when power is off		
<b>Licensing</b>			
50	The software licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned with-out any additional cost during the warranty period. These licenses should be transferable to C-DAC at a future date.		

• VMTS-02

IR HD 4 Megapixel IP IR ANPR Camera				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
	Camera			

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1	Camera Type	ANPR		
2	Image Sensor	1/1.8-inch 4 Megapixel progressive scan CMOS or better		
3	Effective Pixels	2688 X 1520 or better		
4	Min. Illumination	0.0001Lux		
5	Shutter Speed	Auto/Manual, 1s to 1/10000s		
6	S/N Ratio	More than 50dB		
7	Video Frame Rate	25/30 fps @ 4MP		
8	Scanning System	Progressive		
9	OCR Support	Camera should be with controller and should have inbuilt OCR software Accuracy: 99% for Standard Number Plate Recognition		
10	Accuracy	99% for Standard Number Plate Integration		
<b>Lens</b>				
11	Focal length (lens)	10mm to 50mm or better		
<b>Video</b>				
12	Video compression	H.265+ ,H.265,H.264,H.264H,MJPEG		
13	Resolution with aspect ratio	2688x1520, 1920x1080, 1280x720, 1024x576, 960x544, 816x464, 640x360, 480x272 @ 16:9		
14	Multiple streaming	At least two streams Main Stream: H.265/H.264, 1920x1080 / 1280x720, 25FPS Sub Stream: H.265/H.264, 1280x720 / 1024x576, 25FPS		
<b>Audio</b>				
15	Audio Communication	Bi-directional audio (2-way), 1IN/1OUT		
16	Audio Compression	Supported		
<b>Onboard Storage</b>				
17	Storage	Micro SD card slot support up to 256GB. Camera to be fully populated with 256GB		
<b>Operational</b>				

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18	Day and Night	True Day and Night, Auto / Color / BW		
19	Wide Dynamic Range	True WDR, 120Db		
20	IR Distance	Up to 30 meters		
21	Image Features	Multiple Exposure Method, 2D/3D DNR		
22	Intelligent Video Analytics	Object Detection, Face Detection, Perimeter Intrusion, Linger, Dwelling, Abandoned / Removed Objects, Enter, Exit, Crowd Detection, Queue Analysis		
23	Alarm Triggers	Motion detection, Intelligent video analytics, Video tampering, Alarm input, Alarm output, Audio Alarm etc.		
24	Event Triggers	FTP Upload, SMTP Upload, Snapshots, SD Card Record, HTTP Notification, Alarm etc.		
25	PoE/PoE+	Yes		
Network				
26	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCPNTP, UPnP, SMTP, IGMP, 802.1x, QoS, IPv6, Bonjour		
27	API	ONVIF (S, G, T)		
Interface				
28	Network	RJ-45 (10M/100M)		
29	Audio	Line IN × 1, Line OUT × 1		
30	Video Output	Video Output x 1		
31	Alarm	Alarm IN x 1, Alarm OUT x 1		
32	Hardware Reset & Factory Reset Button	Yes		
Environmental				
33	Power supply	PoE 12VDC		
34	Operating Temperature	-30 °C to 60 °C		
35	Operating Humidity	0% ~ 80% relative humidity		
36	Ingress Protection	IP65 or above		
37	Vandal Resistance	IK10 or above		



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	Regulatory		
38	Certification	CE, FCC, RoHS or equivalent	

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IP-based CCTV Surveillance System Features			
Sr. No.	Desired Features	Compliance (Yes/No)	Supporting Document, Page No.
Functional Requirements			
1	The cameras and the video management software etc. should be of the same make for easy compatibility or the system should be compatible for multi brand integration.		
2	Provision of online display of live (real-time) video and images at central monitoring station.		
3	This live viewing should be recorded by the system.		
4	System shall have the feature of archiving the footage in a range of date/time to external hard disc.		
5	System shall have the feature to simultaneously record, view and archive the footage with joystick or Mouse-Keyboard controllers shall be used for Pan, Tilt, Zoom, and other desired functions of the cameras.		
6	System shall ensure that once recorded, the video cannot be altered; ensuring the audit trail is intact for evidential purposes. System must provide built-in facility of watermarking or Digital certificate to ensure tamperproof recording for post event analysis and also these can be used as evidence at a later date, if so desired.		
7	System shall have the inter-operability of hardware, Operating System, software, networking, printing, database connectivity, reporting, emailing, alarm notification, and communication protocols.		
8	System expansion should be possible through off-the-shelf available hardware. Systems design should be such that expansion of 20% additional capacity should be possible. System should be scalable without performance degradation in any manner, it means adding more		

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	camera and hardware configuration should deliver the same performance as originally provided.		
9	True Day/Night cameras are to be installed for the purpose with variable focal length lens. All camera recordings shall have Camera ID, Location/Area of recording & date/time shall be programmable by the system administrator with User ID & Password. Date & time should be picked up from the system to ensure accuracy; the camera must accept external time synchronization from an NTP (Network Time Protocol) server.		
10	All domes shall be rugged and weather proof. The camera should be vandal proof.		
11	IP camera must support activity-controlled frame rate control to automatically adjust frame rate depending on motion in scene. The camera shall provide support for restricting access to pre-defined IP addresses only, so-called IP address filtering. The MAC address of the IP cameras must be registered in the name of OEM supplying the cameras.		
12	System shall be triplex i.e. it should provide facility of Viewing, Recording & Replay, simultaneously.		
13	The offered system shall have facility to export the desired portion of clipping (from a, desired date/time to another desired date/time) on CD or DVD or pendrive or external harddisk. Viewing of this recording shall be possible on standard PC using standard software like windows media player etc and also should be able to generate still images in standard formats like jpeg, psd, jpg etc. from the recorded data		
14	All cameras must be provided with suitable original mounts/housings (wall, dome etc) with dust proof cover		
15	It should have recording modes viz. continuous, manual, or programmed modes on date, time and camera-wise.		
16	It should provide programmable motion detection and recording, to be defined area wise.		
17	The CCTV application should allow retrieval of data instantaneously or any date / time interval chosen through search functionality of the application software. In case data is older than 90 days, the retrieval should be possible if available.		

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18	The proposed Video Management System (VMS) shall provide a complete end-to-end solution for security & surveillance application. The VMS shall be an enterprise class IP based application with Server-client architecture. The VMS shall support cameras using the industry standards ONVIF Profile S, and Profile G. The VMS shall have Management Servers, Recording Servers and Client Interface as integral part of the solution		
19	The VMS will be accompanied with the stack of recording servers is capable to record the live streaming flow of HD videos with appropriate codec and certifications in place. The recording servers under the supervision of VMS will render SDK services through media gateway upon the unicast stream of video per camera entered in DC in order to provide dedicated encrypted stream to the analytical servers, FRS servers and ANPR servers.		
20	The Analytical platform will revert back the derived outcomes to the VMS which will be forwarded to the VMS clients located in the user workstations. Also, the system shall be equipped with one of the VMS clients of the central VMS platform to receive triggers for necessary and immediate field actions.		
21	The VMS servers will conduct Out-of-Band Management (OOBM) Operations with the Analytical platform to enable users to be facilitated with triggered based structured outcomes at the video wall.		
22	The Surveillance System shall not have any limit on the number of cameras to be connected for Surveillance, Monitoring and Recording. Any increase in the no. of cameras shall be possible by augmentation of Hardware components.		
23	<p>Operators shall have the following access to the video feeds of the cameras according to the role-based access assigned to them:</p> <ul style="list-style-type: none"> <li>• Viewing of the live Camera Video Streams (Approx. 10% of total Camera) based on access rights</li> <li>• Viewing rights to the stored feeds, stored on Primary / Secondary Storage</li> <li>• Viewing of video feeds from CCTV surveillance system</li> <li>• Viewing of video feeds basis upon the Alerts / Exceptions / Triggers raised by Video Analytics, FRS, ANPR and PIU system</li> </ul>		

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	<ul style="list-style-type: none"> <li>• Trail Report on specific person / object / vehicle for a specific period / location</li> <li>• Personalized Dashboard (depending upon role-based access level defined to the police personnel/ operators, detailed requirement finalization will be done during Pre-Implementation stage)</li> <li>• Provide search of recorded video. Advanced search should be possible based on various filters like alarm / event, area, camera, etc.</li> <li>• Export rights of video / other critical incident data based on appropriate rights and privileges</li> <li>• Ability to back up data stored in DC to Near DR on demand/ schedule based</li> </ul>		
24	The Video Management Server will provide centralized management of all IP cameras in the city. The database will support more than 200 cameras / IP end points in a single server. The Management Server will provide with 1:1 redundancy. The Fail over and Fall-back Management Server will be on hot standby, ready to take over during the primary Management Server fails. No manual action from the user will be required. The failover time will not be beyond 1 Min and there should not be any loss in the Live and Recorded Videos of the connected cameras.		
25	The Video Management Servers shall be capable to be running in virtualisation / Physical server environment in the DC. The Standby VMS server will support data recovery scenarios where a server can be in another building and only take over if Primary server become offline. Both Primary and Secondary must be based on a single instance Active - Active architecture. The Standby Server will support real-time synchronization of the configuration databases for high reliability		
26	In the centralized scheme of solution, the Video Recording Servers will be running centrally in the best possible efficient environment in DC. Each Video Recording Server Host will be able to handle at least 960 Mbps of Video bandwidth in virtualized or physical environment to meet the project requirement.		
27	The recording Servers will have N:1 redundancy. The Fail over and Fall-back Recording Server will be on hot standby, ready to take over during the primary Recording Server fails. No manual action from the user will be		

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	required. There should not be any loss in the Live and Recorded Videos of the connected cameras due to failover		
28	There will be 10% additional servers to handle the interim storage / database /failover requirements.		
<b>Storage Requirement for Camera Video Streams</b>			
30	In the centralized scheme of solution, there will be centralized storage for all cameras at DC. The centralised storage has been planned at DC to store all camera feeds for 90 days 24/7 at 4MP resolution or at the highest resolution available from the camera at 25 FPS with H.265 video compression.		
<b>CCTV Monitoring Requirements</b>			
31	The VMS and its associated clients shall support Direct Multicast of video streams from the Cameras. The application shall redirect video streams to active viewing clients on the network using multicast UDP directly from cameras and the architecture shall not use multicast streaming via recording servers or any other servers. This will achieve bandwidth usage optimization in the network and increase the overall compute capacity of recording servers.		
32	The failover for VMS client workstations between the servers hosted must be seamless during any of the server or VMS goes down.		
33	10% of 300 cameras to be monitored live. Operators will be able to swap or switch any camera from operator desk to video wall.		
<b>General Requirements</b>			
34	Licenses: for integration of 200 cameras		
35	The VMS shall be based on a true open enterprise architecture that shall allow the user of non-proprietary workstation and server hardware, non-proprietary network infrastructure and non-proprietary storage. The VMS application provider must support at least 50+ brands of cameras and the list of integrations must be listed on the global web site of the application provider.		
36	The VMS shall integrate cameras using dedicated driver or using the industry standards ONVIF profile S and profile G. The same must be listed on the ONVIF website.		
37	A complete and scalable video surveillance solution should be provided which allows cameras to be added on		

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	a unit-by-unit basis. The database shall support more than 500 cameras/IP end points in a single hardware machine.		
38	The proposed VMS solution shall support native failover within application with no dependency on any external application for both hardware and application redundancy. The native failover architecture must be for both management and recording servers.		
39	The failover and fallback management and recording server shall be on hot standby, ready to take over during the primary management server fails. No manual action from the user shall be required. The failover time should not be beyond 1 minute and there should not be any loss in the live video and recorded video.		
40	The application shall offer a plug and play type of hardware discovery service with the following functionalities.		
41	Automatically discover video surveillance units as they are attached to the network.		
42	Discover surveillance units on different network segments, including the Internet, and across routers with or without network address translation (NAT) capabilities.		
43	The application shall have the capacity to configure the key frame interval (I-frame) in seconds or number of frames.		
44	The application shall allow for multiple recording schedules to be assigned to a single camera.		
45	The application shall support direct multicast from camera. For network topologies that restrict the application from sending multicast UDP streams, the application shall redirect audio/video streams to activate viewing clients on the network using multicast UDP directly from cameras and the architecture should not use Multicast streaming via recording servers or any other servers and increase the overall compute capacity of Recording servers.		
46	The application shall allow important video sequences to be protected against normal disk clean-up routines.		
47	The application shall have the following options when protecting a video sequence: Until a specified date, for a specified number of days, indefinitely (until the protection is explicitly removed for evidence).		

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48	The application shall support edge recording capabilities with ability to playback the video recorded at different speeds and ability to offload the video recorded on the application server on schedule, on event, or manually to store it on the recording server.		
49	The proposed software shall be scalable to support live viewing and automatic transfer of video recorded to the cloud on demand basis from UC&C user interface, based on the age of the video for future scalability and the hosted Cloud Platform must be among the approved vendors as per the MeITy approved GI Cloud initiative from Govt of India. The proposed application must provide a single interface to monitor, collaborate and action for both on premises and cloud devices like cameras, ANPR devices etc.		
50	The Application shall be capable to handle both IPv4 and IP v6 Unicast and Multicast traffic.		
51	The application management server should not have any limitation on the no of recording servers added on one single management / failover server. Any limitations must be clearly specified by the bidder.		
52	There should not be any dependency on the end point MAC address for licensing for ease of operations.		
53	VMS Software must be capable and certified to run on Physical or Virtualized Environment		
54	The VMS Platform must have the capability to real time and scheduled backup video/ Flagged and critical data to Near DR Servers/Storage.		
55	The VMS platform must have the flexibility to deploy rules for storing and avoiding data deletion of the flagged data, critical data, & Incident reports based on the criticality of the data.		
56	System shall be able to analyze all the recorded video files and provide the operator with Summarization video for quick review and investigation thereby reducing viewing time considerably. The video files from all the 3rd Party Video Management Software (VMS) shall be supported.		
57	System shall support: - Investigation case management Video summarization (extraction and superimposition of video objects over original scenes to allow simultaneous display of events that occurred at different times) multi-camera search,		

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	enabling the pinpointing of objects of interest via appearance similarity as well as a broad range of filter Presets		
58	Multi-camera search, enabling the pinpointing of objects of interest via appearance similarity as well as a broad range of filter Pre-sets.		
59	Shall support Video File exports from all kind of 3rd Party VMS and even the video files recorded from a Mobile Or any other kind of Analog Camera.		
60	System shall be able to enhance safety and security with quick rapid human response to critical events recorded on video.		
61	Shall support Video File exports from all kind of 3rd Party VMS and even the video files recorded from a Mobile Or any other kind of Analog Camera.		
62	Shall automatically extracts objects from the original video and efficiently reconstructs and superimposes them back in the original scene, simultaneously displaying events that have occurred at different times		
63	System shall rapidly pinpoint people and vehicles of interest, using an extensive range of appearance and movement filters, across multiple video sources from different cameras installed in the premises.		
64	Shall Instantly locate people, vehicles, and items of interest by searching for similar looking objects.		
65	System shall display time-stamps for various objects in the video continuously, while the summarization is played.		
66	Shall provide a web-browser (Preferably Google Chrome) interface to upload the video files, generate the Summarization & for the management of multiple investigation cases		
67	System shall provide density control while replaying the Summarization video. Density refers to the number of events shown concurrently when playing a Summarization. The density control shall increase or decrease the number of events shown at once also changing the event density shall alter the run time duration of the video Summarization thereby enabling quick review time.		
68	Time Range - Limit the search criteria to specific time ranges		
69	Source - Limit objects to specific cameras or files		



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70	Class - Video Summarization shall be shown based on People, Two-Wheeled Vehicles, Other Vehicles and Animals -People Class: Man, Woman and child. -Two-Wheeled Vehicle Class: Bicycle and Motorcycle -Other Vehicles Class: Car, Pickup, Van, Truck, Bus, Train, Airplane, and Boat		
71	attributes - Shall be able to select the attributes within a class to refine the search - Bags: Backpacks, Hand-held Bags - Hats: Hats, No Hats - Upper Wear: Short/No Sleeves, Long Sleeves - Lower Wear: Long, Short		
72	Colour - Identify objects according to any combination of Brown, Red, Orange, Yellow, Green, Lime, Cyan, Purple, Pink, White, Grey and Black		
73	Size - Select objects based on their actual (real-life) size from a histogram of sizes relevant to a specific case		
74	Speed - Select objects based on their actual speed from a histogram of speeds relevant to a specific case		
75	Dwell - Select objects dwelling for longer than a certain period in a scene		
76	Area - Identify objects included or excluded within one or more user-defined 3- or 4-sided polygon areas. The user shall be able to set the minimum duration the object spends inside the area.		
77	Path - Identify objects traveling along one or more user-defined paths. The user shall be able to set the minimum duration the object spends inside the area.		
78	Appearance similarity - System shall be able to do filter and display only the objects matching similar-looking people (People Similarity) or Vehicles (Vehicle Similarity).		
79	Supported Video Resolution - Minimum CIF and Maximum 4K		
80	Visual Layers - System shall provide statistical visual analysis of object activity & dwell areas and popular event paths in a Summarization.		
81	Supported Frame Rate - 8-30 FPS		
82	Shall support video file formats like .AVI, .MKV, .MPEG4, MOV, WMV, DVR, ASF, RT4, DIVX, .264, .H264, .H265, .GE5, .TS, .3GP		

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Client Interface			
83	The Monitoring UI shall support the role of a Unified Security Interface that can monitor various Video, ANPR, and other system events and alarms, as well as view live and recorded video.		
84	VMS shall enable seamless integration with video analytics systems like face recognition, intrusion detection, crowd monitoring; Automated Number Plate Recognition (ANPR) system, other traffic management applications; and other typical video analytics application		
85	The system shall have a single API interface for sending Analytics event alerts and other Maintenance Alerts over HTTP protocol to external systems such as Command & Control Application, Incident Management System, etc.		
86	The Client Viewer shall allow digital zooming on live view as well as on replay view on Fixed as well as PTZ Cameras.		
87	The Client Viewer shall support the use of standard PTZ controller or 3-axis USB joysticks for control of pan, tilt, zoom and auxiliary camera functions.		
88	The Client Viewer shall have the capability to receive multicast streams if a pre-set number of clients are requesting the same live view camera. The system shall have the capability to detect if the network becomes unreliable and to automatically switch to unicast to ensure that the operator is able to receive video.		
User Workspace Customization			
89	The user shall have full control over the user workspace through a variety of user-selectable customization options. Administrators shall also be able to limit what users and operators can modify in their workspace through privileges		
90	Once customized, the user shall be able to save his or her workspace		
91	The user workspace shall be accessible by a specific user from any client application on the network.		
92	Display tile patterns shall be customizable.		
93	Event or alarm lists shall span anywhere from a portion of the screen up to the entire screen and shall be resizable by the user. The length of event or alarm lists shall be user-defined. Scroll bars shall enable the user to navigate through lengthy lists of events and alarms.		

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94	The Monitoring UI shall support multiple display tile patterns (e.g. 1 display tile (1x1 matrix), 16 tiles (8x8 matrix), and multiple additional variations).		
95	Additional customization options include: show/hide window panes, show/hide menus/toolbars, show/hide overlaid information on video, resize different window panes, and choice of tile display pattern on a per task basis.		
96	The Monitoring UI shall provide an interface to support the following tasks and activities common to Various systems		
97	Monitoring the events from a live security system.		
98	Generating reports, including custom reports. Monitoring and acknowledging alarms.		
99	Creating and editing incidents and generating incident reports.		
100	Displaying dynamic graphical maps and floor plans as well as executing actions from dynamic graphical maps and floor plans Unified with UC&C.		
101	The live video viewing capabilities of the Monitoring UI shall include:		
102	The ability to display all cameras attached to the system both Public, Collaborative monitoring and Cloud based entities.		
103	The ability to drag and drop a camera into a display tile for live viewing.		
104	The ability to drag and drop a camera from a map into a display tile for live viewing.		
105	Support for digital zoom on live camera video streams.		
106	The ability for audio communication with video units with audio input and output.		
107	The ability to control pan-tilt-zoom, iris, focus, and Presets.		
108	The ability to bookmark important events for later retrieval on any archiving camera and to uniquely name each bookmark in order to facilitate future searches.		
109	The ability to start/stop recording on any camera in the system that is configured to allow manual recording by clicking on a single button.		
110	The ability to activate or de-activate viewing of all system events as they occur.		

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111	The ability to switch to instant replay of the video for any archiving camera with the simple click of button.		
112	The ability to take snapshots of live video and be able to save or print the snapshots		
113	The ability to browse through a list of all bookmarks created on the system and select any bookmarked event for viewing.		
114	Tools for exporting video and a self-contained video player on various media such as USB keys, CD/DVD-ROM and Proposed Evidence management and Collaboration system. This video player shall be easy to use without training and shall still support reviewing video metadata.		
115	Tools for exporting video sequences in standard video formats, such as ASF, MP4		
116	The ability to encrypt exported video files with industry standard encryption.		
117	A tool building and exporting a set of videos into a single container. This tool shall allow the operator to build sequences of video to create a storyboard and allow the export of synchronous cameras		
<b>Cyber Security Requirements</b>			
118	The VMS shall support only secured media stream requests, unless explicitly configured otherwise. Secured media stream requests shall be secured with strong certificate-based authentication leveraging RTSPS (aka RTSP over TLS). Client authentication for media stream requests is claims-based and may use a limited lifetime security token.		
119	The VMS shall offer the ability to encrypt the media stream, including video, audio, and metadata with authenticated encryption. Media stream encryption shall be done at rest and in transit and be a certificate-based AES 128-bit encryption.		
120	The VMS shall allow encryption to be set on a per camera basis for all or some of the cameras.		
121	Provide up to 20 different certificates for different groups of users who have been granted access to decrypted streams.		
122	Use Secure RTP (SRTP) to encrypt the payload of a media stream in transit and allow multicast and unicast of the encrypted stream.		

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123	Use a random encryption key and change periodically.		
124	Allow encrypted streams to be exported.		
125	The VMS shall support end to end encrypted streams with cameras supporting Secure RTP (SRTP) both in unicast and multicast from the camera.		
126	The Application shall support digitally sign recorded video using 2048-bit RSA public/private key cryptography.		
127	The Application shall protect archived audio/video files and the system database against network access and non-administrative user access.		
128	Media encryption shall support with latest industry standards - AES128.		
129	The application must support encryptions at the rest and not only on the exported videos footage		
130	The proposed VMS platform must have international recognized certifications to prove the Cybersecurity standards adaption. Bidders to submit the certifications along with the technical bid.		
<b>User Authentication Support</b>			
131	The system shall support logon using the username and password credentials and shall allow distributed viewing of multiple cameras on the system on any monitor.		
132	System shall be integrated with dual factor authentication using LDAP/ AD and fingerprint based biometric devices for User authentication.		
133	The system shall include flexible access rights and allow each user to be assigned several roles where each shall define access rights to cameras.		
134	The System shall provide a feature-rich administration client for system configuration and day to- day administration of the system.		
135	The VMS shall support mobile apps for various off-the-shelf devices. The mobile apps shall communicate with the Mobile Server of the VMS over any Wi-Fi or cellular network connection.		
136	All communication between the mobile apps and central server shall be based on standard TCP/IP protocol and shall use the TLS encryption with digital certificates to secure the communication channel.		
<b>Other Essential Functionalities</b>			
137	Core		

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	<p>a. The mobile app should a COTS based app from the VMS provider being made available from the day 1 and must be easily be downloadable from IOS and Android stores online.</p> <p>b. Ability to display a geographic map with VMS entities geo-located on the map.</p> <p>c. Ability to view any camera configured on the map.</p> <p>d. Ability to search cameras or location on the map.</p> <p>e. Ability to view live and recorded video from the cameras of the central recording server.</p> <p>f. Ability to display live and recorded video side-by-side for a specific camera.</p> <p>g. Ability to perform digital zoom on cameras.</p> <p>h. Ability to perform actions on cameras such as add a bookmark, control a PTZ, control the iris/focus function, save a snapshot, start/stop recording.</p> <p>i. Ability to use the camera of the smartphone and stream a live video feed to a video recorder in the system.</p> <p>j. Ability to locate the mobile app user on map and provisioning to message and collaborate in real time with the central command center or field staff.</p>		
138	It shall be possible to extend to the widgets of a dashboard using the SDK. This will provide the ability to develop custom widgets to the system.		
139	The VMS shall support the following actions on a dashboard: print dashboard, export dashboard to PNG file, and automatically email a report based on a schedule and a list of one or more recipients.		
140	<p>The VMS shall support the following operations:</p> <p>a. Adding an IP device</p> <p>b. Updating an IP device</p> <p>c. Updating basic device parameters</p> <p>d. Adding/removing channels</p> <p>e. Adding/removing output signals</p> <p>f. Updating an IP channel</p> <p>g. Removing an IP device</p> <p>h. Enabling/disabling an IP channel</p> <p>i. Refreshing an IP device (in case of firmware upgrade)</p> <p>j. Multicast at multiple aggregation points</p>		
	<b>Video Analytics</b>		
141	The Video Analytics shall offer a suite of analytics rules with Artificial Intelligence to provide automatic		

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	<p>detection of a range of motion and non-motion behaviour of persons, objects and vehicles.</p> <p>Key capabilities to be included:</p> <p>a. Automated Person Identification: Analyze facial features and match them against a secure database, identifying individuals in real-time.</p> <p>b. Access Control Integration: Enable access control to grant or restrict entry based on identity, allowing for seamless and secure management of restricted areas within facilities.</p> <p>c. Real-Time Alerts and Notifications: In case of unauthorized access, the system triggers instant alerts to security personnel, allowing rapid response. Notifications can be configured for specific watchlists, such as known threats or VIP personnel.</p> <p>There shall be a provision of Analytics and Artificial Intelligence through Machine and Deep learning solutions on video feeds received from the cameras. There should be provision of 2 use cases (minimum) per camera.</p>		
142	<p>Each of the video analytics use case shall be able to run on a unified video intelligence platform of the system. Where the platform shall have the capability to support several multi-vendor/OEM video analytics applications that can be deployed on any camera or video-feed seamlessly.</p>		
143	<p>Each of the video analytics use-case shall be structured as an independent module through dedicated SoP that can be deployed on any camera feed using a simple user interface utility, providing a complete visibility of the use cases and which cameras they are running on. The platform should have utility of scheduling each use case on individual camera.</p>		
144	<p>The user should be able to easily select the camera by tag, groups or locations and schedule applications on any camera.</p>		

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145	System will ingest Petabytes of Data in Storage Repository- <ul style="list-style-type: none"> <li>• Intelligence inputs from field officers</li> <li>• Internet Data</li> <li>• Interrogation Reports</li> <li>• Criminal Records</li> <li>• Videos and Images from CCTV cameras, Satellites etc</li> </ul>		
146	Custom Predictive Models trained on client’s training set (AI and ML Models) - <ul style="list-style-type: none"> <li>• Similar criminal profiles</li> <li>• Similar events clusters</li> <li>• Alerts for specific crimes</li> <li>• Identify themes and trends</li> <li>• Track hotspots and dangerous areas</li> <li>• Force deployment</li> <li>• Sensitive Locations</li> </ul>		
147	Visual and Analytical platform to carry out analytics (Analysis) <ul style="list-style-type: none"> <li>• Track the complete profile of an individual</li> <li>• Track compromised assets</li> <li>• Track events and main suspects</li> <li>• Track organizations and their actions</li> <li>• Identify linkages between events and individuals</li> <li>• Identify chronology of an event</li> <li>• Charts and Reports to identify upcoming trends</li> </ul>		
148	Performance Indicators for the Video Analytics: <ul style="list-style-type: none"> <li>• Detection Rate (&gt; 99%)</li> <li>• True Positive Rate + True Negative Rate (&gt;95%)</li> <li>• False Positive Rate (&lt;5%)</li> <li>• False Negative Rate (&lt;5%)</li> </ul>		
149	All the scalability measures in terms of increase in no. of cameras or use-cases will be under the MSI responsibility		
150	Video Analytics will be performed on metadata fields on a data lake of the envisaged system. The data will also be gathered from different datasets to be integrated. Big Data solution with its built Artificial Intelligence (AI) and Machine Learning (ML) algorithms will be capable of assisting Police Officials to work in tandem and collaborative manner in all three following scenarios: <ul style="list-style-type: none"> <li>• Retrospective (Post Incident),</li> <li>• Preventive</li> <li>• Predictive measures</li> </ul>		



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	<p>The various Analytic solutions as envisaged as an effective outcome of the system includes:</p> <p>People Detection</p> <ol style="list-style-type: none"> <li>a. Crowd Detection &amp; Headcount</li> <li>b. Person Falling Detection</li> <li>c. Protection and security towards women in isolation</li> </ol> <p>Vehicular Detection</p> <ol style="list-style-type: none"> <li>a. Automatic Number Plate Recognition (ANPR- Vehicle Surveillance)</li> <li>b. Suspect Vehicle Detection</li> <li>c. Vehicle Search</li> <li>d. Missing Number Plate Detection</li> </ol>		
151	<p>Health monitoring of Field Cameras and Network</p> <p>There will be a policy defined management at the central level (Data Center) for continuous health monitoring of field level devices and the network layer of the architecture.</p> <ul style="list-style-type: none"> <li>• Camera Status: The Camera Health Monitoring application should be able to monitor the status of the camera and report an alert in case the camera is not functional or tampered with intentionally or unintentionally.</li> <li>• View Obstruction: It should detect and raise an alert if the camera view is obstructed by any foreign object. The user should be able to adjust the threshold parameters of extent of obstruction in terms of percentage of camera view</li> <li>• Bright Light Shown: The app should be able to detect and raise an alert if the camera view is tampered with bright lights. The system should specifically identify it as a camera tampering event with light shining.</li> <li>• Camera View Changed: It should raise an alert if the camera view is changed/moved suddenly.</li> <li>• Illumination Too Low: It should raise an alert if the camera scenes gets too dark below a threshold.</li> <li>• Camera Connectivity: It should raise an alert if the camera is turned off or connectivity is lost.</li> <li>• The proposed solution must automatically discover manageable elements connected to the network and map the connectivity between them. The Network Fault</li> </ul>		

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	<p>Management consoles must provide the topology map view from a single central console.</p> <ul style="list-style-type: none"> <li>• The proposed solution must automatically discover manageable elements connected to the network and map the connectivity between them. The Network Fault Management consoles must provide the topology map view from a single central console.</li> <li>• The proposed system must support multiple types of discovery including IP range discovery, Seed router-based discovery &amp; Trap-BasedDiscovery</li> <li>• The system should provide discovery &amp; inventory of heterogeneous physical network devices like Layer-2 &amp; Layer-3 switches, Routers and other IP devices and do mapping of LAN &amp; WAN connectivity with granular visibility up to individual ports level.</li> <li>• The system must be able to support mapping and modelling of the infrastructure grouped by network connectivity, physical location of equipment and user groups</li> </ul>		
	<b>Other Requirements</b>		
152	Provision of online display of live (real-time) video and images at central monitoring station.		
153	This live viewing should be recorded by the system.		
154	System shall have the feature of archiving the footage in a range of date/time to external hard disc.		
155	System shall have the feature to simultaneously record, view and archive the footage with joystick or Mouse-Keyboard controllers shall be used for Pan, Tilt, Zoom, and other desired functions of the cameras.		
156	System shall ensure that once recorded, the video cannot be altered; ensuring the audit trail is intact for evidential purposes. System must provide built-in facility of watermarking or Digital certificate to ensure tamperproof recording for post event analysis and also these can be used as evidence at a later date, if so desired.		
157	System shall have the inter-operability of hardware, Operating System, software, networking, printing, database connectivity, reporting, emailing, alarm notification, and communication protocols.		
158	System expansion should be possible through off-the-shelf available hardware. Systems design should be such that expansion of 20% additional capacity should be		

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	possible. System should be scalable without performance degradation in any manner, it means adding more camera and hardware configuration should deliver the same performance as originally provided.		
159	True Day/Night cameras are to be installed for the purpose with variable focal length lens. All camera recordings shall have Camera ID, Location/Area of recording & date/time shall be programmable by the system administrator with User ID & Password. Date & time should be picked up from the system to ensure accuracy; the camera must accept external time synchronization from an NTP (Network Time Protocol) server.		
160	All domes shall be rugged and weather proof. The camera should be vandal proof.		
161	IP camera must support activity-controlled frame rate control to automatically adjust frame rate depending on motion in scene. The camera shall provide support for restricting access to pre-defined IP addresses only, so-called IP address filtering. The MAC address of the IP cameras must be registered in the name of OEM supplying the cameras.		
162	System shall be triplex i.e. it should provide facility of Viewing, Recording & Replay, simultaneously.		
163	The offered system shall have facility to export the desired portion of clipping (from a, desired date/time to another desired date/time) on CD or DVD or pendrive or external harddisk. Viewing of this recording shall be possible on standard PC using standard software like windows media player etc and also should be able to generate still images in standard formats like jpeg, psd, jpg etc. from the recorded data.		
164	All cameras must be provided with suitable original mounts/housings (wall, dome etc) with dust proof cover		
165	It should have recording modes viz. continuous, manual, or programmed modes on date, time and camera-wise.		
166	It should provide programmable motion detection and recording, to be defined area wise. Surveillance cameras and its dependent infrastructure should have face recognition capability.		
167	The CCTV application should allow retrieval of data instantaneously or any date / time interval chosen through search functionality of the application software.		

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	In case data is older than 90 days, the retrieval should be possible if available.		
<b>Reports and Alerts</b>			
168	System shall provide the facility to generate different (customizable) kinds of reports.		
169	System shall have the facility to generate and export reports in Excel, CSV, PDF format for a given day, week, month, custom-range-of-dates.		
170	System shall have the facility to email the reports automatically to concerned (configurable) members.		
171	System shall have the option to save custom reports for subsequent use.		
172	System shall have the facility to raise alerts for unexpected events.		
<b>Storage / Scalability / Logs</b>			
173	System shall log all activities for reporting or auditing purpose.		
174	System shall provide sufficient storage of all the camera recordings for a period of minimum 90 days or more at 1080p or higher real time recording @ 25 FPS, using necessary compression techniques for all cameras preferable H.265/ H.264 (extended capacity of cameras i.e. present capacity + 25 %). The recording frame rate & resolution for each camera shall be user programmable. Facility of camera recording in real-time mode (25 FPS)/15/12.5/10 or lower FPS as well as in any desired combination must be available in the system. Cameras should support simultaneous usage of different compression technologies for viewing and recording.		
175	VMS should have configurable settings, the local time & date, event functionality and video configuration shall be stored in a non-volatile memory and there should be Zero data loss during power cuts or soft resets.		
176	System shall be scalable and should have room for expansion in future.		
177	Access control log shall be available only to authorized personnel.		
178	The events and log should be stored in an un-editable, tamperproof and secure way.		
<b>Certifications / Security / Encryption / System Hardening</b>			
179	System should have necessary applicable certifications such as CE and FCC/BIS/UL/ROHS/TUV or equivalent		

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180	Communication among controllers and the host system should be encrypted with at least AES 128 Bit and TLS 1.3.		
181	All the PC/servers systems shall be protected by server-client based anti-virus software.		
182	All firmware and software should be at the recent most secure stable version as suggested by the respective OEM/manufacturer.		
183	Apply appropriate measures from OEM’s/manufacturer’s system hardening guide.		
184	Remove all default, installer or temporary user accounts and passwords used during installation that are not part of end-user’s final operational requirements.		
185	Assign new passwords that are substantially different from factory default passwords to user accounts.		
Tailgating / Failsafe / Fail Secure / Emergency / Safety features			
186	In case of main storage server failure, the individual cameras shall continue to monitor as expected and push the recorded data once the storage server comes up.		
Licensing			
187	The software/camera licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned without any additional cost during the warranty period. These licenses should be transferable to C-DAC’s Customer at a future date when C-DAC’s contract with the Customer is concluded		
Mounting Poles			
188	Corrosion free, erected, iron pole which shall mount cameras.		
189	The pole should be strong and should bear the load of all mounted equipment. The required civil work like excavation, RCC pedestal, back filling, structural steel support etc is included in scope of work of vendor.		

- SS-02

Video Management Server
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**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Main Processor	Quad-core embedded processor		
2	RAM	At least 16GB		
3	Operating System	Pre-loaded		
4	Keyboard and Mouse	Included		
5	Certifications	CE, FCC and UL or equivalent		
6	Make	VMS, and IP Cameras of the same make is preferred		
7	Working Environment	Operating temperature should be 4.5 - 35° C		
8	Power	Stable Power 210W		
<b>Display</b>				
9	Interface	3 HDMI, 1 VGA		
10	OSD	Camera title, time, video loss, camera lock, motion detection, recording		
<b>Video Detection and Alarm</b>				
11	Trigger events	Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips		
12	Video Detection	Motion Detection, Video Loss and Tampering		
<b>Playback and Backup</b>				
13	Sync Playback	Upto 64		
14	Search mode	Time /Date, Alarm, MD and Exact Search (accurate to second)		
15	Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom		
16	Backup mode	USB Device / Network / Internal SATA burner/eSATA Device		
17	Certifications	CE / FCC and UL or equivalent		
<b>Storage</b>				
18	Storage	At least 500TB (fully populated)		
19	RAID	0 / 1 / 5 / 6/ 10		
<b>Auxiliary Interfaces</b>				

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

20	USB	3 Ports or more		
21	RS232	1 Port, for PC Communication		
<b>Recording</b>				
22	Record Rate	960 Mbps		
23	Record Mode	Manual, Schedule (Regular (Continuous) , MD, Alarm), Stop		
24	Trigger Events	Recording, PTZ, Tour, Alarm out, Video Push, Email, FTP, Snapshot, Buzzer, network loss, video loss		
25	OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording		
26	Video Detection	Motion Detection, Video Loss, Camera Blank		
<b>Network</b>				
27	Ethernet Port	4 (1Gbps)		
28	Network Function	TCP/IP, DHCP, Cloud P2P, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP,HTTPS		
29	Interoperability	ONVIF 2.0 or higher, PSIA, CGI Conformant		

- SS-03

<b>IR HD 4 Megapixel IP Dome Camera with Motorized VariFocals zoom lens with all accessories</b>				
	<b>Parameters</b>	<b>Desired Technical Specification</b>	<b>Compliance (Yes/No)</b>	<b>Supporting Document, Page No.</b>
<b>Camera</b>				
1	Camera Type	Dome		
2	Image Sensor	1.8-inch 4 Megapixel progressive scan CMOS or better		
3	Effective Pixels	2688 X 1520 or better		
4	Min. Illumination	0.003Lux/F1.8		
5	Shutter Speed	Auto/Manual, 1s to 1/10000s		
6	S/N Ratio	More than 50dB		
7	Video Rate	25/30 fps @ 4MP		
8	Scanning System	Progressive		
<b>Lens</b>				

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

9	Focal length (lens)	2.7mm to 12mm or more		
Video				
10	Video compression	H.265+, H.265, H.264, H.264H, MJPEG		
11	Resolution with aspect ratio	2688 X 1520, 1920x1080, 1280x720, 1024x576, 960x544, 816x464, 640x360, 480x272 @ 16:9		
12	Multiple streaming	At least three streams Main Stream: H.265/H.264, 2688x1520 / 1920x1080 / 1280x720, 25FPS Sub Stream: H.265/H.264, 1280x720 / 1024x576, 25FPS		
Audio				
13	Audio Communication	Bi-directional audio (2-way), 1IN/1OUT		
14	Audio Compression	Supported		
Onboard Storage				
15	Storage	Micro SD card slot support up to 256GB. Camera to be fully populated with 256GB		
Operational				
16	Day and Night	True Day and Night, Auto / Color / BW		
17	Wide Dynamic Range	True WDR, 120dB		
18	IR Distance	Up to 40 meters		
19	Image Features	Multiple Exposure Method, 2D/3D DNR		
20	Corridor Pattern	Supported		
21	Video Privacy	4 zones video mask		
22	Intelligent Video Analytics	Object Detection, Face Detection, Perimeter Intrusion, Lingering, Dwelling, Abandoned / Removed Objects, Enter, Exit, Crowd Detection, Queue Analysis		
23	Alarm Triggers	Motion detection, Intelligent video analytics, Video tampering, Alarm input, Alarm output, Audio Alarm etc.		
24	Event Triggers	FTP Upload, SMTP Upload, Snapshots, SD Card Record, HTTP Notification, Alarm etc.		
25	PoE/PoE+	Yes		



**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

Network				
26	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCPNTP, UPnP, SMTP, IGMP, 802.1x, QoS, IPv6, Bonjour		
27	Online Connection	Simultaneous monitoring for up to 20 users, multi-stream real time transmission		
28	API	ONVIF (S, G, T)		
Interface				
29	Network	RJ-45 (10M/100M)		
30	Audio	Line IN × 1, Line OUT × 1		
31	Video Output	Video Output x 1		
32	Alarm	Alarm IN x 1, Alarm OUT x 1		
33	Hardware Reset & Factory Reset Button	Yes		
Environmental				
34	Power supply	PoE 12VDC		
35	Operating Temperature	-30 °C to 60 °C		
36	Operating Humidity	0% ~ 80% relative humidity		
37	Ingress Protection	IP65 or above		
38	Vandal Resistance	IK10 or above		
Regulatory				
39	Certification	CE, FCC, RoHS or equivalent		

- SS-04

IR HD 4 Megapixel IP Bullet Camera with Motorized VariFocals zoom lens with all accessories				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
Camera				
1	Camera Type	Fixed box / Bullet		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

2	Image Sensor	1.8-inch 4 Megapixel progressive scan CMOS or better		
3	Effective Pixels	2688 X 1520 or better		
4	Shutter Speed	Auto/Manual, 1s to 1/10000s		
5	Min. Illumination	0.003Lux/F1.8		
6	Shutter Speed	Auto/Manual, 1s to 1/10000s		
7	S/N Ratio	More than 50dB		
8	Video Fame Rate	25/30 fps @ 4MP		
9	Scanning System	Progressive		
Lens				
10	Focal length (lens)	2.7mm to 12mm or more		
Video				
11	Video compression	H.265+, H.265, H.264, H.264H, MJPEG		
12	Resolution with aspect ratio	2688x1520, 1920x1080, 1280x720, 1024x576, 960x544, 816x464, 640x360, 480x272 @ 16:9		
13	Multiple streaming	At least three streams Main Stream: H.265/H.264, 2688x1520, 1920x1080 / 1280x720, 25FPS Sub Stream: H.265/H.264, 1280x720 / 1024x576, 25FPS		
Audio				
14	Audio Communication	Bi-directional audio (2-way), 1IN/1OUT		
15	Audio Compression	Supported		
Onboard Storage				
16	Storage	Micro SD card slot support up to 256GB. Camera to be fully populated with 256GB		
Operational				
17	Day and Night	True Day and Night, Auto / Color / BW		
18	Wide Dynamic Range	True WDR, 120dB		
19	IR Distance	Up to 50 meters		
20	Image Features	Multiple Exposure Method, 2D/3D DNR		
21	Corridor Pattern	Supported		
22	Video Privacy	4 zones video mask		
23	Intelligent Video Analytics	Object Detection, Face Detection, Perimeter Intrusion, Linger, Dwelling, Abandoned / Removed Objects, Enter, Exit, Crowd Detection,		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		Queue Analysis		
24	Alarm Triggers	Motion detection, Intelligent video analytics, Video tampering, Alarm input, Alarm output, Audio Alarm etc.		
25	Event Triggers	FTP Upload, SMTP Upload, Snapshots, SD Card Record, HTTP Notification, Alarm etc.		
26	PoE/PoE+	Yes		
	Network			
27	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCPNTP, UPnP, SMTP, IGMP, 802.1x, QoS, IPv6, Bonjour		
28	Online Connection	simultaneous monitoring for up to 20 users, multi-stream real time transmission		
29	API	ONVIF (S, G, T)		
	Interface			
30	Network	RJ-45 (10M/100M)		
31	Audio	Line IN × 1, Line OUT × 1		
32	Video Output	Video Output x 1		
33	Alarm	Alarm IN x 1, Alarm OUT x 1		
34	Hardware Reset & Factory Reset Button	Yes		
	Environmental			
35	Power supply	PoE 12VDC		
36	Operating Temperature	-30 °C to 60 °C		
37	Operating Humidity	0% ~ 80% relative humidity		
38	Ingress Protection	IP65 or above		
39	Vandal Resistance	IK10 or above		
	Regulatory			
40	Certification	CE, FCC, RoHS or equivalent		

• SS-05

4 Megapixel IP IR PTZ Outdoor Camera with Motorized VariFocals zoom lens with all accessories			
Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
Camera			

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

1	Camera Type	PTZ		
2	Image Sensor	1/3 omcj 4 Megapixel progressive scan CMOS or better		
3	Zoom	30x Optical Zoom 16 Digital Zoom		
4	Shutter Speed	Auto/Manual, 1s to 1/10000s		
5	Min. Illumination	0.01Lux/F1.6		
6	S/N Ratio	More than 50dB		
7	Video Frame Rate	25/30 fps @ 4MP		
8	Scanning System	Progressive		
<b>Lens</b>				
9	Focal length (lens)	4.5mm to 135mm or better		
<b>Video</b>				
10	Video compression	H.265+, H.265, H.264, H.264H, MJPEG		
11	Resolution and aspect ratio	2688x1520, 1920x1080, 1280x720, 1024x576, 960x544, 816x464, 640x360, 480x272 @ 16:9		
12	Multiple streaming	At least three streams Main Stream: H.265/H.264, 2688x1520 / 1920x1080 / 1280x720, 25FPS Sub Stream: H.265/H.264, 1280x720 / 1024x576, 25FPS		
<b>Audio</b>				
13	Audio Communication	Bi-directional audio (2-way), 1IN/1OUT		
14	Audio Compression	Supported		
<b>Onboard Storage</b>				
15	Storage	Micro SD card slot support up to 128GB. Camera to be fully populated with 128GB		
<b>Operational</b>				
16	Day and Night	True Day and Night, Auto / Color / BW		
17	Wide Dynamic Range	True WDR, 120dB		
18	IR Distance	Up to 150 meters		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

19	Image Features	Defog, Multiple Exposure Method,2D/3D DNR		
20	Video Privacy	24 zones video mask		
21	Intelligent Video Analytics	Object Detection,FaceDetection,Perimeter Intrusion, Lingering, Dwelling, Abandoned / Removed Objects, Enter, Exit, Crowd Detection, Queue Analysis		
22	Alarm Triggers	Motion detection, Intelligent video analytics,Video tampering, Alarm input, Alarm output, Audio Alarm etc.		
23	Event Triggers	FTP Upload, SMTP Upload, Snapshots, SD Card Record, HTTP Notification, Alarm etc.		
24	PoE/PoE+	Yes		
<b>Network</b>				
25	Protocol	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP NTP, UPnP, SMTP, IGMP, 802.1x, QoS, IPv6, Bonjour		
26	Online Connection	simultaneous monitoring for up to 20 users, multi-stream real time transmission		
27	API	ONVIF (S, G, T)		
<b>Interface</b>				
28	Network	RJ-45 (10M/100M)		
29	Audio	Line IN × 1, Line OUT × 1		
30	Video Output	Video Output x 1		
31	Alarm	Alarm IN x 1, Alarm OUT x 1		
32	Hardware Reset &Factory Reset Button	Yes		
<b>Environmental</b>				
33	Power supply	PoE 12VDC		
34	Operating Temperature	-30°C to 60 °C		
35	Operating Humidity	0% ~ 80% relative humidity		
36	Ingress Protection	IP65 or above		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

37	Vandal Resistance	IK10 or above		
	Regulatory			
38	Certification	CE, FCC, RoHS or equivalent		

• SS-06

55" LED Color Monitor with HDMI and VGA support				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Display Type	Slim LED		
2	Screen Size	55 inches		
3	Connectivity	HDMI, USB		
4	Resolution	1920 X 1080		
5	Number of speakers	02		
6	Audio Output	Stereo Mini Jack Watts		
7	Color	Black		
8	Power Supply	AC 100 - 240 V 50-60 Hz		
9	Display Features	Full HD Features		
10	Smart TV	Yes		
11	USB Por	01		
12	HDMI Port	02 (minimum)		

• SS-07

Enterprise NAS Storage for Video Management Server				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Main Processor	64bit		
2	RAM	At least 4GB		
3	Operating System	Pre-loaded		
4	Certifications	CE, FCC or equivalent		
5	Make	VMS, and IP Cameras of the same make is preferred		
6	Working Environment	Operating temperature should be 4.5 - 35° C		
7	Power	175W to 950W		
	Storage			

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

8	Maximum Storage	At least 600TB (raw capacity) The server should be fully populated		
9	RAID	0 / 1 / /5 / 6/ 10		
Auxiliary Interfaces				
10	USB	2 Ports or more		
11	RS232	1 Port, for PC Communication		
Recording				
12	Record Rate	1Gbps or better		
Network				
13	Ethernet Port	4 (1Gbps)		
14	Network Function	TCP/IP, DHCP, Cloud P2P, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP,HTTPS		
15	Interoperability	ONVIF 2.0 or higher, PSIA, CGI Conformant		

• XBS-01

X-Ray Baggage Inspection System Features				
Sr. No.	Desired Features	Compliance (Yes/No)	Supporting Document, Page No.	
1	Tunnel size should be minimum 50 cm (width) x 30cm (height).			
2	Conveyer belt should support atleast 0.2 meters per second speed.			
3	Conveyer capacity should be 100 Kg or better.			
4	Throughput should be 200 bags per hour or higher.			
5	The System shall be capable of bidirectional screening operation.			
6	The System shall provide a crisp, clear and robust color images enabling the operator to interpret threat objects with higher degree of confidence.			
7	The System shall have an operator interface with a touch-sensitive pad/roller allowing operator for a continuous heads-up operation.			
8	The machine should be capable of discrimination of organic/inorganic stripping, reverse video, pseudo colour imaging, image annotation, real time continuous diagnostics and edge enhancement.			

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

9	The machine should have image zooming capability from minimum 2X to 32X zoom and continuous zoom up to 32X.		
10	The machine should have features of multi energy X-ray imaging facility where materials of different atomic number will be displayed in different colors to distinguish between organic and inorganic materials. With this method to distinguish high density organic materials including explosives. Machine should have variable color or materials stripping to facilitate the operator to monitor images of organic materials for closer scrutiny. All suspicious items (Explosive High density, material narcotics) should be displayed in one mode and that should be on line.		
11	The system shall have the image management features such as visual alerts to the operator in case of a threat or high-density object.		
12	The images should be captured with necessary information such as date, time and operator's identity.		
13	The system shall have necessary radiation safety. The machine must comply with requirements of health and safety regulations with regard to mechanical electrical and radiation hazards. Before installation of the machine, the supplier/manufacturer should furnish relevant certificate from Atomic Energy Regulatory Board of India regarding radiation safety. The company manufacturing the equipment should have ISO certification for manufacturing and servicing of X-ray Screening machines.		
14	The system shall have necessary film safety. Guaranteed safety for high-speed films up to ISO1600. The machines should be film safe. In other words, photographic films must not be damaged due to x-ray examination		
15	System shall have the Threat Image Projection (TIP) feature which facilitates the supervisors in testing the operator alertness and training X-ray screeners to improve their ability in identifying specific threat object. The system will create a threat object and the same will be superimposed on the monitor screen while a bag is being screened. To acknowledge that the operator has seen the false object, operator must press a designated key that will cause the computer-		



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	generated threat object to disappear from x-rayed bag image on the screen.		
16	Conveyer speed of X-Ray machine shall support a speed of 200 mm per second and above.		
17	The machine shall have the features of multi energy X-ray imaging facility where materials of different atomic number will be displayed in different colors to distinguish between organic and inorganic materials. With this method to distinguish high density organic materials including explosives. Machine should have variable color or materials stripping to facilitate the operator to monitor images of organic materials for closer scrutiny. All suspicious items (Explosive High density, material narcotics) should be displayed in one mode and that should be on line.		
18	The company manufacturing the equipment should have ISO certification for manufacturing and serving of X-ray Screening machine.		
19	X Ray baggage screening system shall have quality system compliance (ISO 9001), CE complied and Atomic Energy Regulatory Board (AERB) of India certified. Manufacturers will have to produce a certificate in this regard for the particular model proposed in the bid.		
20	The X-Ray machine shall comply with the film safety of ten passes of ISO 1600/33 DIN high speed photographic film.		
21	Machine shall be capable for recalling 15 or more previous images.		
22	System shall have the capability or archiving 50,000 or more images with date & time stamp.		
23	System shall have the facility of image enhancement shall be provided.		
24	System shall the facility for variable contrast that must be incorporated to allow enhancement lighter and darker portion of the image.		
25	System shall have the recording facility and images can be recorded on a mass storage device & should be able to view images so recorded on standalone PC.		
26	The machine shall have the feature of Multi-energy X-Ray imagine facility where materials of different atomic number will be displayed in different colors to		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	distinguish between organic & inorganic materials.		
27	System shall have the facility of Continuous Electronic Zoom to magnify the chosen area of an image eight times (8X) or more. Image feature shall be key board or mouse controllable.		
28	Machine should be property sealed from all the sides for pest proof. Dust proof cover is to be provided for covering the system when not in use.		
<b>Reports and Alerts</b>			
29	System shall provide the facility to generate different (customizable) kinds of reports.		
30	System shall have the facility to generate and export reports in Excel, CSV, PDF format for a given day, week, month, custom-range-of-dates.		
31	System shall have the facility to email the reports automatically to concerned (configurable) members.		
32	System shall have the option to save custom reports for subsequent use.		
33	System shall have the facility to raise alerts for events such as unexpected, unauthorized material.		
<b>Storage / Scalability / Logs</b>			
34	System shall log all activities for reporting or auditing purpose.		
35	System shall store at least 90 days of transactions/events post which the same should be able to be archived. System shall provide sufficient storage for the same.		
36	System shall be scalable and should have room for expansion in future.		
37	Access control log shall be available only to authorized personnel.		
38	The events and log should be stored in an un-editable, tamperproof and secure way.		
<b>Certifications / Security / Encryption / System Hardening</b>			
39	System should have necessary applicable certifications such as CE and FCC/BIS/UL/ROHS/TUV or equivalent.		
40	Communication among controllers and the host system should be encrypted with at least AES 128 Bit and TLS 1.3.		
41	All the PC/servers systems shall be protected by server-client based anti-virus software.		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

42	All firmware and software should be at the recent most secure stable version as suggested by the respective OEM/manufacturer.		
43	Apply appropriate measures from OEM's/manufacturer's system hardening guide.		
44	Remove all default, installer or temporary user accounts and passwords used during installation that are not part of end-user's final operational requirements.		
45	Assign new passwords that are substantially different from factory default passwords to user accounts.		
<b>Integration</b>			
46	System should be integrated with C-DAC's existing services such as HRMS, LDAP, BMS, fire system, power supply, etc.		
47	Integrate with other components such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system, etc.		
48	System shall keep itself in sync with LDAP, shall automatically import employee details from C-DAC's LDAP and shall automatically deactivate access rights if an employee leaves the organization.		
<b>Tailgating / Failsafe / Fail Secure / Emergency / Safety features</b>			
49	System should have the provisions to prevent tailgating/piggybacking by means of an alarm/display.		
50	In case of network failure, the individual door controllers shall continue to control the entry and exit of the personnel as expected.		
51	The system shall be capable to work in offline mode (unavailability of network connectivity). All activities/transactions should be stored locally in door controller and upon resumption of network connectivity it should be sent to the server.		
52	Overriding features should be available to take care of unexpected circumstances such as auto release of entry lock openings in case of (medical/fire/etc.) emergency.		
53	System should have necessary safety features such as automatically open when power is off		
<b>Licensing</b>			
54	The software licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned with-out any additional cost during the warranty period. These licenses should be transferable to C-DAC at a future date.		

• SIP-01

Single Integrated Portal in a single Dash board and Control Center for all Systems			
	Feature	Compliance (Yes/No)	Supporting Document, Page No.
1	The single integrated portal and control center for all systems shall be an enterprise class application.		
2	The integrated portal shall enable the operator to access, monitor, configure, manage, control and generate reports all the systems such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system and x-ray baggage inspection.		
3	All functionalities of all individual systems should be made available to the operator by the integrated portal. Whatever operation the operator can do separately on an individual system should also be available through integrated portal.		
4	System shall have role-based functionalities such as administrator may have full control, report-viewer may have privilege to access the reports and normal user may have the privilege to view his own data.		
5	System shall be based on non-proprietary open architecture where sub-component such as video management system can work and integrate with any make of IT hardware. Recording of the video shall also be on an open architecture.		
6	System shall have the facility to change access rights but only through authorized personnel.		
7	A video wall shall be provided at a designated location inside the premise.		
8	Five (5) Individual workstations shall be provided for security personnel at the designated location.		
9	Any customization reported by C-DAC in 1 year post deployment should be incorporated within 15 days of reporting.		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

10	System shall be capable of adding more 3rd party systems to the portal in future through well-defined SDK. SDK and the APIS along with detailed documents shall be provided to CDAC.		
11	The Security Audit Certificate of the application must be Submitted as a Documentary Evidence/Proof.		
<b>Reports and Alerts</b>			
12	System shall provide the facility to generate different (customizable) kinds of reports		
13	System shall have the facility to generate and export reports in Excel, CSV, PDF format for a given day, week, month, custom-range-of-dates.		
14	System shall have the facility to email the reports automatically to concerned (configurable) members.		
15	System shall have the option to save custom reports for subsequent use.		
16	System shall have the facility to raise alerts for unexpected events.		
<b>Storage / Scalability / Logs</b>			
17	System shall log all activities for reporting or auditing purpose.		
18	System shall store at least 90 days of transactions/events post which the same should be able to be archived. System shall provide sufficient storage for the same.		
19	System shall be scalable and should have room for expansion in future.		
20	Access control log shall be available only to authorized personnel.		
21	The events and log should be stored in an un-editable, tamperproof and secure way.		
<b>Certifications / Security / Encryption / System Hardening</b>			
22	System should have necessary applicable certifications such as CE and FCC/BIS/UL/ROHS/TUV or equivalent.		
23	Communication among controllers and the host system should be encrypted with at least AES 128 Bit and TLS 1.3.		
24	All the PC/servers systems shall be protected by server-client based anti-virus software.		
25	All firmware and software should be at the recent most secure stable version as suggested by the respective OEM/manufacturer.		
26	Apply appropriate measures from OEM's/manufacturer's system hardening guide.		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

27	Remove all default, installer or temporary user accounts and passwords used during installation that are not part of end-user’s final operational requirements.		
28	Assign new passwords that are substantially different from factory default passwords to user accounts.		
<b>Integration</b>			
29	System should be integrated with C-DAC’s existing services such as HRMS, LDAP, BMS, fire system, power supply, etc.		
30	Integrate with other components such as access control system, visitor tracking system, vehicle movement tracking system, surveillance system, etc.		
31	System shall keep itself in sync with LDAP, shall automatically import employee details from C-DAC’s LDAP and shall automatically deactivate access rights if an employee leaves the organization.		
<b>Tailgating / Failsafe / Fail Secure / Emergency / Safety features</b>			
32	System should have the provisions to prevent tailgating/piggybacking by means of an alarm/display.		
33	In case of network failure, the individual door controllers shall continue to control the entry and exit of the personnel as expected.		
34	The system shall be capable to work in offline mode (unavailability of network connectivity). All activities/transactions should be stored locally in door controller and upon resumption of network connectivity it should be sent to the server.		
35	Overriding features should be available to take care of unexpected circumstances such as auto release of entry lock openings in case of (medical/fire/etc.) emergency.		
36	System should have necessary safety features such as automatically open when power is off		
<b>Licensing</b>			
37	The software licenses, if any, are required to be and shall be provided in the name of C-DAC. The licenses shall contain paper licenses and at least one set of media (CDs) - wherever applicable. All the Licenses quoted shall be perpetual. All the upgrades, latest Release and Revisions, signature updates shall be provisioned with-out any additional cost during the warranty period. These licenses should be transferable to C-DAC at a future date.		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

• SIP-02

Video Wall				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Video Wall	55" inches LED, The native resolution of each LED should be 1920 X 1080 pixels (Full HD) and should offer min 16.7 million colors.		
2	Contrast	1500:1 or higher		
3	Aspect ratio	The Aspect Ratio of each of projection module should be 16:9		
4	Screen	The screen should have front accessibility and adjustable low inter screen gap < 1 mm to give seamless viewing experience.		
5	Video wall controller	Should be based on server architecture, operating system should be windows 7 or higher, 64 bit RAM 16GB, HDD 500 GB, Dual redundant power supply, 24 DP/ DVI outputs to the cube 6 DVI Input , Dual LAN 19 Inch rack mountable Capable to display image from UNIX, LINUX system Software should be provided to manage video wall content		

• GEN-01

Color Network Laser Printer				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Speed	min 25 PPM (A4)		
2	Memory(min.)	min 156 MB		
3	Resolution	600x600 dpi		
4	Interface	USB, Ethernet (UTP) with respective cables		
5	Monthly Duty Cycle	Monthly Duty		
6	Drivers	Windows XP, Windows Vista,		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		Windows 7, Windows 10, Windows 11 MAC OS 9.0, MAC OS X, Linux Kernel 2.4 or later		
7	Scanning Feature	Yes		
8	Duplex	Automatic Duplex		
9	Network Capability	Yes		

• GEN-02

30 KVA ONLINE UPS - The rating shall be confirmed by the bidder based on the finalization and updated number of devices and their requirement.				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	UPS Rating	Minimum 30 KVA The rating shall be confirmed by the bidder based on the finalization and updated number of devices and their requirement. The quoted UPS capacity (KVA) should be 30% more than the overall power consumption of all supporting equipments. Calculation has to be provided by the bidder. Vendor can take up the UPS supply from UPS DB Placed inside each Hub Room. Wherever Hub room is not there, bidder to consider UPS supply from the nearest UPS DB available under their scope. Detailed site visit is required before quoting.		
2	Nominal Voltage	230V AC		
3	Nominal Voltage Range	160-280V @ 100% load, 110-300V @ 50% load		
4	Frequency	40 to 70 Hz		
5	Phase	Single/Three Phase with ground		
6	Technology	IGBT		



**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

7	Power Factor	≥0.99 @ nominal voltage (Input voltage)		
8	THDi	< 5% at full load		
10	Output Voltage	415 / 200/208/220/230/240V AC		
11	Frequency Range	50Hz +/- 0.1 Hz		
12	Overload	105% - 110%: 10mins 110% - 130% - 1 min		
13	Crest Factor	3:01		
14	Output Voltage THD for 100% linear load	≤3%		
15	Output Voltage THD for 100% non-linear load	≤6%		
16	Transfer time (AC Mode to Batt.Mode)	0ms		
17	Transfer time (Inverter to Bypass)	Inhibited		
18	Waveform	Pure sine wave		
19	Overall Efficiency	At 25% load Up to 86% At 50% load Up to 87% At 75% load Up to 88% At 100% load Up to 90%		
<b>Battery Parameters</b>				
20	Nominal Power in KW	0.8 KW		
21	Battery Type	12V SMF VRLA		
22	Float Voltage	2.27 V/cell		
23	Boost Voltage	2.35 V/cell		
24	Minimum Discharge Voltage	1.75 V/cell		
25	Battery Voltage	36 VDC / as per OEM recommendation		
	Backup Time	15 Minutes at rated capacity of UPS		

- GEN-03

24 Port Managed L3 Core Switch, fully populated
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**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Type of Switch	Managed Non PoE		
2	No. of SFP+ 1GFibre Ports	24		
3	No. of SFP+ 10GFibre ports	4		
4	Console Port RJ- 45	Available		
5	Management Port (RJ 45)	Available		
6	Layer 2 Features	Jumbo Frames support Auto-negotiation for Port Speed and Duplex MDI/MDIX Auto-crossover IEEE 802.1D MAC Bridging/STP IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) STP Root Guard STP BPDU Guard Edge Port / Port Fast IEEE 802.1Q VLAN Tagging Private VLAN IEEE 802.3ad Link Aggregation with LACP Unicast/Multicast traffic balance over trunking port IEEE 802.1AX Link Aggregation Spanning Tree Instances (MSTP/CST) IEEE 802.3x Flow Control and Back-pressure IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3z 1000Base-SX/LX IEEE 802.3ab 1000Base-T IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3 CSMA/CD Access Method and Physical Layer Specifications Storm Control		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		<p>MAC, IP, Ethertype-based VLANs</p> <p>L2 Security:              802.1x Authentication (Port-based, MAC-based, MAB) Syslog              Collection              DHCP Snooping Device Detection              MAC Black/White Listing              Policy Control of Users and Devices              Firewall</p> <p>L2 Management:              Auto Discovery of Multiple Switches              Link Aggregation              Configuration Spanning Tree              LLDP/MED</p>		
7	Layer 3 Features	<p>L3 Routing and Services:              Policy-Based Routing              Virtual Domain              Static Routing              Dynamic Routing Protocols: OSPFv2, RIPv2, VRRP, BGP, ISIS.              Multicast Routing Protocols              IGMP Snooping              Bidirectional Forwarding Detection (BFD)              DHCP Relay</p> <p>L3 Security:              Port Mirroring              IEEE 802.1x authentication Port-based              IEEE 802.1x Authentication MAC-based              IEEE 802.1x Guest and Fallback VLAN              IEEE 802.1x MAC Access Bypass (MAB)              IEEE 802.1x Dynamic VLAN Assignment              Radius Accounting              MAC-IP Binding              sFlow              ACL              IEEE 802.1ab Link Layer Discovery Protocol (LLDP)              IEEE 802.1ab LLDP-MED              DHCP-Snooping              Dynamic ARP Inspection</p>		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		Sticky MAC and MAC Limit		
8	Device Management	SSH, HTTPS SNMP v1/v2c/v3 Standard CLI and Secure Web GUI Interface TACACS+ and RADIUS authentication Syslog Support		
9	Other Features	Switching Capacity (Duplex): 176 Gbps or more Packets Per Second (Duplex): 130 Mbps or more MAC Address Storage: 16K Network Latency:< 1µs VLANs Supported: 4 K Link Aggregation Group Size: 8 Total Link Aggregation Groups: Up to number of ports Packet Buffers: 1.5 MB DRAM: 512 MB FLASH: 256 MB		
10	High Availability	Yes		
11	QoS	Yes		
12	Power Supply	Redundant		
13	OEM	All the switches and SFP Modules should be from the same OEM		

• GEN-04

24 Port Managed L2 Access Switch, fully populated				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Type of Switch	Managed L2 Switch		
2	No. of 10/100/1000 Base-T Ports	24		
3	No. of 100/1000Base-X SFP (Uplink) Ports	4		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

4	Console Port RJ- 45	Available		
5	Management Port (RJ 45)	Available		
6	Standards	<p>Jumbo Frames support  Auto-negotiation for Port Speed and Duplex MDI/MDIX Autocrossover  IEEE 802.1D MAC Bridging/STP  IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s  Multiple Spanning Tree Protocol (MSTP)  STP Root Guard  STP BPDU Guard  Edge Port / Port Fast  IEEE 802.1Q VLAN Tagging  Private VLAN  IEEE 802.3ad Link Aggregation with LACP  Unicast/Multicast traffic balance over trunking port IEEE 802.1AX  Link Aggregation  Spanning Tree Instances (MSTP/CST)  IEEE 802.3x Flow Control and Back-pressure</p> <p>L2 Security:  802.1x Authentication (Port-based, MAC-based, MAB) Syslog  Collection  DHCP Snooping Device Detection  MAC Black/White Listing  Policy Control of Users and Devices  Firewall</p> <p>L2 Management:  Auto Discovery of Multiple Switches  Link Aggregation  Configuration Spanning Tree  LLDP/MED</p>		
7	Device Management	SSH, HTTPS SNMP v1/v2c/v3 Standard CLI and Secure Web GUI Interface TACACS+ and RADIUS authentication		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		Syslog Support		
8	Other Features	Switching Capacity (Duplex): 56 Gbps or more Packets Per Second (Duplex): 83 Mpps MAC Address Storage: 16K Network Latency:< 1µs VLANs Supported: 4 K Link Aggregation Group Size: 8 Total Link Aggregation Groups: Up to number of ports Packet Buffers: 1.5 MB DRAM: 512 MB FLASH: 128 MB		
9	High Availability	Yes		
10	QoS	Yes		
11	Power Supply	Redundant		
12	OEM	All the switches and SFP Modules should be from the same OEM		

• GEN-05

24 Port Managed L2 Access Switch (all ports PoE+(384-720W) enabled), fully populated				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Type of Switch	Managed L2 Switch All ports PoE+(384-720W) enabled		
2	No. of 10/100/1000 Base-T Ports	24		
3	No. of 100/1000Base-X SFP (Uplink) Ports	4		
4	Console Port RJ- 45	Available		
5	Management Port (RJ 45)	Available		
6	Standards	Jumbo Frames support		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		<p>Auto-negotiation for Port Speed and Duplex MDI/MDIX Autocrossover  IEEE 802.1D MAC Bridging/STP  IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s  Multiple Spanning Tree Protocol (MSTP)  STP Root Guard  STP BPDU Guard  Edge Port / Port Fast  IEEE 802.1Q VLAN Tagging  Private VLAN  IEEE 802.3ad Link Aggregation with LACP Unicast/Multicast traffic  balance over trunking port IEEE 802.1AX Link Aggregation  Spanning Tree Instances (MSTP/CST)  IEEE 802.3x Flow Control and Back-pressure</p> <p>L2 Security:  802.1x Authentication (Port-based, MAC-based, MAB) Syslog  Collection  DHCP Snooping Device Detection  MAC Black/While Listing  Policy Control of Users and Devices  Firewall</p> <p>L2 Management:  Auto Discovery of Multiple Switches  Link Aggregation  Configuration Spanning Tree  LLDP/MED</p>		
7	Device Management	<p>SSH, HTTPS  SNMP v1/v2c/v3  Standard CLI and Secure Web GUI Interface  TACACS+ and RADIUS authentication  Syslog Support</p>		
8	Other Features	<p>Switching Capacity (Duplex): 56 Gbps or more  Packets Per Second (Duplex): 83 Mpps  MAC Address Storage: 16K</p>		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

		Network Latency:< 1µs VLANs Supported: 4 K Link Aggregation Group Size: 8 Total Link Aggregation Groups: Up to number of ports Packet Buffers: 1.5 MB DRAM: 512 MB FLASH: 128 MB		
9	High Availability	Yes		
10	QoS	Yes		
11	Power Supply	Redundant		
12	OEM	All the switches and SFP Modules should be from the same OEM		

• GEN-06

42U Rack with PDUs - (19" Equipment Rack, 42 U including cooling fans, Patch Panel, Cable Manager, accessories, etc.)					
	Parameters	Desired Specification	Technical	Compliance (Yes/No)	Supporting Document, Page No.
1	Type of Server Racks	Rack Enclosures			
2	Size of Server Rack Enclosure	42U			
3	Depth of the Rack (mm)	Upto 1000			
4	Mount Type	Free-Standing			
5	Front glass Door	Yes			
6	Type of glass used in front door	Transparent Toughened Glass			
7	Material used for rear door	SPCC Quality Cold Rolled Steel Metal			
8	Both rear and front doors with Perforation	No			
9	Side Panels with Key Locks and Slam Latch	Yes			
10	Secure Locks	Available			
11	Keyboard Tray Sliding and Rotary	Yes			
12	Shelf For CRT/TFT Display	No			
13	Cable channel in rear side for cable management	Yes			



**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

14	Support cable entry from top or bottom	Yes		
15	Vertical & Horizontal managers	Yes		
16	Heavy Duty Caster Wheels	Yes		
17	Front Break Options	Available		
18	Load Bearing Capacity (Kgs)	1200 kilogram		
19	Dust or water resistant	Yes		
20	PDU Power Strips	Orientation: Horizontal Power Supply: 30 Amps Mounting: Rack mountable Power Sockets: C13 and C19 Count of C13 an C19 sockets: To be quoted by bidder. All Devices which are rack mounted should be power supplied in redundant.		

• GEN-07

9U Rack with PDU(19" Equipment Rack, 9 U including cooling fans, Patch Panel, Cable Manager, accessories, etc.)				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Rack Size	<ul style="list-style-type: none"> <li>• 9U Wall Mount</li> <li>• Lock &amp; Key with front glass door</li> <li>• Power coated steel cabinet</li> </ul>		
2	Accessories	<ul style="list-style-type: none"> <li>• Min 1 cooling fan</li> <li>• Min 1 cable manager</li> <li>• Min 1 equipment placement tray</li> <li>• Min 5 socket/plug power strip (with repair/replacement)</li> <li>• Rack must be supplied with Min 1 (one) no of standard hardware pack/bag (which includes mounting nut-bolts, cable ties etc.) per each rack unit for mounting at least 6 Nos network/IT equipment</li> </ul>		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

3	Warranty	Min 5 years comprehensive warranty with parts such as FAN, power strip (repair or replacement)		
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• GEN-08

Client Workstation (Desktop Computer)				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Processor	Dual core Intel I7 or better		
2	Memory	16GB DDR4 or better		
3	Hard Disk Drive	1TB SATA or better		
4	Network Interface	Integrated Gigabit Ethernet Controller		
5	Audio Controller	Integrated High-Definition Audio		
6	Power Supply	240W, 100~240VAC 50/60Hz		
7	Monitor Display Size	24 inches		
8	Monitor Display Size	24 inches		
9	Display ports	1 HDMI, 1 VGA, 2 DP or better		
10	Operating System	Microsoft Windows 10 Professional or Enterprise, 64 bits		
11	Antivirus Feature	Advanced antivirus, antispysware, desktop firewall, intrusion prevention which can be managed by a central server		
12	Necessary accessories	Keyboard and Mouse inclusive		

• GEN-09

Other Components (Face Plates, Cables, PVC Conduit, Casing/Caping, etc.) to complete activity on turn key basis				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	USB Cable	As required to complete the activity		
2	HDMI Cable	As required to complete the activity		
3	LAN Cable (Cat 6)	As required to complete the activity		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

4	Serial Cable	As required to complete the activity		
5	Data Cable	As required to complete the activity		
6	Power Cable	As required to complete the activity		
7	Patch Cord	As required to complete the activity		
8	IO Cable	As required to complete the activity		
9	Face Plate	As required to complete the activity		
10	PVC Conduit	<ul style="list-style-type: none"> <li>• Specification:IS-9537-1983; Internal Dia 24 “+, -,” 1 mm, Wall, Thickness- 4.2~5 mm,</li> <li>• Acceptable Quality: ISI Marked. Make - Precision/ Prince or equivalent</li> </ul>		
11	Cable, Rack Dressing	Included		
12	Perforated MS/GI Cable Tray with mounting accessories - 150mm X 50mm	As required to complete the activity		
13	Perforated MS/GI Cable Trunking with cover and mounting accessories - 150mm X 50mm	As required to complete the activity		
14	Other required accessories (Patch Panel, Junction Box, Relays, video splitter, etc.)	As required to complete the activity		
15	Required Civil Work including digging, laying cables through required pipes, RCC/PCC work for Poles foundations ,Painting etc. for the work keeping the aesthetics of the premise unchanged or better.	As required to complete the activity		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

16	Required Electrical Work	As required to complete the activity		
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• GEN-10

Poles (Used to mount cameras for Surveillance/ANPR)				
	Parameters	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Type	Hot dip galvanized after fabrication with silver coating of 86 micron		
2	Height	As per the requirements for different type of cameras and site conditions <ul style="list-style-type: none"> <li>• For surveillance cameras - up to 6 meters height</li> <li>• For ANPR cameras 2.5 meters</li> <li>• For face recognition devices - up to 2.5 meters height</li> </ul>		
3	Diameter	Bidders to choose larger diameter for higher height <ul style="list-style-type: none"> <li>• For surveillance cameras - 4 inches</li> <li>• For ANPR cameras 2.5 meters</li> <li>• For face recognition devices - 2 inches</li> </ul>		
4	Base Plate	As per the requirements for different type of cameras and site conditions. MS hot dip galvanized 15mm thick.		
5	All accessories such as washer, screws, nut bolts and other mounting accessories)	Included		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

• GEN-11

Field Junction Box (600Height X 500 Width X 400 Depth)			
	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Suitable size as per the site requirements to house the field equipment		
2	Cabinet material shall be powder coated CRCA sheet / stainless steel		
3	Material thickness shall be minimum 1.2 mm		
4	Number of locks 2		
5	Protection shall be IP 55		
6	Mounting on camera pole / ground mounted on concrete base		
7	Form factor rack mount / DIN rail		
8	Other features: Rain canopy, cable entry with fans, any other accessories as required for operation of equipment's within junction box		

• GEN-12

Boom Barrier			
	Desired Technical Specification	Compliance (Yes/No)	Supporting Document, Page No.
1	Operating Speed 1.5-6s (Adjustable)		
2	Boom Length:4 m		
3	Boom Type: Telescopic straight		
4	Boom Chassis Dimension :1010*350*280mm, IP -54		
5	Weight < 48KG		
6	Motor Type :24V DC brushless motor		
7	Output Power <170W Working voltage DC 24V Power Supply AC 220V50Hz		
8	Operating Temperature-30° C to 60° C		
9	Remote Control Distance ≥30m		
10	MCBF ≥= 2 million times		
11	Operation:-Remote Control and Button Both		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

- GEN-13

<b>Turnstile: -</b>			
	<b>Desired Technical Specification</b>	<b>Compliance (Yes/No)</b>	<b>Supporting Document, Page No.</b>
1	Power Requirements AC220V, 50HZ		
2	Working Humidity 25% to 75%, Working Environment: - Outdoor		
3	Speed of Throughput: RFID Maximum 20/minute, Fingerprint Maximum 15/minute		
4	Lane Width: 560 mm		
5	Footprint: - (L*W) 1400*1395(mm) (APPROX)		
6	Dimension: - (L*W*H) 1400*1395*2220 (mm) (APPROX)		
7	Weight: -220 kg (APPROX)		
8	LED Indicator: - Supports		
9	Cabinet material SUS304 Stainless Steel		
10	Barrier Material SUS304		
11	Barrier Movement: -Rotating		
12	Emergency Mode: - Supports		
13	Security Level: - High		
14	MCBF 1 million		
15	Ingress Protection IP65		
16	Suitable all weather canopy fabrication work above both Turnstile gates		

**(End of Section - V)**

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**BOQ / Commercial-Bid Format**

<b>Sl. No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Units</b>
1	Access Control System		
1.01	Supply, Installation, Testing and commissioning of Access Control Software . (Technical Specification Reference -ACS-01)	1.00	Lot
1.02	Supply, Installation, Testing and commissioning of Intelligent microprocessor-based controller ( 4D 8R) along with Enclosure (with lock)&Power Supply point etc and other required material all needed to make it functional . (Technical Specification Reference -ACS-02) This Includes provision of suitable power piont & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	32.00	Nos.
1.03	Supply, Installation, Testing and commissioning of Reader with Card, Fingerprint and Pin or any combination of these with necessary mounting accessories. (Technical Specification Reference -ACS-03) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	97.00	Nos.
1.04	Supply, Installation, Testing and commissioning of Emergency break glass. (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and	97.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	any other necessary works etc required for making the work complete & fully functional .		
1.05	Supply, Installation, Testing and commissioning of exit switch / push button with mounting accessories (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	97.00	Nos.
1.06	Supply, Installation, Testing and commissioning of 1200 LBS double leaf EM locks with all required brackets . (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	8.00	Nos.
1.07	Supply, Installation, Testing and commissioning of 600 LBS double leaf EM locks with all required brackets. (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	16.00	Nos.
1.08	Supply, Installation, Testing and commissioning of Magnetic contact door sensor for monitoring the status of doors (open/close) (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary	119.00	Nos.



**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .		
1.09	Supply, Installation, Testing and commissioning of Access Control Server. (Technical Specification Reference -ACS-04) This Includes provision of suitable power point & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Lot
1.10	Supply, Installation, Testing and commissioning of 1200 LBS single leaf EM locks with all required brackets. (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	15.00	Nos.
1.11	Supply, Installation, Testing and commissioning of 600 LBS single leaf EM locks with all required brackets. (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	58.00	Nos.
1.12	Supply, Installation, Testing and commissioning of Card Printer (Includes Power Point, Data Point with necessary accessories.)(Technical Specification Reference -ACS-06)This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other	1.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	necessary works etc required for making the work complete & fully functional .		
1.13	Supply, Installation, Testing and commissioning of Workstation for Access Control Software. (Technical Specification Reference -GEN-08) This Includes provision of suitable power point & data point, power cabling ,data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.
1.14	Integration of access control system with existing HRMS system of CDAC for authentication of all staffs cards for access control AND IN-OUT log creation in access control system	1.00	Nos.
2	Visitor Tracking System		
2.01	Supply, Installation, Testing and commissioning of Visitor Management Software and System integrated with Access Control System (Technical Specification Reference -VTS-01,VTS-05) This Includes provision of suitable power point & data point,power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
2.02	Supply, Installation, Testing and commissioning of UHF long range readers for visitor monitoring inside premise (Technical Specification Reference -VTS-02) This Includes provision of suitable power point & data point,power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	18.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

2.03	Supply, Installation, Testing and commissioning of Antenna for UHF Readers along with Mounting Brackets (Technical Specification Reference -Enterprise Class) This Includes provision of suitable power piont & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	36.00	Nos.
2.04	Supply, Installation, Testing and commissioning of UHF long range cards to be issued to visitors (Technical Specification Reference -VTS-03)	250.00	Nos.
2.05	Supply, Installation, Testing and commissioning of Kiosk application workstation for self-registration of the visitor with 7 inch screen iOS along with necessary mounting accessories (Technical Specification Reference -Enterprise Class) This Includes provision of suitable power piont & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
2.06	Supply, Installation, Testing and commissioning of Video Display Workstation with all accessories(at each floor) (Technical Specification Reference -GEN-08) This Includes provision of suitable power piont & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	9.00	Nos.
3	Vehicle Movement Tracking System		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

3.01	Supply, Installation, Testing and commissioning of ANPR-based Software for Vehicle Movement Tracking. (Technical Specification Reference -VMTS-01) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
3.02	Supply, Installation, Testing and commissioning of ANPR Cameras (Technical Specification Reference -VMTS-02) This Includes provision of suitable power point & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	4.00	Nos.
3.03	Supply, Installation, Testing and commissioning of 6 meter GI Pole for mounting ANPR Camera along with suitable civil foundation as per CPWD specification. (Technical Specification Reference -GEN-10) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	4.00	Nos.
3.04	Supply, Installation, Testing and commissioning of Illuminator (LED Lights) for vehicle classification in night for each lane (Technical Specification Reference -Enterprise Class) This Includes provision of suitable power point & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

3.05	Supply, Installation, Testing and commissioning of Operator Workstation(UG floor proposed security control room) (Technical Specification Reference -GEN-08) This Includes provision of suitable power point & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional	2.00	Nos.
4	IP-based CCTV Surveillance System		
4.01	Supply, Installation, Testing and commissioning of IP-based CCTV Surveillance System including Video Management Software(Technical Specification Reference -SS-01) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Lot
4.02	Supply, Installation, Testing and commissioning of Video Camera License for new and existing cameras in premise (Technical Specification Reference -Enterprise Class)  This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	200.00	Nos.
4.03	Supply, Installation, Testing and commissioning of Dome camera (Technical Specification Reference -SS-03) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	116.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

4.04	Supply, Installation, Testing and commissioning of Bullet camera (Technical Specification Reference -SS-04) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	24.00	Nos.
4.05	Supply, Installation, Testing and commissioning of PTZ Camera (Technical Specification Reference -SS-05) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.
4.06	Supply, Installation, Testing and commissioning of Video Management Server (Technical Specification Reference -SS-02) This Includes provision of suitable power piont & data point,power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Lot
4.07	Supply, Installation, Testing and commissioning of Required recording NAS storage for 90 days (Technical Specification Reference -SS-07) This Includes provision of suitable power piont & data point,power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Lot

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

4.08	Supply, Installation, Testing and commissioning of Joystick for PTZ camera (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
4.09	Supply, Installation, Testing and commissioning of 4 meter GI Pole for mounting PTZ Camera along with suitable civil foundation as per CPWD specification. (Technical Specification Reference -GEN-10) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.
4.10	Supply, Installation, Testing and commissioning of Operator Workstation(UG floor proposed security control room) (Technical Specification Reference -GEN-08) This Includes provision of suitable power point & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.
4.11	Supply, Installation, Testing and Commissioning of Face Recognition Application Software System A face recognition application software system is to be included which provides advanced security monitoring by enhancing traditional video surveillance with real-time identity recognition capabilities. The system leverages IP cameras connected over the network, feeding live video to a centralized software platform that analyzes facial data. The bidder needs to study the existing HRMS and SCOSTA employee ID cards and	1.00	Lot

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	integrate the solution with the existing HRMS application by using the existing SCOSTA employee ID cards.		
5	X-Ray Baggage Scanner		
5.01	Supply, Installation, Testing and commissioning of X-Ray Baggage Scanner System along with necessary mounting accessories (Near to Entry Gate) (Technical Specification Reference -XBS-01) This Includes provision of suitable power point & data point, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
6	Single Integrated Portal (SIP) with Video Wall		
6.01	Supply, Installation, Testing and commissioning of SIP along with necessary accessories. (Technical Specification Reference -SIP-01) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Lot
6.02	Supply, Installation, Testing and commissioning of Video Wall display - 2 X 2 matrix, 55-inch LED with all mounting accessories( UG floor security control room & first floor PARAM SIDDHI BMS room )(Technical Specification Reference -SS-06)This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	3.00	Set



**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

6.03	Supply, Installation, Testing and commissioning of Operator Workstation with all accessories (Technical Specification Reference -GEN-08) This Includes provision of suitable Power Point , Data Point , power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
7	General (Part of all components above)		
7.01	Supply, Installation, Testing and commissioning of Color laser printer (Technical Specification Reference -GEN-01) This Includes provision of suitable Power Point , Data Point ,power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.
7.02	Supply, Installation, Testing and commissioning of 30 KVA UPS (Minimum Capacity )with Battery back up (UG Floor Security room).If Requirement is higher to support all equipments after all derating and losses , vendor needs to consider the higher size KVA.(Load Calculation sheet to be submitted in technical bid)  (The rating shall be confirmed by the bidder based on the finalization and number of devices and their power requirement.) (Technical Specification Reference -GEN-02) This Includes provision of Input DB , Output DB/Panel, power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

7.03	<p>Supply, Installation, Testing and commissioning of Fully populated 24 Port Managed L3 core switch +24 Port patch panel + 24 nos of 2 mtrs Patch cord</p> <p>(Technical Specification Reference -GEN-03) This Includes provision of suitable Power Point , Data Point ,power cabling &amp; control cabling,Fibre cable between Server to switch and L3 Switch to floor POE switch in suitable conduit, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways to individual points, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete &amp; fully functional .</p>	2.00	Lot
7.04	<p>Supply, Installation, Testing and commissioning of Fully populated 24 Port Managed PoE Switch +24 Port patch panel + 24 nos of 2 mtrs Patch cord</p> <p>(Technical Specification Reference -GEN-05)</p> <p>This Includes provision of power cabling &amp; control cabling,Fibre cable between switch to switch in suitable conduit data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete &amp; fully functional .</p>	14.00	Lot
7.05	<p>Supply, Installation, Testing and commissioning of 9U Rack</p> <p>(Technical Specification Reference -GEN-07) This Includes provision of suitable Power Point , Data Point ,power cabling &amp; control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete &amp; fully functional .</p>	2.00	Nos.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

7.06	Integration with existing Addressable fire alarm Panel of CDAC (M/S Siemens Make) for release of all access control in Fire Situation (Technical Specification Reference -Enterprise Class) This Includes provision of power cabling & control cabling, data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	1.00	Lot
7.07	Supply, Installation, Testing and commissioning of minimum BEE 5 star 1.5 tonne DX split AC with Copper Condensor unit in UG Security Control Room with 4/8 hours of configurable timer control switch.This Includes provision of power cabling & control cabling, through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos
7.08	Dismantling of existing Tables in UG Floor Security Control Room and stacking in first floor stroage area	1.00	Lot
7.09	Providing & fixing of 1200(L)x600(W) table unit in UG Security Control Room This Includes provision of power cabling & control cabling, through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , civil work and any other necessary works etc required for making the work complete & fully functional - 1) Table top Material-Three layer prelaminated particle board(Wood Product) of grade II type II of IS 12823/Latest 2) Leg Material-NO LEGS 3) Thickness of table top ±2 mm25 millimeter 4) Length of table top ±10 mm1200 millimeter 5) Depth of table ±10 mm600 millimeter 6) Height of table ±10 mm750 millimeter 7) Product shall be ISO 9001:2015, ISO 14001:2015, ISO 18001:2007 certified 8)Frame type- Free standing	4.00	Nos

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

	9)Understructure of table- Gable end and modesty panel		
7.10	Providing & fixing of Mid back chair -Providing and fixing Motion Mid back office chair with suitable caster wheels, Contact-Tilt Mechanism , Seat Height Adjustable, Adjustable arm rest, Mesh back fabric, lumbar back support. Finish colour -Black. PU foam cushion seat. Note -The chair is required with cushion seat assembly consists of seat base moulded in glass-filled ply-amide moulded in HR Polyurethane foam density $45 \pm 2\text{kg/ m}^3$	4.00	No.s
7.11	Vendor has to provide API access for all database operations, functionality and access to devices. Vendor has to provide Comprehensive API documentation. Vendor has to provide Full and unrestricted license to access and use the API for integration with the CDAC system or other software. Vendor has to provide Integration support during the commissioning and support period. CDAC will integrate the access control system with existing HRMS. Floor to Floor connection between Switches and also server to switch connection has to be done through Fibre cable only. Different Colour Used for Network Cabling. All the carpentry and alignment work for access control doors is in vendor scope. Vendor has to consider and include Door Auto Closer for wooden and metal doors under the scope of work Enterprise Class Lot 1	1.00	Lot
7.12	Charges for Deploying Technical Manpower :- Bidder shall provide ONE onsite dedicated RE (Residence Engineer-Diploma /BE/B.Tech with five years experience in CCTV and access control) at site on 9/6 basis Monday to Saturday (Sunday Leave). Payment will be released on quarterly prorata basis after satisfactory services	60.00	Months
8	Boom Barrier and Turnstile Gates :-		

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

8.01	Supply, Installation, Testing and commissioning of Boom Barrier -4 Meter (Technical Specification Reference -GEN-12)(Location at two gates of premises :Entry and Exit Gate) This Includes provision of remote control point along with suitable Power Point , Data Point ,power cabling & control cabling, Fibre cabling/data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , Foundation & civil work and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.
8.02	Supply, Installation, Testing and commissioning of Turnstile Gates (Technical Specification Reference -GEN-13)(Location at two gates of premises :Entry and Exit Gate) This Includes Integration with satff HRMS for satff card authentication and IN-OUT log creation in access control system and also includes provision of suitable Power Point , Data Point ,power cabling & control cabling, Fibre Cable /data cabling (Cat- 6) through PVC conduit /flexible pipe / raceways, necessary mounting structures /supports , breaking of wall ,Foundation , civil work,Painting and any other necessary works etc required for making the work complete & fully functional .	2.00	Nos.

**EXECUTION & HANDING OVER AND TAKING OVER OF WORKS / EQUIPMENT / SYSTEMS.**

1. The successful Bidder has to submit all working/shop/GFC drawings such as Access control system Drawings,IP-based CCTV Surveillance System drawings, Electrical Cable & Data Cable route Drawings, Raceway/Conduit Drawings, etc before starting execution of works. After execution, three (03) sheets of As-Built Drawings have to be submitted for all above mentioned.

The Contractor shall hand over and the Owner shall take over the works/equipment's/systems covered under this contract only after they have been completely installed, tested and commissioned in all respects by the Contractor to

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

the entire satisfaction of the Owner. And all relevant test forms/certificates operation and maintenance manuals, as built drawings, etc. Incomplete/partly commissioned works/equipment/system will not be taken over by the Owner. The on-site warranty of all items /equipment/works /solution is for **Five** year after successful installation/completion certified by CDAC.

**(End of Section - VI)**

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**ANNEXURE A: COVERING LETTER**

Date:

To:

**Executive Director**

**Centre for Development of Advanced Computing (C-DAC)**

**Innovation Park, Panchavati, Pashan Road,**

**Pune - 411008 Maharashtra, INDIA**

**Subject: Tender for submission .....**

Dear Sir,

We, the undersigned, offer to SITC work of ....., in response to your Tender No .....

We are hereby submitting our proposal for same, which includes Technical Bid and the Price Bid on GeM portal

We undertake, if our proposal is accepted, to submit a Performance Bank Guarantee@10% of the contract/ order value, as per terms stipulated in the tender.

We hereby certify that my/ our firm has not been disqualified and/ or blacklisted by any Office/ Department/ Undertaking of the State Government/ Central Govt. of India, PSU/ Autonomous Body of Government of India, at the time of submission of this bid.

We agree to abide by all the terms and conditions of the tender document, including corrigenda. We would hold the terms of our bid valid **for 180 days** as stipulated in the tender document.

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

The undersigned is authorized to sign this bid document. The authority letter to this effect is enclosed.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**ANNEXURE B: AUTHORITY LETTER**

Date:

To:  
Executive Director,  
Centre for Development of Advanced Computing (C-DAC)  
Innovation Park, Panchavati, Pashan Road,  
Pune - 411008 Maharashtra, INDIA

**Subject: Authority Letter**

Reference: Tender for supply of .....against GeM Bid No .....

Dear Sir,

We, M/s \_\_\_\_\_ (Name of the bidder) having registered office at \_\_\_\_\_ (address of the bidder) herewith submit our bid against the said tender document.

Mr./Ms. \_\_\_\_\_ (Name and designation of the signatory), whose signature is appended below, is authorized to sign and submit the bid documents on our behalf against said RFP

Specimen Signature:

The undersigned is authorised to issue such authorisation on behalf of us.

For M/s \_\_\_\_\_ (Name of the bidder)

Signature and company seal  
Name  
Designation  
Email  
Mobile No.



**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**ANNEXURE C - UNDERTAKING BY PRINCIPAL MANUFACTURER(S)  
(To be submitted in Original on Letterhead)**

Date:

**Executive Director,  
Centre for Development of Advanced Computing (C-DAC)  
Innovation Park, Panchavati, Pashan Road,  
Pune - 411008 Maharashtra, INDIA**

Subject: Undertaking by Principal Manufacturer against GeM Bid no. .... for supply of .....

Dear Sir,  
We, M/s \_\_\_\_\_ (Name of the manufacturer) having registered office at \_\_\_\_\_ (address of the manufacturer) by virtue of being manufacturer for \_\_\_\_\_ (Name of the product/s), hereby certify that M/s \_\_\_\_\_ (Name of the bidder) having their office at \_\_\_\_\_ (Address of bidder) are our Authorised Distributors/ Dealers for our range of products quoted by them, as listed below:

- 1
- 2

Within the scope of requirement as per the tender mentioned above, we undertake to provide technical & other support towards fulfilling the requirements of installation, commissioning, benchmarking, acceptance criteria and product warranty services for all the major components of both the hardware and the software components mentioned in the BoQ to be supplied and installed at the C-DAC site by M/s. (Name of bidder) against said tender.

We also certify that the products offered are not nearing end-of-life / end-of-support five years down the line from the date of bidding.

The undersigned is authorised to issue this certificate on behalf of M/s \_\_\_\_\_ (Name of the manufacturer).

For M/s \_\_\_\_\_ (Name of the manufacturer)

Signature & company seal  
Name  
Designation  
Email  
Mobile No.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**ANEXURE D - PROFORMA OF BANK GUARANTEE**

(To be submitted by the vendor for claiming payment)

To,  
Centre for Development of Advanced Computing  
Innovation Park, PANCHAVATI,  
Pashan Road, Pune - 411 008

BANK GUARANTEE NO:

DATE:

Dear Sir(S)

This has reference to the Purchase Order No. \_\_\_\_\_ Dated \_\_\_\_\_ been placed by Centre for Development of Advanced Computing(C-DAC), Pune on M/s \_\_\_\_\_ (Name & Address of vendor) for supply, installation, commissioning and warranty of \_\_\_\_\_ (description of items) at C-DAC site.

The conditions of this order provide that the vendor shall, arrange to deliver the items listed in the said order to the consignee, as per details given in said order, and arrange to install and commission the items listed in said order at client's site, to the entire satisfaction of C-DAC and Arrange for the comprehensive on-site warranty service support towards the items supplied by vendor on site as per the warranty clause in said purchase order.

M/s (Name of Vendor) has accepted the said purchase order with the terms and conditions stipulated therein and have agreed to issue the performance bank guarantee on their part, towards promises and assurance of their contractual obligations vide the Supply Order No. \_\_\_\_\_ M/s. \_\_\_\_\_ (name of vendor) holds an account with us and has approached us and at their request and in consideration of the promises, we hereby furnish such guarantees as mentioned hereinafter.

C-DAC shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other undertaking of security in respect of the suppliers obligations and / or liabilities under or in connection with the said contract or to vary the terms vis-a - vis the supplier or the said contract or to grant time and or indulgence to the supplier or to reduce or to increase or otherwise vary the prices or the total contract value or to forebear from enforcement of all or any of the obligations of the supplier under the said contract and/or the remedies of C-DAC under any security now, or hereafter held by C-DAC and no such dealing(s) with the supplier or release or forbearance whatsoever shall have the effect of releasing the bank from its full liability of C-DAC hereunder or of prejudicing right of C-DAC against the bank.

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This undertaking guarantee shall be a continuing undertaking guarantee and shall remain valid and irrevocable for all claims of C-DAC and liabilities of the supplier arising up to and until \_\_\_\_\_ (date)

This undertaking guarantee shall be in addition to any other undertaking or guarantee or security whatsoever that C-DAC may now or at any time have in relation to its claims or the supplier's obligations/liabilities under and / or in connection with the said contract and C-DAC shall have the full authority to take recourse to or enforce this undertaking guarantee in preference to the other undertaking or security (ies) at its sole discretion and no failure on the part of C-DAC in enforcing or requiring enforcement of any other undertaking or security shall have the effect of releasing the bank from its full liability hereunder.

We \_\_\_\_\_ (Name of Bank) hereby agree and irrevocably undertake and promise that if in your (C-DAC's) opinion any default is made by M/s \_\_\_\_\_ (Name of Vendor) in performing any of the terms and /or conditions of the agreement or if in your opinion they commit any breach of the contract or there is any demand by you against M/s \_\_\_\_\_ (Name of Vendor), then on notice to us by you, we shall on demand and without demur and without reference to M/s \_\_\_\_\_ (Name of Vendor), pay you, in any manner in which you may direct, the amount of Rs. \_\_\_\_\_/- (Rupees \_\_\_\_\_ Only) or such portion thereof as may be demanded by you not exceeding the said sum and as you may from time to time require. Our liability to pay is not dependent or conditional on your proceeding against M/s \_\_\_\_\_ (Name of Vendor) and we shall be liable & obligated to pay the aforesaid amount as and when demanded by you merely on an intimation being given by you and even before any legal proceedings, if any, are taken against M/s \_\_\_\_\_ (Name of Vendor)

The Bank hereby waives all rights at any time inconsistent with the terms of this undertaking guarantee and the obligations of the bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the supplier (whether or not pending before any arbitrator, Tribunal or Court) or any denial of liability by the supplier or any order or any order or communication whatsoever by the supplier stopping or preventing or purporting to stop or prevent payment by the Bank to C-DAC hereunder.

The amount stated in any notice of demand addressed by C-DAC to the Bank as claimed by C-DAC from the supplier or as suffered or incurred by C-DAC on the account of any losses or damages or costs, charges and/or expenses shall as between the Bank and C-DAC be conclusive of the amount so claimed or liable to be paid to C-DAC or suffered or incurred by C-DAC, as the case may be and payable by the Bank to C-DAC in terms hereof.

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

You (C-DAC) shall have full liberty without reference to us and without affecting this guarantee, to postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s \_\_\_\_\_ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s \_\_\_\_\_ (name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

You will have full liberty without reference to us and without affecting this guarantee, to postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s \_\_\_\_\_ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s \_\_\_\_\_ (Name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

Your right to recover the said sum of Rs. \_\_\_\_\_/- (Rupees \_\_\_\_\_ only) from us in manner aforesaid will not be affected/ or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s \_\_\_\_\_ (Name of Vendor) and/ or that any dispute or disputes are pending before any officer, tribunal or court or Arbitrator.

The guarantee herein contained shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the said M/s \_\_\_\_\_ (Name of Vendor) but shall in all respects and for all purposes be binding and operative until payment of all dues to C-DAC in respect of such liability or liabilities.

Our liability under this guarantee is restricted to Rs. \_\_\_\_\_/- (Rupees \_\_\_\_\_ Only). Our guarantee shall remain in force until unless a suit action to enforce a claim under guarantee is filed against us within six months from (which is date of expiry of guarantee) all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under. We have power to issue this guarantee in your favour under Memorandum and Articles of Association of our Bank and the undersigned has full power to do under the power of Attorney dated.

Notwithstanding anything contained herein:

Our liability under this guarantee shall not exceed Rs \_\_\_\_\_ (in words) This bank guarantee shall be valid up to \_\_\_\_\_ & unless a suit for action to enforce a claim under guarantee is filed against us within six months from the date of expiry of guarantee. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there after i.e., after two months from the date of expiry of this Bank guarantee.

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We are liable to pay the guaranteed amount or any parts thereof under this bank guarantee only and only if you serve upon us a written claim or demand or before \_\_\_\_\_.

The Bank guarantee will expire on (Min62 months from the date of successful installations of the items in the order) \_\_\_\_\_.

Granted by the Bank

Yours faithfully,

For (Name of Bank)

SEAL OF THE BANK  
Authorised Signatory

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**ANNEXURE E CERTIFICATE/UNDERTAKING FROM BIDDER  
(ON COMPANY’S LETTERHEAD)**

**Executive Director,  
Centre for Development of Advanced Computing (C-DAC)  
Innovation Park, Panchavati, Pashan Road,  
Pune - 411008 Maharashtra, INDIA**

Ref: GeM Bid / Enquiry No. .... dt. ....

We have read the clause mentioned in the Order No.F.7/10/2021-PPD (1) (Public Procurement No. 4) dated 23.02.2023 issued by Procurement Policy Division, Department of Expenditure, Ministry of Finance, GOI and further Order/OMs (if any) regarding restrictions on procurement from a bidder of a country which shares a land border with India.

In view of this, we certify that,

a. We are not from a country sharing land border with India and any registration as mentioned in said OM is not applicable to us.

OR

b. We are registered with the competent authority as mentioned in said OM. The copy of our registration with Competent Authority bearing No. .... dt. .... is enclosed herewith.

(Delete whatever is not applicable)

For (Name of Bidder)

Authorised Signatory  
(Name & Signature)  
(Company’s Seal)

**Note: kindly select only one of the options provided above i.e. (a) or (b).**

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**ANNEXURE F**

*Please submit the certificate as per format given below on Bidder’s Letterhead*

To  
Executive Director,  
Centre for Development of Advanced Computing (C-DAC)  
Innovation Park, Panchavati, Pashan Road,  
Pune - 411008 Maharashtra, INDIA

**Sub: GeM Bid / Enquiry Ref. No. .... For supply of .....**

We hereby certify that the goods / software / services / works being offered by us vide our proposal, comply with the provisions of the Make In India Order No. P-45021/2/2017-PP(BE-II)-Part(4)Vol.II dated 19.07.2024 issued by Public Procurement Section, Department of Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Gol

We also certify that, we are not from a country sharing land border with India as defined in the Order No.F.7/10/2021-PPD (1) (Public Procurement No. 4) dated 23.02.2023 issued by Procurement Policy Division, Department of Expenditure, Ministry of Finance, GOI (details provided below).

**We hereby certify the details pertaining to goods / software offered by us, against the tender requirement is given below:**

Sr No	Item Description, Make, Model	Make and Model	Country of origin Of OEM	Country of Manufacture of item	Percentage of local content	Details of the location(s) at which the local value addition is made
1	Items with description					
2	Services with description					
3.	Works with description					

Seal and Signature of the Agency / Contractor

Seal and Signature  
C-DAC

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Consolidated MII / Local Content for the complete solution declared by System Integrator (SI)/ Bidder	
--	--

*Note 1: The Country of origin / manufacturing, should be declared for individual items being offered for items.*

*Note 2: CDAC reserves the right to Accept / Reject / Cancel the bid / bidder, at its sole discretion, based on the responses received against the MII and Land border sharing declarations submitted by the bidders / vendors.*

*Note 3: The System Integrator / Bidder, needs to provide the MII / Local content declaration as a consolidated figure for the complete solution. However, location of value addition should be declared for each item.*

For (Name of bidder)

Authorized Signatory Name & Designation:  
Mobile No:



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**ANNEXURE G  
NON-DISCLOSURE AGREEMENT**

This Non-Disclosure Agreement is made and executed on      day of      2024,  
at      .

By and Between

**CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING**, a Scientific Society under the Ministry of Electronics and Information Technology, Government of India, registered under the Societies Registration Act 1860 and the Bombay Public Trusts Act 1950 and having its Office at Innovation Park, Panchavati, Pashan, Pune 411 008, hereinafter referred as “C-DAC” (which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include its administrators, successors and assigns)....**PARTY OF THE FIRST PART**

AND

\_\_\_\_\_, a  
Company/ Partnership Firm/ a Society, Registered under the laws of \_\_\_\_\_,  
having its Registered Office at \_\_\_\_\_,  
\_\_\_\_\_, hereinafter referred to as  
“\_\_\_\_\_” (which expression, shall unless  
repugnant to the context or meaning thereof shall mean and include his  
administrators and assigns)....**PARTY OF THE SECOND PART**

Hereinafter collectively referred as “Parties”, and individually as the “Party”  
as the case may be.

**WHEREAS:**

- A. C-DAC has after being set up as India’s national initiative for the development of indigenous super computing technology, diversified into other advanced areas of information technology, more particularly in multilingual computing technology, network security, geomatics, artificial intelligence, data ware housing, data mining, real times system and has offered software solutions for sector of health, power, telecom, financial services e-governance for various government agencies and organizations.

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B. \_\_\_\_\_ is engaged in the field of .

Parties are in discussion and process of executing the agreement with respect to the proposal for Technology Solution Provider and Integrator towards Physical Security of C-DAC’s Innovation Park (CIP) building at C-DAC Pune Premise, whereby C-DAC (“**Disclosing Party**”) would be sharing Confidential Information with \_\_\_\_\_ (“**Receiving Party**”) with respect to possible business transaction (“**Proposed Activity**”)

**NOW THEREFORE**, in consideration of the mutual understandings and obligations set forth herein, the Parties agree as follows:

1. The Receiving Party acknowledges and confirms the confidential and sensitive nature of all information, data, documents and material relating to the purpose and objectives of the Proposed Activity and/or of the assets and operations of Disclosing Party’s and/or its affiliates’ businesses, undertakings and establishments: (i) that may be disclosed or made available to the Receiving Party by Disclosing Party or its directors, officers, employees, representatives, advisors, consultants; (ii) the Receiving Party may gain or gather from any source identified by the Disclosing Party during the course of the Permitted Activity; (all the information referred to above is hereinafter referred to as the “**Confidential Information**”).
2. Without limiting the generality of the foregoing, Confidential Information (whether made available in written, verbal, machine recognizable, graphic, sample or electronic form) is understood to include without limitation, non-public commercial, technical or financial information, know-how, patent and ancillary information and other proprietary information, content, audios, videos, audio-visual content (including any conversions, transcodes, etc.), files, articles, literature, writings, documents, manuals, images, illustrations, drawings, photographs, sketches, models, design or performance specifications, analysis, compilations, studies, research, reviews, investigations, notes, business plans, business and accounting practices and records, business methods, market research, database, business tools, customer/client lists and data, enabling software, applications, source codes, object codes, websites, domain names, business processes, computer programs, processes, procedures, presentations, discussions, dialogues, scripts, creatives, media (planning and buying) plans, rates, ideas, concepts, raw and final content, design, technology, marketing, commercial knowledge, personnel/employee information, third party confidential

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information, information communicated or obtained through discussion, documents, negotiation and/or meeting between the Parties, any information or materials to which it gains access, directly and/or indirectly regardless of the form, format, mode or media.

3. Provided, however, that Confidential Information shall not include information which: (i) is, or becomes, publicly known, otherwise than through a wrongful act of the Receiving Party or its representatives; (ii) is in the possession of the Receiving Party prior to receipt from Disclosing Party or its representatives without an obligation of confidentiality; (iii) is independently developed by the Receiving Party, provided that it was not derived from the Confidential Information; (iv) is approved in writing by Disclosing Party for disclosure; v) is received by the Receiving party from a source not bound to the Disclosing Party or any of its affiliate by obligations of confidentiality.
4. The Receiving Party shall not disclose the Confidential Information to any other person save and except with the express consent in writing given by Disclosing Party except that the Receiving Party might share the Confidential Information to its employees/third parties providing support only for the Proposed Activity on a need-to-know basis. The Receiving Party, however, may disclose such part of the Confidential Information where: (i) such disclosure is in response to a valid order of a court or any other governmental body having jurisdiction over this Agreement provided that the Receiving Party has given prior written notice to Disclosing Party forthwith it came to learn about such order, or (ii) such disclosure is otherwise required by law, provided that the Receiving Party has given prior written notice to Disclosing Party, forthwith it came to learn about such disclosure requirement or the demand for such disclosure and made all reasonable efforts to protect the Confidential Information in connection with such disclosure.
5. The Receiving Party shall with reference to the Confidential Information take all actions as may be necessary to: (i) maintain the confidentiality thereof; (ii) limit its use of such Confidential Information solely for the purpose of the Proposed Activity; (iii) avoid disclosure even to any of its employees that are not associated with the Proposed Activity except as stated in this agreement; (iv) avoid any dissemination or publication by any of its employees/representatives associated with the Proposed Activity; and (v) safeguard the Confidential Information from being accessed, modified and/or exploited in any manner by any unauthorized person (vi) if the Proposed Activity consists of creation of any product using the Confidential Information which is to be shared with any other

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person, then such product shall be shared only after prior written approval of the Disclosing Party. Such actions shall include but not be limited to maintaining appropriate non-disclosure undertakings from its employees, third party service provider/vendor providing support directly or indirectly engaged in the Proposed Activity.

6. Receiving Party may use Disclosing Party’s Confidential Information in combination with other data for statistical or analytical purposes provided that such Confidential Information shall not be shared with any third party without prior written consent of the Disclosing Party.
7. In no event shall Disclosing Party be liable for consequential, special, incidental or punitive loss, damage or expense (including without limitation, lost profits, opportunity costs, etc.) to Receiving Party caused due to disclosure/use of the Confidential Information.
8. No license from Disclosing Party hereto is granted or implied, by estoppels or otherwise, under any trademarks, copyrights, patents (existing or future) or for any use of Confidential Information except such use which is expressly contemplated by this Agreement.
9. Nothing in this Agreement is intended to grant any rights to Receiving Party under any patents, copyrights, trademarks and designs of Disclosing Party nor shall this Agreement grant Receiving Party any right in or to the Confidential Information except as expressly set forth herein. No license grant or intellectual property rights are provided under this Agreement and all intellectual property rights are owned by the Disclosing Party.
10. The Receiving Party and its representatives acknowledge that neither Disclosing Party nor any of its representatives make any express or implied representation or warranty as to the accuracy or completeness of the information supplied. In addition, neither Disclosing Party nor any of its representatives shall have any liability to the Receiving Party or any other person in connection with the use of the information.
11. The Receiving Party hereby agrees to indemnify and hold harmless Disclosing Party, its parent, affiliates, subsidiaries, associates and group entities and their respective directors, officers, employees and representatives from and against any direct damage, loss, cost or liability (including all expenses and costs of enforcing rights under the Agreement) arising out of or resulting from: (i) any use or disclosure by the Receiving Party of Confidential Information in violation of the

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Agreement; (ii) any leakage of the Confidential Information at the end of the Receiving Party or its employees and/or its representatives; and/or (iii) breach or violation of any of the other covenants herein.

12. The Receiving Party will, within reasonable time upon the receipt of written request from the Disclosing Party, deliver to Disclosing Party, the documents comprising the Confidential Information or any part thereof and will destroy any copies, notes, or extracts thereof, retaining only one copy for archival purpose thereof, except that any portion of the Confidential Information that consists of analysis and any written Confidential Information not requested for destruction and returned, shall be retained and kept by the Receiving Party subject to the terms of this Agreement, or upon Disclosing Party’s written request be destroyed.
13. The obligation to maintain confidentiality of Disclosing Party’s Confidential Information shall survive the termination of this Agreement for a period of seven years. The agreements, obligations, warranties and undertakings on the Receiving Party’s part set out in this Agreement will continue in full force for a period of seven years from the Execution Date of this Agreement or until such time that Confidential Information is no longer confidential according to Clause 3 above, whichever occurs later.
14. The provisions of this Agreement are necessary for the protection of the business and goodwill of Disclosing Party and are considered by the Receiving Party to be reasonable for such purpose. The Receiving Party hereby acknowledges that breach of this Agreement, unauthorized disclosure or use of Confidential Information will cause irreparable harm, significant injury and substantial damages to Disclosing Party that may be difficult to ascertain. Accordingly, the Receiving Party agrees that in addition to other remedies that may be available to Disclosing Party under law and/or in equity and/or under this Agreement, Disclosing Party shall have the right to seek and obtain immediate injunctive relief to enforce an obligation under this Agreement.
15. The Receiving Party hereby represents, warrants and undertakes that in performing its obligations or exercising its rights etc. under this Agreement, the Receiving Party and its employees shall abide with all applicable laws.
16. This Agreement shall be governed by the laws of India. Any dispute, difference or claim related to or arising under, out of or in connection with this Agreement shall be first place, in good faith, resolved amicably.

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- 17. If the dispute is not resolved within 30 days after such dispute arises, the dispute shall be referred to the Arbitrator and dealt with as per provisions of Arbitration and Conciliation Act, 1996 including any rules, amendments, revisions or ordinances issued there under. The Arbitration proceeding shall be in English language and venue of the Arbitration shall be at Pune. The decision of the Arbitrator shall be final and binding on both the parties. The dispute shall be resolved only by the Courts at Pune, if the same is beyond the ambit of Arbitration.
  
- 18. The obligations and duties imposed by this Agreement regarding Confidential Information may be enforced by the Discloser of such Confidential information against any and all recipients of such Confidential Information. The receiving Party is liable and responsible for breach of the terms of this Agreement by any of its Affiliates, employees and representatives.

In witness thereof this Non-Disclosure Agreement is Signed, sealed and delivered under the hands of the authorized representatives of both the parties hereto, in duplicate, on the date first written herein above.

For and on behalf of C-DAC,

For and on behalf of \_\_\_\_\_  
\_\_\_\_\_

Authorized Signatory

Authorized Signatory

Name  
Designation  
Date

Name  
Designation  
Date

**WITNESSES**

Signature

Signature

Name

Name

Designation

Designation

**“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

**Annexure H**

**(To be executed on Rs. 100/- Stamp paper duly notarised and applicable for all tenders of value above Rs.1 Crore)**

**INTEGRITY PACT**

This Integrity Pact (“the Pact”) is made and executed on this \_\_\_\_ Day of \_\_\_\_\_ Two Thousand Twenty \_\_\_\_\_ at \_\_\_\_\_.

**By and Between**

**Centre for Development of Advanced Computing (C-DAC)**, an autonomous scientific Society under the Ministry of Electronics and Information Technology, Government of India, registered under the Societies Registration Act 1860 and the Bombay Public Trusts Act 1950, having its registered Office at SavitribaiPhule Pune University Campus, Pune 411 007, hereinafter referred to as "C-DAC/Principal", which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include its administrators, successors or assignees, as the case may be.

and

..... hereinafter referred to as “The Bidder(s)/Contractor(s)”, which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include its administrators, successors or assignees, as the case may be.

(The Principal and the Bidder (s)/Contractor(s) are collectively referred to as “the Parties”.

**Preamble**

The principal intends to award, under laid down organizational procedures, contract/s for ----- (“the Contract”). The principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s. The principal intends to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into. The principal also intends that Bidder/s and Contractor/s should abstain from bribing or indulging in any corrupt practices in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Bidder/s

## **“Tender for Physical Security Infrastructure Work CIP CDAC PUNE”**

and Contractor/s shall commit to prevent corruption, in any form, by its officials by following transparent procedures.

In order to achieve these goals, the principal, by way of this Integrity Pact (“the Pact”) will appoint Independent External Monitor (“IEM”) who will monitor the tender process and the execution of the Contract for compliance with the principles mentioned above.

The parties hereto hereby agree to enter into this Pact and agree as mentioned below.

### **Section 1 Commitments of the Principal**

- 1) The principal commits itself to take all measures necessary to prevent corruption and to observe the following: -
  - a) No employee of the principal, personally or through relatives or any other person, will in connection with the tender, or for the execution of the Contract, demand, promise or accept for himself/herself or any third person, any material or immaterial benefit or any other advantage from the bidder/s or contractor/s which he/she is not legally entitled to.
  - b) The principal will, during the tender process treat all Bidder/s and Contractor/s with equity and reason. The principal will in particular, before and during the tender process, provide to all bidder/s and contractor/s the same information and will not provide to any bidder/s or contractor/s additional/confidential information through which the bidder/s and contractor/s could obtain an advantage in relation to the tender process or the contract execution.
  - c) The principal will exclude from the process all known prejudiced persons.
- 2) If the Principal obtains information on the conduct of any of its employees, which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion and the same is prima facie found to be correct in this regard, the principal will inform its Vigilance Office and in addition can initiate disciplinary actions. In such a case while such enquiry is being conducted by the principal, the proceedings under the contract shall not be stalled.

### **Section 2 Commitments of the Bidder/ contractor**

- 1) The Bidder / Contractor commits to take all measures necessary to prevent corrupt practices, unfair means and illegal activities. He commits himself to observe the



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following during his participation in the tender process and during the contract execution:

- a) The Bidder / Contractor undertakes that he/she has not given, offered or promised to give directly or indirectly any bribe, gift, consideration, reward, favour any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the principal, for which benefit etc. he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- b) The Bidder / Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Principal, for which benefit etc. he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract
- c) The Bidder / Contractor will not enter into any agreement or understanding with other Bidders in connection with the bid, including but not limited to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.
- d) The Bidder / Contractor will not commit any offence under the relevant provisions of Anti-Corruption Laws of India/Indian Penal Code, 1860, Information and Technology Act, 2000, Competition law or any other relevant laws, enactments, rules and regulations. Further the Bidder / Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically. The Bidder / Contractor also undertakes to exercise due and adequate care of any such information so divulged.
- e) The Bidder / Contractor further confirms and declares to the Principal that the Bidder / Contractor is the original manufacturer / integrator / authorised government sponsored export entity and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Principal or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder / Contractor, nor has any

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amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

- f) The Bidder / Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to make or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and the details of the services agreed upon for such payments.
- g) The bidder(s)/ contractor (s) of foreign origin shall disclose the name and address of agents and representatives in India related to this tender. Similarly, the bidder(s)/ contractor(s) of Indian nationality shall furnish the name and address of their foreign principals or associates, if any, related to this tender.
- h) The Bidder / Contractor shall not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- i) If the Bidder / Contractor or any employee of the Bidder / Contractor or any person acting on behalf of the Bidder / Contractor, either directly or indirectly, is a relative of any of the officers of the principal, or alternatively, if any relative of an officer of the principal has financial interest / stake in the Bidder's / Contractor's firm, proprietorship, company, etc. the same shall be disclosed by the Bidder / Contractor at the time of filing of tender/EoI. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act, 2013.
- j) The Bidder / Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the principal.
- k) The bidder / contractor shall disclose the circumstances, arrangements, undertakings or relationships that constitute, or may reasonably be considered to constitute, an actual or potential conflict of interest with its obligations specified in the tender process or under any Agreement which may be negotiated or executed with Principal. Bidder / Contractor and its employees, agents, advisors and any other person associated with the bidder / contractor must not place themselves in a position which may, or does, give rise to conflict of interest (or a potential conflict of interest between the interests of Principal or any other interests during this tender process or through operation of the Agreement.
- l) The bidder(s)/ contractor (s) who have signed the Pact shall not approach the Courts while the matters/disputes/issues, related to tender process or the Contract are presented before the IEM and awaiting the final decision.

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- 2) The Bidder / Contractor will not instigate third persons to commit above mentioned acts / omissions / offences outlined above or be an accessory to such offences.

### **Section 3**

#### **Disqualification from tender process and exclusion from future contracts**

- 1) If the Bidder, before the Contract is awarded, has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question:
  - a) The principal is entitled to disqualify the Bidder from the tender process or to terminate the Contract, if already signed, for such reason.
  - b) The principal is entitled to exclude the Bidder / Contractor from participating in future contracts/tenders. The imposition and duration of the exclusion will be determined by the principal based on the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder / Contractor and the amount of the damage. The exclusion will be imposed for a minimum of six (6) months and maximum of three (3) years.
- 2) An act/omission would be treated as a transgression after due consideration of the available evidence by the principal.
- 3) The Bidder / Contractor accepts and undertakes to respect and uphold the principal's absolute right to resort to and impose such disqualification/exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision of disqualification/exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
- 4) If the Bidder / Contractor can prove that he has restored the damage caused by him and has installed a suitable corruption prevention system, the principal may revoke the aforesaid disqualification/exclusion prematurely.

### **Section 4**

#### **Compensation for Damages**

- 1) Without prejudice to any rights that may be available to the principal under any law or the contract or its laid down policies and procedures, the Principal shall have the following rights in case of breach of this Pact by the Bidder/Contractor:
  - a) To forfeit the Earnest Money/Bid Security if the Bidder is disqualified from the tender process prior to the award in terms of Section 3;

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- b) To forfeit/invoke the Security Deposit/ Performance Bank Guarantee if the principal has either terminated or is entitled to terminate the Contract of the Bidder in terms of Section 3.
- c) To immediately call of the pre contract negotiations without assigning any reason or giving any compensation to the Bidder / Contractor.
- d) To immediately cancel the contract, if already signed, without giving any compensation to the bidder / contractor. The Bidder / Contractor shall be liable to pay the compensation for any loss or damage to the principal resulting from such cancellation / rescission and the principal shall be entitled to deduct the amount so payable from the amount due to the Bidder / Contractor.
- e) To recover all sums already paid by the principal, with interest at \_\_\_% @ p.a. if any outstanding payment is due to the Bidder / Contractor from the Principal in connection with any other contract, such outstanding payment could also be set off to recover the aforesaid sum and interest.
- f) To recover all sums paid in violation of this Pact by the Bidder / Contractor to any middleman or agent or broker with a view to securing the contract.

### **Section 5 Previous transgression**

- 1) The Bidder declares that he has not committed any transgressions in the last three (3) years against any Company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could invite/justify his exclusion from this tender process.
- 2) Any concealment of information or misrepresentation of facts, in regard to the aforesaid, can lead to his disqualification from the tender process or termination of the Contract, if already awarded, or invite any other appropriate action(s) as deemed fit.

### **Section 6 Equal treatment of all Bidders / Contractors / Subcontractors**

- 1) The principal will enter into Pacts on identical terms with all bidders and contractors.
- 2) The Bidder(s) / Contractor(s) assures to procure from all their subcontractors an undertaking for the adoption of this Pact. The Bidder (s) / Contractor(s) shall alone

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be responsible for any violation (s) of the provisions laid down in the Pact by any/all of their sub-contractor (s) or sub-vendor (s).

- 3) The principal will be entitled to disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

### **Section 7 Independent External Monitor / Monitors**

- 1) The principal appoints competent and credible Independent External Monitor as nominated and approved by the Central Vigilance Commission. The task of the IEM is to review independently and objectively, whether and to what extent the Parties comply with the obligations under this Pact. The IEM would be required to sign ‘Non-Disclosure Agreements’ alongwith a declaration of ‘Absence of Conflict of Interest’. In case of any conflict of interest arises at a later date, the IEM shall inform Chairperson of the Board of the Principal and recuse himself/herself from that case.
- 2) The IEM is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal. The IEM would be provided access to all documents/records pertaining to the contract for which a complaint or issue is raised before them, as and when warranted. However, the documents/records/ information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.
- 3) The Bidder / Contractor accepts that the IEM has the right to access, without restriction, all Project documentation available with the principal including the documents/ records/ information provided by the Bidder/Contractor. The Bidder/Contractor will also grant the IEM, upon their request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The IEM is under contractual obligation to treat the documents/ records/ information of the Bidder/Contractor/ Subcontractor with confidentiality.
- 4) The principal will provide to the IEM sufficient information about all meetings among the parties related to the Project provided that such meetings could have an impact on the contractual relations between the Principal and the Bidder/Contractor. The Parties will offer to the IEM the option to participate in such meetings.
- 5) As soon as the IEM notices, or suspects, a violation of this Pact, he will inform the Management of the Principal and request the Management to discontinue or rectify the violation, or take any other relevant action. The IEM can in this regard submit nonbinding recommendations. Beyond this, the IEM has no right to demand from the

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Parties that they act in a specific manner, refrain from action or tolerate action. However, the IEM shall give an opportunity to the Bidder / Contractor to present his case before making its recommendations to the principal.

- 6) The IEM is expected to tender their recommendation on all the complaints within 30 days of their receipt, to the Chairperson of the Board of the Principal. Further, should the occasion arise, the IEM may submit proposals for correcting problematic situations.
- 7) If the IEM has reported to the Chairperson of the Board of the Principal a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India/Indian Penal Code, 1860, or any other relevant laws and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEM may transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8) The word ‘IEM’ would include both singular and plural.

### **Section 8 Pact Duration**

- 1) This Pact comes into force when both parties have signed it. It expires for the Bidder / Contractor 12 months after the last payment under the respective contract, and for all other Bidders / Contractors 6 months after the contract has been awarded.
- 2) If any claim is made / lodged during the aforesaid duration, the same shall continue to be valid despite the lapse of this pact as specified above, till it is discharged / determined by Chairperson of the Board of the Principal.

### **Section 09 Other provisions**

- 1) This Pact is subject to Indian Laws. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Pune. The Arbitration clause provided in the main tender document / contract shall be applicable to any issue / dispute arising under this Pact.
- 2) If the Contractor is a partnership or a consortium, this Pact must be signed by all partners or consortium members.
- 3) In case of any allegation of violation of any provisions of this Pact or payment of commission etc. the principal or its agencies shall be entitled to examine all the

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documents including the Books of Accounts of the Bidder / Contractor and Bidder / Contractor shall provide necessary information and documents and shall extend all possible help for the purpose of such examination.

4) If one or several provisions of this Pact are held to be invalid/unenforceable, the remainder of this Pact shall remain valid as though the invalid or unenforceable parts had not been included herein. In this case, the parties will strive to come to an agreement to their original intentions.

5) Issues like warranty/ guarantee etc. shall be outside the purview of IEM.

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For the Principal

Place -----

Date -----

-----

For the Bidder / Contractor

Witness 1 : -----

Witness 2: -----

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**List of Recommended Makes**

<b>A</b>	<b>IP CCTV Surveillance System</b>	
1	IP Dome Cameras with Varifocallense	Bosch, Honeywell, Siemens, Axis, Sony, Pelco, Tyco
2	IP BOX Camera	Bosch, Honeywell, Siemens, Axis, Sony, Pelco, Tyco
3	IP PTZ Camera & ANPR	Bosch, Honeywell, Siemens, Axis, Sony, Pelco, Tyco
4	Video Management, Recording Software	Bosch, Honeywell, Siemens, Axis, Sony, Pelco, Tyco
5	24/32/55” Monitors/TV/Video Wall	Samsung, LG, Sony
6	Network Switch	Comnet, RuggedCom, Moxa, Cisco
7	CAT 6 Cable	AMP, Molex, Schneider, Polycab
8	OFC Cables	Finolex, Sterlite, HFCL
9	Power Cables	Polycab, Excel, LAPP kabel, Finolex
<b>B</b>	<b>Access Control System</b>	
1	Intelligent Access Controller	Bosch, Siemens, Honeywell, Tyco, HID, VIRDI, Tyco
2	Access Management Software	Bosch, Siemens, Honeywell, Tyco, HID, VIRDI, Tyco
3	Biometric Readers	Bosch, Siemens, Honeywell, Tyco, HID, VIRDI, Tyco
4	Cards	Bosch, Siemens, Honeywell, Tyco, HID, VIRDI
5	Proximity Readers	Bosch, Siemens, Honeywell, Tyco, HID, VIRDI
6	Electromagnetic Locks	Dormakaba, Yale, Bell, Ebelco
7	Emergency Break Glass	Dormakaba, Yale, Bell, Ebelco
8	Magnetic Door Sensor	Dormakaba, Yale, Bell, Ebelco
9	Exit Switch/Push Button	Dormakaba, Yale, Bell, Ebelco
10	Card Printer	Zebra, Evolis, ID Card
11	Access Control Server	HP, DELL, LENOVO, CISCO
12	Network Switch	Comnet, RuggedCom, Moxa, Cisco
<b>C</b>	<b>Visitor Management</b>	
1	Visitor Management Software	Bosch, Siemens, Honeywell, Tyco, HID (Global), VIRDI, JCI
2	UHF Long range readers	Zebra, HID, Morpho, Entero
3	Antena for UHF Long range readers	Zebra, HID, Morpho, Entero



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4	UHF Long range cards	Zebra, HID, Morpho, Entero
5	Video Display Workstations	HP, DELL, LENOVO, CISCO
<b>D</b>	<b>DDC Controllers &amp; Others</b>	
1	Main Control System/DDC Controllers	Bosch, Siemens, Honeywell, Tyco, HID, VIRDI, JCI
2	UPS	Schneider, Vertiv, Fuji, Numeric
3	Battery	Amar raja, Exide, HBL
4	Boom Barrier	FAAC, Magnetic, Dorba, Entero, Godrej
5	X-Ray Baggarge Scanner	Smith Detection, Godrej, Tyco, Rapiscan
6	Turnstile	FAAC, Magnetic, Dorba, Entero, Godrej
<b>7</b>	Desktop & Srvrs	HP, DELL, LENOVO, CISCO

Sr. No	Description List of Makes -	Recommended Makes
<b>E</b>	<b>Electrical &amp; Allied</b>	
1	LT POWER & CONTROL CABLES	KEI / FINOLEX / POLYCAB / RR / MK
2	MS/GI CONDUITS	BEC / BHARAT / AKG / UNIVERCAL
3	PVC CONDUITS	Avon Plast / Precision / Diamond
4	MODULAR SWITCH SOCKET WITH SWITCH BOXES	Anchor / Legrand / Schneider / MK
5	BRASS DOUBLE COPRESSION GLANDS	Dowells / Commet / Siemens / Phoenix
6	MCCB / MCB / ACB	Schneider / ABB / Siemens / Legrand / Hager
7	FSU WITH HRC FUSE	L&T / SIEMENS / Schneider / Eaton
8	ELCB / MCB	Siemens / Schneider / Legrand / Eaton
9	MCB DBS	Schneider / ABB / Siemens / Legrand / Hager
10	METAL CLAD SOCKET OUTLETS	Legrand / Salzer / Havells / L&T / Hager / Schneider
11	CABLE TRAYS	Profab / Ovi Engineers / Aslesha / Indiana / Obo Bettermann
12	Racks	Natrack, Valrack, Precision, Rittal
13	Poles	Jindal, Sail, RINL, Tata
<b>F</b>	<b>Civil and Interior</b>	
1	Cement	ACC, L&T, Ambuja
2	Wall Putty	Goldsize Putty By Shalimar Paints Ltd., J K Wall Putty, Birla White

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3	Structural Steel	Tisco, Sail, Rinl, Jindal, Essar, Tata Steel
4	Anchor Fastner	Hilti, Fisher
5	Aluminium Sections	Indal, Hindalco, Jindal,
6	Distemper & Paints	Ici-Dulux,Asian Paints, Berger Paints, Nerolac,British Paint
7	Laminates	Merino, Green Ply, Century, Anchor, Formica, Decolam, Newmika, National, Greenlam, Spectrum
8	Gypsum Board and Fire Rated Partition	India Gypsum, Lafarge Boral, Ramco Ltd
9	Sealants	3M,Hilti,Fischer
G	Any other Material	With prior approval of Client

Note: -

1. Order will be placed with the prior approval of engineer in charge relating to makes and quantities.
2. When certain makes of the items are missing in the above list/description of item, the make will be decided as per the approval of Engineer- in- charge.

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**Schedule of Quantities**

**Un-Priced Schedule:**

The above quoted prices are including freight, insurance, loading, un-loading, handling and allied charges to be incurred till installation at site.

The rates (%) of GST for each line item shall be as given in this un-priced bid submitted along with the technical bid.

(No Other Commercial Details should be submitted)

**Note:**

1. Bidder has to quote rate on item rate basis in the respective cell.
3. Item Rates quoted by the tenderer shall be inclusive of carriage of materials by mechanical transport including loading, unloading complete upto site for all leads excise and royalty etc. in terms of tender condition.
4. Bidder has to quote for all items. Otherwise, bid will be rejected at the discretion of CDAC.

Signatures of the Contractor  
Or Authorized Person  
(With full name)  
Name of Firm:  
Seal of Firm:

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**ANNEXURE I- SITE VISIT CERTIFICATION**

Name of Tenderfor“.....”		
NITNo.		
<b>SITEVISITREPOR T</b>		
		Date:-
1	NameoftheBidder	
	Authorized Person's Name for Site Visit	
	IdProof	
	Email-Id	
	ContactDetails	
<b>SI NO</b>	<b>DESCRIPTION</b>	<b>CONFIRMATION</b>
1	SiteAccessibilityfromRoadischecked	
2	UNDERTAKING: -Authorized person has visited site before submitting the bid to assess the ground condition & working condition at site. Bidder is quoting price & responsible for any further site related consequences there of & it is to be considered as self-declaration.	
3	We have noted all local conditions & working conditions.	

Authorized Person of Bidder(Signed Off)

Seal of Tenderer:Date:

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**\*\*\*\*\* END OF DOCUMENT \*\*\*\*\***