

NIT No.: Build/NIFTSHL/MGCC/Estimates/Permanent Campus/2012/



राष्ट्रीय फैशन प्रौद्योगिकी संस्थान, शिलांग



NATIONAL INSTITUTE OF FASHION TECHNOLOGY, SHILLONG PERMANENT CAMPUS

SHILLONG

(A Statutory body governed by the NIFT Act 2006 and set up by the Ministry of Textiles, Govt of India)

Tender No – 11089/(16)/Build/NIFTSHL/MGCC/Estimates/Permanent Campus/2012/part-XII(part-XIX)/21

TENDER DOCUMENT FOR

“SUPPLY, INSTALLATION, TESTING, COMMISSIONING OF

CCTV CAMERA IN NIFT SHILLONG PERMANENT CAMPUS

AT UMSAWLI, MAWPAT, EAST KHASI HILLS

National Institute of Fashion Technology,

NIT No.: Build/NIFTSHL/MGCC/Estimates/Permanent Campus/2012/

NIFT Shillong Permanent Campus

Umsawli, Mawpat

East Khasi Hills: 793012, Meghalaya

Tender Value: - 66, 00,000/-

Time schedule for tender process:

| | |
|---|---|
| Date of publication of tender notification on official website and newspapers | 5/10/20 |
| Uploading of tender document commences from | 5/10/20 |
| Last date & time for receipt of duly filled in tenders | 27/10/20 2 pm |
| Date and Time of the opening Technical Bids | 27/10/20 3 pm |
| Date and Time of the opening Financial Bids | will be notified to the technically qualified tenderers |

Note: This tender document contains 39pages (total no. of pages including Annexures) and tenderers are requested to sign on all the pages.

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1. INTRODUCTION:

National Institute of Fashion Technology (NIFT) was set up by the Ministry of Textiles, Government of India in 1986 which has been accorded statutory status under the Act of Parliament in 2006 (NIFT Act 2006) for the promotion and development of education and research in field of Fashion Technology. NIFT provides fashion business education across the country through its network of 16 centers. It provides four years under graduate (UG) program in design and technology, two years post graduate (PG) program in design, fashion management & fashion technology and short duration education program to address the specialized needs of professional and students in the field of fashion. NIFT has its head office at New Delhi with its campuses located at Bengaluru, Bhopal, Bhubaneswar, Chennai, Gandhinagar, Hyderabad, Jodhpur, Kangra, Kannur, Kolkata, Mumbai, New Delhi, Patna, Raibareli, Shillong and Srinagar.

The foundation stone of NIFT Shillong was laid on 11th August 2008 and is presently operating from its Permanent Campus at Umsawli, Mawpat Shillong:- 793012 and is spread over an area of 20.13 acres. At present the centre is offering 03 no. of courses, i.e. 2 nos of UG courses i.e. Bachelor of Fashion Design and Bachelor of Accessory Design and 01 nos of PG course i.e. Master of Fashion Management.

2. NOTICE INVITING TENDER

I. Introduction

The National Institute of Fashion Technology (Shillong) invites sealed tender under “**Two Bid System**” from reputed suppliers for “SUPPLY, INSTALLATION, TESTING, COMMISSIONING OF CCTV CAMERA IN NIFT Shillong Permanent Campus, Umsawli, Mawpat – 793012”. “**TWO BIDS SYSTEM**” shall be followed for this tender. Tenderer should take due care to submit the tender in accordance with requirement in sealed covers. Bids received shall be evaluated as per the Criteria prescribed in the tender document. NIFT will not entertain any modifications subsequent to opening of bids and bids not conforming to tender conditions shall be liable to be rejected. Therefore, bidders are advised to submit their bids complete in all respects as per requirement of tender document specifying their acceptance to all the clauses of Bid Evaluation Criteria, General terms and conditions and compliance to the Scope of Work requirement etc. The tender document is not transferable to any other person.

The EMD envelop should be kept inside the Technical Bid Cover. The “**Technical Bid**” in separate covers duly super scribed as “Technical Bid” and the sealed covers should then be kept in a bigger cover which should also be sealed & duly super scribed as “**Tender for Supplying, Installation, testing and commissioning of CCTV Camera in NIFT Shillong Permanent Campus, Umsawli, Mawpat – 793012**”

II. Site Visit:

The bidder is advised to acquaint himself with the job work, visit the site & examine site conditions, climatic conditions, labour, power, material availability, transport and communication facilities, environmental regulations, laws and bye- laws of statutory, local bodies and the Govt. of India and collect all information that shall be necessary for preparing the bid. The cost of visiting the site and collecting information for the purpose of submission of the bid shall be incurred by the bidder only. The bidder and any of his personnel or agents will be granted permission by the Employer to enter upon the site for the purpose of such inspection. .But the permission should be sought only in written.

III. Defect Liability Period:

The work/materials of the manufacturer shall be under 24 months Defect Liability Period (DLP). Any defect/s noticed during the defect liability period shall be rectified by the manufacturer/supplier without any cost to NIFT Shillong failing which the Security Deposit of the Supplier may be forfeited. If the supplier/dealer backs out from the work tender, the EMD amount deposited of the supplier/dealer stand forfeited. The supplier/dealer may also be debarred from any future tendering process in the institute for reasons assigned hereinabove.

IV. Bid Validity

90 days from the date of opening of Financial bid

V. Correspondence Address:

The Purchase Officer, National Institute of Fashion Technology,
NIFT Permanent Campus,
Umsawli Mawpat - 793 012,
Meghalaya

VI. Submission of Bids

The interested firms should apply online and submit their tender and the bids along with scanned copies of all the relevant certificates, documents, etc. in support of their bids from 5th October 2020 to 27th October 2020 (2:00 Pm). Tender documents is also available for viewing on the “tenders” link of the NIFT website i.e. <https://www.nift.ac.in/shillong/tenders> under Shillong campus

Applications to this tender will be accepted only through the online mode through the website <https://nifttenders.eproc.in> No other mode of application will be considered & application will not be accepted.

For applying online, the Firm should get itself registered at <https://nifttenders.eproc.in> by paying for Annual Registration Charges

- Annual Registration Charges of Rs. 2000 + Rs. 360 (GST @ 18%) = Rs. 2360/- (Rupees Two Thousand Three Hundred and Sixty Only - Non-Refundable)
- Bid Processing Fee charges of Rs. 5000+ 900(GST 18%) = 5900/- (Rupees– Three Thousand six hundred twenty five Non- Refundable) only

Also, the interested Firms should submit a hard copy of the application submitted online with all relevant supporting documents by 27thOctober 2020 before 2:00 pm. Non-submission of hardcopy as directed will lead to rejection of the tender application.

The sealed hard copy of the tender shall be submitted in one big envelope superscripting “Tender for Supplying, Installation ,testing and commissioning of CCTV Camera in NIFT Shillong Permanent Campus, Umsawli, Mawpat – 793018,Meghalaya”, containing sealed envelopes, for "Technical Bid" for superscripting as such and addressed to:-

The Purchase Officer,
National Institute of Fashion Technology,NIFT Shillong Campus,
Umsawli, Mawpat: - 793 012, Meghalaya

The sealed tender must be dropped in the tender box at NIFT Shillong Campus only, on or before 27th October 2020 before 2:00 pm

The technical bid envelope must contain the technical bid in prescribed Performa as per Annexure-III along with Earnest Money Deposit (refundable but non-interest bearing) of **Rs 1, 98,000 /- (One lakhs Ninety Eight thousand) only favoring** NIFT, Shillong and payable at Shillong with all relevant documents in support of eligibility and experience criteria. The financial bid shall include all the charges including all taxes etc to complete the work in all respect. NIFT will not accept any claim other than mentioned in financial bid.

The technical bid will be opened at NIFT, Shillong Campus in the conference room on 27nd October 2020 at 3:00 pm in the presence of the bidders/ their authorized representatives and committee members who wish to be present. The Financial bid will be opened on the date which will be communicated to only those bidders who are found to be technically qualified after evaluation of technical bids.

The interested firms are advised to read carefully the entire tender document before submitting their tender and the tender documents not received online in prescribed format and/or are found incomplete in any respect shall be summarily rejected.

Any further clarifications can be sought from the office of Purchase Officer and computer Engineer on email purchase.shillong@nift.ac.in & computerengineer.shillong@nift.ac.in (for specification) or Telephone No.7085852710 and 9774156588 National Institute of Fashion Technology, NIFT Shillong Campus, Umsawli Mawpat East Khasi Hills - 793 012, Meghalaya

For online procedure for Annual Registration and complains if any in Eproc Website:

Mr. Sandeep Bhandari,

E-mail:- sandeep.bhandari@ciindia.com and niftsupport@ciindia.com

Phone No.:- 0124-4302033 & 36

3. COMMERCIAL AND GENERAL TERMS & CONDITIONS OF THE CONTRACT

Nature of Goods/ Equipments: Supply, installation, testing, commissioning of CCTV Camera

Eligibility Criteria:

- a) Bidder should have an established Service Centre. Service providers should have been in this business for a period not less than three years as on 01.01.2020.
- b) Bidder should have a minimum 3 year experience in Supply, installation, testing and commissioning of CCTV Surveillance System.
- c) The Bidder shall not be under a declaration of ineligibility for corrupt or fraudulent practices or blacklisted by any of the Government agencies.
- d) The Bidder must have a turnover of more than Rs.75 lakhs in each of the last three years and at least Rs. 50 lakhs turnover specifically in the Supply, installation, testing and commissioning of CCTV Surveillance System
- e) The bidder must have successfully completed at least two similar nature of work ie Installation of CCTV system whose value should not less than 60.00 lakhs in last two years in any Government /PSU/Autonomous Organization. Attach work Order/completion certificate to prove the claim with Contact No of the Authority to confirm the satisfactory completion of the work.
- f) The Bidders shall submit the copy of PAN Number, GST Number registration details along with the tender.

OEM Eligibility Criteria

1. CCTV OEM should have direct presence in India since last ten years (not as joint venture, partnership firms or through any other association). Documentary evidence such as copy of ROC to be submitted.
2. Due to security reasons, products manufactured by the adversary countries or having their origin from those countries are not to be quoted. Declaration on OEM/Bidder letter head needs to be submitted.
3. Due to security reasons, No China based (Registered in China & Hong Kong) Original Equipment Manufacturer (OEM) and No Chinese, Taiwan and Vietnam Origin products are allowed. Declaration on OEM letterhead should be submitted.
4. CCTV OEM must have experience of manufacturing of CCTV Products from last 10 years in India or 15 years for non-Indian OEM. The OEM of CCTV Equipment should be in surveillance business for at least 10(Ten) years as of 31st March 2020 and should have valid factory license.
5. **MANUFACTURER AUTHORISATION CERTIFICATE (Annexure IV)** of camera should be produced in the name of **OEM** supplying the cameras.
6. OEM should not be blacklisted or barred by any Ministry of Government of India or any of the Government / PSUs or any other government department at the time of bidding. (Annexure-VI)
7. Bidder has to compulsory quote for single OEM make & model of each Camera. The bid with multiples OEM & Models for single item will be treated as non compliance & that bid will be liable for rejection for further evaluation.

Preference to Domestic Manufacturers

As per instructions contained in the Order's No.P-45021/2/2017-B.E.-II dated 15th June 2017 circulated/issued by Government of India, Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, Udyog Bhawan, New Delhi in pursuance of provision of Rule 153(iii) of General Financial Rule 2017, to encourage "Make in India" and promote manufacturing and production of goods and services in India, preference will be given to local supplier/bidder meeting the criteria prescribed in the above said order. All the instructions mentioned therein will be adhered. No representation/request of any firm(s) against the decision taken by the Deptt. in pursuance of these orders/instructions will be entertained at any stage on any ground whatsoever it is.

2. Scope of work / Supply:

- a) **Supply:** Entrusted bidder must supply and work as per work order. All supplies must be certified. Supplied components must satisfy the minimum guiding specifications and guidelines, as applicable, proprietary technology must be mentioned against each component. Bidder is allowed to propose only one make / model per system or software required for the proposed solution. Bids with optional offers would be summarily rejected.
- b) **Installation, Integration & Implementation:** Installation, integration & implementation will be governed by the stated guidelines and associated standards & in line with the scope of work defined in this document. Installation & commissioning of the CCTV Surveillance Systems at NIFT Shillong, this includes supply, installation, commissioning, training of all required allied facilities etc. that are essential for the job but not explicitly mentioned. The delivery / supply of the materials may be done by successful Bidder at NIFT Shillong Post installation warranty supports are the sole responsibility of the Bidder.
 - (i) Design, Engineering, Supply, installation, testing, Commissioning and training of complete CCTV surveillance system at **NIFT Shillong**.
 - (ii) Supply and laying of all cables through cable racks, cable trays, conduits or inside suitable trenches (To be provided by the Bidder including back filling) as required.
 - (iii) Installation, acceptable, testing, commissioning, field acceptance, test-run and stabilization of the complete system.
 - (iv) The facility of recording should be for a minimum period of 30 days.
 - (v) Completion of drawings / documents as per the execution of work at site.
 - (vi) User documentation, Product data sheet, Product test certificate, Warranty certificate, Training etc. to be provided by the bidder.
 - (vii) Bidder needs to submit MAF from OEM mentioning Warranty Period and Service Infrastructure details of OEM in India. The MAF will be verified by the respective OEM.
 - (viii) Any other instrument / equipment / services, which are not explicitly mentioned above or in the price bid but deemed necessary for the successful operation of the system complete in all respect, shall be in bidder's scope.

- (ix) Bidder may visit the NIFT Shillong for site survey.
- (x) Proper Electrical earthing for entire CCTV system.
- (xi) Bidder should deploy dedicated engineer and execution team at NIFT Shillong for execution of CCTV Surveillance System till completion of project hand over. The project engineer will provide day to day progress report of work to NIFT concern person.
- (xii) Selected bidder should handover the warranty of OEM to NIFT Shillong.
- (xiii) **The entire site should be capable of connecting at least 4 no. displays with different sets of camera views.**

3. **OEM responsibility:**

The OEM for camera & NVR should have its own registered business entity in India. Group company/joint venture/collaboration would not be considered eligible to participate in the bid.

- a) CCTV Camera & NVR OEM should have direct presence in India for a minimum period of 5 Years as on as on bid submission date and should be present global in the same line of manufacturing for at least 15 years.
- b) OEM should have self owned support /service office & engineering Support for Technical Support/Service on its payroll in India. The technical support setup should be existent for at least 5years in India. Letter to be submitted duly signed by the country Head/Director/CEO of OEM. Service setup with escalation matrix to be submitted.
- c) CCTV camera must have **UL, CE, FCC, and IK10, IP66 / IP67 certifications**. Copy of relevant certificates issued by competent authority has to be submitted for each camera models proposed in the bid. Series certificates for models will be eligible for disqualification in the bid.
Note:Box camera must have UL, CE, FCC, and camera housing must have IK10, IP66 / IP67 certification.
- (i) Bullet camera must have UL, CE, FCC, and camera housing must have IK10, IP67 certification.
- d) NVR must have CE, FCC, UL certifications. Copy of relevant certificates issued by competent authority has to be submitted for each camera models proposed in the bid.
- e) OEM should have never been black listed / banned /removed from any govt. /PSU / Consulates in India or abroad. Declaration to be submitted duly signed by the country Head/Director/CEO of OEM.
- f) The CCTV, NVR, Switch OEM should have its technical Support contact number and e-mail Id in India for any technical support query from the SI or end customer. Service line number should be mentioned in the manufacturer's authorization letter to be submitted along with the bid duly signed by the country Head/Director /CEO of OEM.
- g) All OEM declarations should be on its letter head duly signed in Blue Ink/digital signature by its authorized signatory.
- h) The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras. Declaration to be submitted with bid duly signed by the country Head/Director/CEO of OEM.
- i) The proposed Camera & NVR should be ONVIF compliant and the OEM should have never been banned by ONVIF. Suitable evidence document to be submitted with bid.
- j) The CCTV System solution provider OEM should submit an undertaking of the product & solution performance for NIFT Shillong which would be provided by them.
- k) Cameras, NVR (Network Video Recorder), VMS (Video Management Software) and VA (Video Analytics) with FRS and LPR should be from Same OEM for seamless integration. FRS (Face recognition) and LPR (License Plate Recognition) should also be integrated in the same VMS. Declaration to be submitted with bid duly signed by the country Head/Director/ HR Head CEO of OEM.
- l) The Camera OEM should have supplied minimum 100 cameras with relevant AI solution (as required in this tender) in single project. Suitable evidence document to be submitted with bid.
- m) OEM should have Self-Owned RMA set up in India for last 5 years from the date of submission of bid (not as joint venture, partnership firms or through any other association). Declaration to be submitted with bid duly signed by the

n) OEM should be an ISO certified organization.

o) For any change in system part no. / Serial no. of any hardware / software from the time of submission of offer till completion of the contract (for reasons like model changes or replacement systems), bidder should notify the change to the purchaser in written with supporting justification letter from the respective OEM for the change. The Purchaser reserves the right to accept or reject such changes.

p) The tenders shall be submitted as per the technical specifications as per Annexure – I

q) Submission of the tender implies that these conditions of tender have been read by the bidders and is aware of the scope of the work/supply and the quality of the material to be supplied. The final acceptance of the tender rests with the Director, NIFT, Shillong who reserves the right to accept or reject any or all tenders without assigning any reason thereof.

r) Bidders should clearly understand the scope of work clearly which is as follows :-

(i) The work includes supply, Installation, testing and commissioning of all items.

(ii) Installation includes all type of civil work, electrical work etc.

(iii) It's the bidders responsibility to carry out defined work in neat and clean manner and do reconditioning wherever road cutting concrete cutting with his resources

4. The Service Level agreement (SLA) –

Turnaround time:

| Severity | Severity Description | Resolution Time in Hrs |
|------------------|----------------------|----------------------------|
| Initial Response | On Logging of Call | 12hrs from Logging of Call |
| Minor Defect | On Logging of Call | 24hrs from Logging of Call |
| Major Defect | On Logging of Call | 28hrs from Logging of Call |

A declaration should be given on letter head signed by country head / Director / CEO of System Integrator for the above.

If failed to provide the service more than three times in a quarter penalties will be 2% of the security Deposit.

1) Bidder should have its Service contact number; e-mail ID in Meghalaya for any technical support query from the end customer. Service contact number, e-mail ID should be mentioned in the letter and submitted along with the bid duly signed by the Authorized Signatory of System Integrator

2) Bidder should have its own registered office in Meghalaya of its own for project execution and support. Certificate of incorporation, Establishment proof with declaration to be submitted duly signed by the Authorized Signatory.

3) Bidder must have ISO certified. Documentary proof to be submitted.

4) Bidder should present in Meghalaya minimum 5 years to ensure better service support. Documentary proof to be submitted.

5) Camera, NVR (Network Video Recorder), VMS (Video Management Software), VA (Video Analytics) from Same OEM for seamless integration and support/service. FRS (Face recognition) and LPR (License Plate Recognition) should also be integrated in the same VMS. Declaration to be submitted with bid duly signed by the country Head/Director/ HR Head CEO of OEM.

6) Bidder should submit conformation from OEM of VMS and VA licenses with perpetual validity. NIFT Shillong would not be entitled to pay any additional charges for maintaining validity of VMS or VA license for the entirety of project life.
OEM of VMS and VA should ensure to provide all applicable licenses as per the tender requirement with 3 years comprehensive support including but not limiting to all upgrades, updates, software support

charges etc. NIFT Shillong would not be entitled to pay any further charges whatsoever for maintenance including but limiting to upgrading, updating or software support till the end of 3 years as per the tender. OEM declaration to be submitted with bid duly signed by the country Head/Director/CEO.

- 7) Bidder must have authorized partner of their proposed CCTV System solution provider OEM. Documentary proof to be submitted.
- 8) Bidder should never or is black listed / banned /removed from any govt. /PSU / Consulates in India or abroad. Declaration to be submitted duly signed.

5. Validity of Tender:

- a) The tender shall be valid for a period of 90 days from the date of opening of the tender.
- b) Bidders for any reason whatever, withdraws the tender after it is accepted or become unable or fails to execute the orders within stipulated delivery period, NIFT,Shillong shall be at liberty to cancel the order forthwith and the EMD of the tender in such a case will be forfeited by the NIFT,Shillong .
- c) No representation for the enhancement of the prices of the accepted tender or alteration of the terms and conditions will be entertained till supplies are completed.

6. Offers ready stock / Subject to prior sale:

- a) Offers from ready stock are preferred. In case the offers are subject to prior orders, the Bidders shall indicate the period within which the ordered quantity will be supplied. The Bidders shall note that in case Bidder fails to supply within the period of delivery indicated in the said tender, penalty @ Rs 500/-per day shall be imposed.
- b) The successful Bidder shall, within 5 days from the date of receipt of communication of acceptance of quotes from NIFT, shall intimate his acceptance of the offer. The successful Bidder shall complete supplies strictly as per the accepted delivery period.

7. Price Applicability

The price shall be firm and shall include all applicable taxes and charges. Any variation in the duties, levies etc. during the period of supplies shall be charged to the bidder account. The rates quoted shall be all inclusive of GST with the delivery, up to destination i.e. NIFT Shillong Permanent Campus at Umsawli,Mawpat .

8. Completion:

- a) The successful bidder shall complete the job strictly within the accepted completion period of 90 days.
- b) The Equipments shall have to be delivered and installed at NIFT,Shillong Permanent campus to the satisfaction of concerned Authority.
- c) The comprehensive catalogue which includes instructions for Operation, Maintenance, Trouble shooting and all other areas which are necessary for smooth functioning of equipment, shall be provided along with the equipment by the bidder.

9. Standards

The goods supplied under the contract shall conform to the standards mentioned in the Technical Specifications.

10. Patent Rights

The Contractor shall indemnify the Purchaser against all third party actions/claims of infringement of patent, trademark or industrial design rights arising from the use of goods or any part thereof.

11. Security Deposit

- a) Within 10 days of receipt of Work Order, the Contractor shall furnish a Security Deposit in the form of a Demand Draft/Bank Guarantee for an amount equivalent to 5% of the contract/P.O value issued by a schedule Bank from its branch in Meghalaya, in the prescribed format given in this tender.
- b) EMD can be adjusted along with the payment of the Security Deposit on the written request of the vendor.
- c) The Security Deposit will be discharged by the Purchaser after completion of the Contractor's obligations without any interest including any warranty obligations under the contract.

12. Inspection and Tests

- a) The Purchaser or its representatives or ultimate client shall have the right to inspect and test the goods for their conformity to the specifications. The Purchaser may also appoint an agency for this purpose. The technical specifications shall specify what inspection and tests the Purchaser requires and where they are to be conducted, Where the Purchaser decides to conduct such tests on the premises of the Contractor, all reasonable facilities and assistance like testing instruments and other test gadgets including access to the drawings and production data shall be furnished to the Inspector free of costs. In case the tested goods fail to conform to the specifications, the Inspector may reject them and the Contractor shall either replace the rejected goods or make alteration necessary to meet the specifications requirements free of cost to the Purchaser.
- b) Notwithstanding the pre-supply tests and inspections , the material on receipts in the Purchaser's premises shall also be tested and if any material or part thereof is found defective, the same shall be replaced free of cost to the Purchaser. If any material before it is taken over is found defective or fails to fulfill the requirements of the contract, the Inspector shall give the Contractor notice setting forth details of such defects or failures and the Contractor shall make the material good or alter the same to make it comply with the requirements of the contract and in any case within a period not exceeding 1 month of the initial report. These replacements shall be made by the Contractor, free of the all charges, at the site(s).

13. Warranty

- a. The Contractor shall give warranty that goods to be supplied shall be new and free from all defects and faults in material, workmanship, and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type ordered and shall perform in full conformity with the specifications and drawings. The Contractor shall be responsible for any defects that may develop under the conditions provided by the contractor and under proper use, arising from faulty materials, design or workmanship such as corrosion of the equipment, inadequate contact protection, deficiencies in circuit design and or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect goods are faulty. This warrantee shall survive inspection or payment for, and acceptance of goods, after the goods have been taken over.

b. If it becomes necessary for the contractor to replace or renew any defective portion/portions of the equipment under this clause, the provisions of the clause shall apply to the portion/portions of equipment's replaced or renewed. If any defect is not remedied within a reasonable time, the Purchaser may proceed to get the work done at the Contractor's risk and expenses, but without prejudice to any other rights which the Purchaser may have against the Contractor in respect of such defects.

- c. Replacement under warranty clause shall be made by the Contractor free of all charges at site including freight, insurance and other incidental charges.
- d. The equipments offered shall confirm to the specifications as given in tender/order and shall be guaranteed against defective design, defective quality material supplied, manufacturing defects etc., for a minimum period of 24 months from the date of supply of CCTV Camera.
- e. The Bidders have the right to offer warranty more than the period of warranty offered by manufacturer of the product for 24 months from the date of supply of CCTV Camera and this aspect would certainly be taken into consideration.

14. **Payment:**

- a. The payment will be made through NEFT by NIFT, Shillong to the bank account as mentioned in the bank mandate. The bidder shall submit the documents which shall clearly indicate that the Proper Installation, Commissioning & successful Testing of Equipment are done and said document shall be duly acknowledged by the **authorized person.**
- b. 90% Payment shall be Released immediately after certification the NIFT, Shillong **IT purchase committee** and completion of work, balance 10% payment shall be released after 6 month of satisfactorily running of installed equipments.
- c. TDS and GST shall be deducted as per applicable rules

15. **Earnest Money Deposit**

(EMD): Earnest Money Deposit (EMD):

- a) The units registered with Central Purchase Organization (DGS&D), National Small Industries Corporation (NSIC), MSME or the concerned Ministry or Department shall be exempted from the payment of Earnest Money as defined **under Rule 170 of General Financial Rules (GFR), 2017**. In such case, copy of the certificate showing registration with the above mentioned institutions to be enclosed along with the bid.
- b) In case the unit is not covered as above, it shall submit the offer along with the Earnest Money Deposit (EMD) for Rs. 1,98,000/-[, An Earnest Money Deposit of Rs. 1,98,000/- (Rs. One lakhs Ninety Eight thousand only) in the form of demand draft drawn in favor of NIFT, Shillong payable at Shillong, failing which their bids will not be considered valid. The amount will be refunded to unsuccessful bidder without any interest after completion of the tender process. The EMD should remain valid for a period of 90 days.
- c) Note:
The EMD will be forfeited in following cases:
 - a) If the bidder fails to accept the order based on his/her offer (bid) and within the prescribed time.

16. Service Facility:

In order to ensure proper and timely after sales service, the vendors should have the branch office in shillong or contact details with addresses of service centre nearest to shillong (within 15Km to 20Km from the campus) shall be provided along with the bid.

17. Taxes:

Contractors shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchase Officer, NIFT, Shillong, campus Umsawli,mawpat,793012.

18. Change Orders

The Purchaser may at any time by written order given to the Contractor make changes Within the general scope of the contract in any one or more of the following:-

- a) Drawings, designs or specifications where goods to be furnished under the contract are to be specifically manufactured for the Purchaser.
- b) Method of transportation or packing.
- c) Place of delivery.
- d) Services to be provided by the contractor.

If any such change causes an increase or decrease in the cost or the time required for the execution of the contractor, an equitable adjustment shall be made in the contract price or delivery schedule or both and the contract shall accordingly be amended.

19. Sub-Letting

The Bidder cannot assign or transfer and sub-contract its interest/ obligations under the contract without prior written permission of the Purchaser.

Liquidated Damages

- a) The date of the delivery of the goods/services stipulated in the acceptance of tender should be deemed to be the essence of the contract and the delivery must be completed not later than the dates specified therein. Extension in delivery period will not be given except in exceptional circumstances. Should, however, deliveries be made after expiry of the contract delivery period and accepted by the consignee, such deliveries will not deprive the Purchaser of the right to recover Liquidated Damages.
- b) In case the Contractor fails to supply the goods/services against the order, the same shall be procured from other Contractors at the cost and risk of the Contractor and the excess money will be recovered from any dues of the party.
- c) For late deliveries, as liquidated damages of **0.05% to 5% of the work value would be imposed per week delay**. The Purchaser also reserves the right to cancel the order in such cases and forfeit the EMD/Security Deposit and may also debar the Contractor for future purchases.

20. Price Bid:- The L1 vendors would be selected from the total amount quoted in the financial bid as per Annexure:-VII and not item wise .If there are more than one L1 then the contract would be awarded to the vendor with more similar work experience.

21. However the vendors must also quote items wise rate inclusive of GST as per the Financial Bid Format.

22. Arbitration

- a) In the event of any dispute arising between Purchaser and the Contractor in any matter covered by this contract or arising directly or indirectly there from or connected or concerned with the said contract in any manner of the implementation of any terms and conditions of the said contract, the matter shall be referred to the Director, NIFT, Shillong, who may himself act as sole arbitrator or may name as sole arbitrator an officer of NIFT notwithstanding the fact that such officer has been directly or indirectly associated with this contract and the provisions of the Indian Arbitration Conciliation Act, 1996 shall apply to such arbitration. The contractor expressly agrees that the arbitration proceedings shall be held at Shillong.
- b) The proceedings of arbitration shall be in English language:
- c) In case any contractor wants to take the dispute to a court of law after arbitration award as aforesaid, it is clearly understood that only courts in Shillong shall have the Jurisdiction.

23. Risk Purchase

In the event of Contractor's failure to execute the contract to the satisfaction of the purchaser, the purchaser reserves the right:

- (a) To reject any part of the Contract executed and withhold payment for such portion of the Contract till such time the defects are rectified to the satisfaction of the purchaser.
- (b) To terminate the Contract by giving 2 weeks' notice in writing without assigning any reason and to get the Contract executed by other agency at the risk and cost of the Contractor.

24. Applicable Laws

- a) This contract shall be interpreted, construed and governed by the laws of the Republic of India and the parties hereby submit to the exclusive jurisdiction of the Court at Shillong, having jurisdiction in appeal there from. Any dispute in relation to the contract shall be submitted to the appropriate Court of the Republic of India for determination. The parties to the contract shall continue to fulfill their respective obligations under the contract during the currency of the contract pending the final decision of the Court

25. Packing

- a) The contractor shall provide packing of the goods, as required to prevent their damages or deterioration during the transit to their final destination as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit.
- b) The equipment shall be securely boxed, crated and protected from mechanical damage, moisture etc. suitable for both storage and transit according to the nature of the material and mode of transport.

26. Replacement Of Defective Equipment

- a) If any equipment or any part thereof, is found defective or fails to meet the requirements of the contract before it is accepted, NIFT, Shillong shall give the Contractor a notice setting forth details of such defects or failures and the Contractor shall forthwith arrange to set right the defective equipment or replace the same by the good one to make it comply with the requirements of the contract. This in any case shall be completed within a period not exceeding one month from the date of the initial report pointing out the defects. The replacement or rectification shall be made at site by the Contractor free of cost. If the Contractor fails to do the needful within this stipulated

time frame, the purchaser reserves the right to reject the equipment in full or in part and get it replaced at the cost of the Contractor. The cost of any such replacement made by the Purchaser shall be deducted from the amount payable to the Contractor against this purchase order.

- b) If any equipment or part thereof is lost or rendered defective during transit, pending settlement of the insurance claim, fresh order shall be placed on the Contractor for such loss or defective equipment and the Contractor shall arrange to supply the same within three months of such order at the same prices and on the same general terms and conditions as mentioned in this purchase order.

27. Force Majeure

- a) If any time, during the continuance of this contract, the performance in whole or in part by either party under obligation as per this contract is prevented or delayed by reasons of war or hostility, act of the public enemy, civil commotion, sabotage, fire, flood, explosion, epidemic, quarantine restrictions, strike, lockout or acts of Nature, hereinafter referred to “eventuality”, provided notice of happening of any such eventuality is given by either party to the other within 21 days of the date of occurrence thereof, neither party shall be reason of such an “eventuality” be entitled to terminate this contract nor shall either party have any claim or damages against the other in respect of such non-performance or delay in performance and deliveries under the contract. The contract shall be resumed as soon as practicable after such “eventuality” has come to an end or ceased to exist. In case of any dispute, the decision of Director, NIFT, Shillong shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such eventuality for a period exceeding 60 days, either party may at its option, terminate the contract. Provided also that if the contract is terminated under this clause the Purchaser shall be at liberty to take over from the Contractor at a price to be fixed by the Purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and other stores in the course of manufacture which may be in the possession of the Contractor at the time of such termination, or such portion thereof as the Purchaser may deem fit except such material, as the Contractor may, with the concurrence of the Purchaser, elect to retain.

28. Termination for Default

- a) The Purchaser, may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Contractor, terminate this contract in whole or in part.
- If the contractor fails to deliver any or all the goods within the time period (s) Specified in the contract, or any extension thereof granted by the Purchaser
 - If the Contractor fails to perform any other obligation(s) under the contract;
 - If the Contractor, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
 - If the Contractor, in either of the above circumstances, does not remedy his failure within a period of 15 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.
 - On a notice period of 30 days. For

the purpose of this Clause:

- 1) “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- 2) “Fraudulent practice” means a misrepresentation of facts in order to influence a

procurement process or the execution of a contract to the detriment of Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition”.

b) In the event the Purchaser terminates the contract in whole or in part pursuant to above paragraph the Purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the Contractor shall be liable to the Purchaser for any excess cost for such similar goods. However, the Contractor shall continue the performance of the contract to the extent not terminated.

29. Claims:

- a) If the material supplied are found to be off size and shape different than those in the accepted offer and are of specifications lower than those stipulated in the accepted offer, NIFT, Shillong shall have the right to totally reject the goods and/or to prefer a claim for compensation for the part of goods, which are rejected.
- b) The contractor shall reimburse to NIFT, Shillong, the actual expenditure incurred, on such goods, within 15 (fifteen) days of its demand.
- c) The contractor shall be responsible for arranging the rejected goods to be removed at his/her cost from NIFT, Shillong premises.

The contractor shall also compensate for losses, if any, sustained by NIFT due to defective packing and/or wrong marking of the goods.

We confirm with our acceptance to the Commercial & General Terms & Conditions Sl. No. 1 to 14 as given above.

Date:

Name, Signature and Seal of Bidders

ANNEXURE-1

ANNEXURE – I TECHNICAL BID

(To be kept in separate sealed envelope superscripted as “Technical Bid”)

Name of the Agency/Firm:

Name of the authorized person (Who signs on the tender documents) :

Address of the Agency/Firm:

Phone No. :

Mobile No.:

Fax No.:

Email :

| Sr. No | Particulars | Attached at Pg | Remarks |
|---------------|---|-----------------------|--|
| 1 | KHADC Trading License | | Copy of certificate to be attached |
| 2 | Earnest Money Demand Draft/Bank Guarantee for Rs. Rs 1,98,000/- only | | Yes/No |
| 3 | Tender document along with compliance to the technical specifications filled and duly signed without mentioning the rates | | To be filled, signed and attached with Technical Bid |
| 4 | Work completion period (within 90 days) | | Yes/No |
| 5 | Firm / Company Registration/GST Registration NO. | | Copy of certificate to be attached |
| 6 | PAN Number | | Copy of certificate to be attached |
| 7 | Certificate regarding carried out similar works in the last 02 years: | | Copy of certificate to be attached |
| 8 | Turnover not less than 75 lakhs per annum for Three years for financial year 2017-18 and 2018-19 2019-20 | | Copy of certificate to be attached (profit & Loss ,Balance sheet attested by the CA) |
| 9 | In case of OEM or authorized dealer of CCTV Camera submit authorization letter along with your bid | | To be enclosed |
| 10 | Please confirm that your firm have not been banned or delisted by any Government or Quasi Government agencies or PSUs. This does not necessarily be the cause for disqualification. However if this | | To be enclosed in firm letter head |

| | | | | |
|----|--|--|------------------------------------|--|
| 11 | Confirm unconditional acceptance that any bidder making a false claim would have its contract terminated forthwith, if detected later. | | To be enclosed in firm letter head | |
| 12 | Confirm that you shall supply the requisite operation/maintenance manual with the equipment. | | To be enclosed in firm letter head | |
| 13 | Please also confirm that spare parts shall be made available as and when required for a minimum period of 3 years from the date of successful completion of warranty period. | | To be enclosed in firm letter head | |
| 14 | Confirm unconditional acceptance of comprehensive warranty (inclusive of absolutely free of charge delivery (all expenses paid) at our site and installation of replacement parts/spares and free of all expenses related to such service calls) for a period of clear 12 months or more from the date of satisfactory completion of onsite installation, commissioning and training at our location | | To be enclosed in firm letter head | |
| 15 | Attached List of Previous and Present List of Clients with work order | | To be enclosed in firm letter head | |

Note-1: All the copies of documents mentioned above to be sealed in the technical bid cover along with EMD.

Note 2: Tenders not accompanied with above information & documents in support of the same may be summarily rejected.

Note 3:- The vendor who is awarded the contract must produce the KHADC trading license within 30 days of issuing of the work order, failing to produce work order may lead to cancellation of the work order/Contract.

Technical Specifications

Technical Specification of the Items

1. 2 MP IR HD Dome Camera :-

| S/N | Parameter | Specification |
|-----------------------|--------------------|---|
| Camera | | |
| 1 | Image Sensor | 1/2.8" Progressive Scan CMOS or better |
| 2 | Min. Illumination | Color: 0.005 Lux 0 Lux with IR |
| 3 | Shutter Speed | 1/3 s to 1/15,000 s, Supports Slow Shutter |
| 4 | Image Enhancement | BLC/3D DNR/ROI/Defog |
| 5 | User | Support three streams, and Support 3channels live view at the same time |
| 6 | Day & Night | Electronic IR Cut Filter |
| 7 | WDR | 90dB or better |
| Image | | |
| 8 | Max. Resolution | 1920 × 1080 |
| 9 | Frame Rate | 1080P (1920 x 1080), 720P (1280 x 720), D1, CIF, 480 x 240 |
| 10 | Image Setting | Rotate Mode, Saturation, Brightness, Contrast, Sharpness adjustable by client software or web browser |
| 11 | Day & Night | Auto/Schedule/Triggered by Alarm In |
| 12 | AGC | Required |
| Lens and Audio | | |
| 13 | Lens Type | 2.8 to 12 mm Motorized Zoom vari-focal Lens, or better |
| 14 | Angle Adjustment | Pan: 0° to 350°, tilt: 0° to 72°, rotate: 0° to 330° |
| 15 | Video Compression | H.265/H.264/MJPEG |
| 16 | Video Bit Rate | 256 Kbps – 6 Mbps |
| 17 | Audio Compression | G.711a, G.711u, |
| 18 | Audio Bit Rate | 32 to 128kbps |
| 19 | Alarm Trigger | Motion detection, video tampering, network disconnected, IP address conflict, illegal login, HDD full, HDD error, Alarm input, Alarm output |
| 20 | Protocols | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, IPv6, |
| 21 | General Function | One-key reset, anti-flicker, three streams, password protection, privacy mask, IP address filter |
| | Intelligence | |
| 22 | Behavior Analysis | Line crossing detection, intrusion detection, Face detection and face capture |
| 23 | Region of Interest | Support 1 ROI per stream |

| | | |
|------------------|-------------------------|---|
| 24 | Onvif | Should support |
| 25 | Simultaneous Live View | Up to 3 channels |
| 26 | User/Host | Up to 3 users,3 levels: Administrator, Operator and User |
| Interface | | |
| 27 | Audio | 1 input (line in, 3.5 mm), 1 output(3.5 mm), single track |
| 28 | Communication Interface | 1 RJ45 10M/100M self-adaptive Ethernet port |
| 29 | Alarm | 1 input, 1 output |
| 30 | Video Output | 1Vp-p composite output (75 Ω /BNC) |
| 31 | On-board storage | Built-in Micro SD/SDHC/SDXC slot, up to 128 GB |
| 32 | SVC | H.264 encoding supports |
| General | | |
| 33 | IR Range | min30 mtr |
| 34 | Regulatory | UL, CE, FCC,BIS |
| 35 | Operating Conditions | Temperature: 0 °C to +60 °C (-22 °F to +140 °F) Humidity: 90% or less (non-condensing) |
| 36 | Power Supply | 12 VDC , PoE (802.3af) |
| 37 | Protection Level | IP66, IK10 |

1) **5 MP IR HD Dome Camera :-**

| S/N | Parameter | Specification |
|---------------------|-------------------------|--|
| Camera | | |
| 1 | Image Sensor | 1/2.8" Progressive Scan CMOS or better |
| 2 | Min. Illumination | Color: 0.04 Lux 0 Lux. with IR |
| 3 | Shutter Speed | 1/3 s to 1/15000 s, Supports Slow Shutter |
| 4 | Day & Night | IR Cut Filter |
| 5 | Digital Noise Reduction | 3D DNR |
| 6 | WDR | min 100dB |
| 7 | IR Range | Min 30 mtr |
| Image | | |
| 8 | Max. Resolution | 5 MP or better |
| 9 | Frame Rate | 25 fps (2592×1944, 2560 × 1440, 1920 × 1080, 1280 × 720) 60Hz: 20 fps (3840 × 2160), 30 fps (2944 × 1656, 2560 × 1440, 1920 × 1080, 1280 × 720) |
| 10 | Image Setting | Rotate Mode, Saturation, Brightness, Contrast, Sharpness adjustable by web Browser |
| 11 | Day & Night | Auto/Schedule/Triggered by Alarm In |
| 12 | AGC | Required |
| Intelligence | | |
| 13 | Behavior Analysis | Line crossing detection, intrusion detection, Face detection and capture |
| 14 | Region of Interest | Support 1 ROI per stream |

| Lens and Audio | | |
|----------------|-------------------|--|
| 15 | Focal length | 2.8 to 12 mm Motorized Zoom vari-focal Lens, or better |
| 16 | Aperture | F1.5 |
| 17 | Video Bit Rate | 256 Kbps to 10 Mbps |
| 18 | Audio Compression | G.711a, G.711u, AAC |
| 19 | Audio Bit Rate | 32 to 128kbps |
| | Interface | |

6. 2MP IR HD Bullet Camera :-

| S/N | Parameter | Specification |
|---------------------------|------------------------------------|---|
| Camera | | |
| 1 | Sensor | 1/2.8" progressive Scan CMOS or better |
| 2 | Min illumination | Color: 0.005 Lux , 0 Lux with IR |
| 3 | Shutter Speed | 1/30000s Slow Shutter Support |
| Lens | | |
| 4 | Lens | 2.8-12mm @ F1.4, angle of view : 90.1 31° , vari-focal Lens, or better |
| 5 | Lens Mount | AF – automatic focusing and motorized zoom lens |
| 6 | Auto iris | Required |
| 7 | Day & Night | IR Cut Filter |
| 8 | WDR | True WDR 90dB |
| Intelligence | | |
| 9 | Behavior Analysis | Line crossing detection, intrusion detection, Face detection and capture |
| Image | | |
| 10 | Video Compression | Main stream: H.265/H.264 |
| | | Sub stream: H.265/H.264/MJPEG |
| | | Third stream:H.265/H.264 |
| 11 | Max Resolution & Image enhancement | 1920 x 1080,3D DNR ,BLC |
| 12 | Frame Rate & Streams | 25fps (1920x1080, 1280x720),Triple stream supported |
| 13 | Alarm Trigger | Motion detection, video tampering, network disconnected, IP address conflict, illegal login, HDD full, HDD error, Alarm input, Alarm output |
| Network, Interface | | |
| 14 | Protocols | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, IPv6, |
| 15 | Standard | ONVIF |
| 16 | Audio | 1 input, 1 output |
| 17 | Communication Interface | 1 RJ45 10M/100M Ethernet Port |
| 18 | Alarm | 1 input, 1 output |
| 19 | Video Output (-S) | 1Vp-p composite output 7 Ω/BNC |

| | | |
|----------------|----------------------|---|
| 20 | On-board storage | Built-in Micro SD/SDHC/SDXC slot, upto 128 GB |
| Audio | | |
| 21 | Video Bit Rate | 256 Kbps to 6 Mbps |
| 22 | Audio Compression | G.711a, G.711u, AAC |
| General | | |
| 23 | Protection Level | IP 67,IK10 |
| 24 | Operating Conditions | Temperature: 0 °C to +60 °C (-22 °F to +140 °F) |
| | | Humidity: 90% (non-condensing) |
| 25 | Power Supply | 12 VDC \pm 25%, PoE (802.3at) |
| 26 | IR Distance | Minimum 30 Mtr |
| 27 | Regulatory | UL, CE, FCC,BIS |

1) 2MP IR HD BOX Camera :-

| S/N | Parameter | Specification |
|-----------------------------|-------------------------|--|
| Camera | | |
| 1 | Image Sensor | 1/2.8'' Progressive Scan CMOS or better |
| 2 | Min. Illumination | Color: 0.005 Lux B/W: 0.0005 Lux |
| 3 | Shutter Speed | 1s ~ 1/30000s |
| 4 | Slow Shutter | Support |
| 5 | Lens Mount | C/CS mount 9-40mm manual varifocal lens or better |
| 6 | Auto-iris | DC drive |
| 7 | IR Distance | Min 50 mtr internal/External compatible with camera. |
| 8 | Day & Night | IR cut filter with auto switch |
| 9 | WDR | 120dB True WDR |
| Image | | |
| 10 | Max. Resolution | 1920 x 1080 |
| 11 | Frame Rate | 50Hz: 25fps (1920 \times 1080)/(1280 \times 960)/(1280 \times 720) 60Hz: 30fps (1920 \times 1080)/(1280 \times 960)/(1280 \times 720) |
| 12 | Third Stream | Independent with Main Stream and Sub Stream, up to 50/60Hz: 20fps(1280 \times 720) |
| 13 | Image Enhancement | HLC/3D DNR/ROI/Defog |
| 14 | Back Light Compensation | Support |
| 15 | Image Setting | Rotate Mode, Saturation, Brightness, Contrast adjustable by client software or web browser |
| 16 | Regional Cropping | Support |
| 17 | Day/Night Switch | Auto/Schedule/ Alarm |
| Compression Standard | | |
| 18 | Video Compression | H.265/H.264/MJPEG |
| 19 | H.264 Type | Baseline Profile / Main Profile / High Profile |
| 20 | Video Bit Rate | Up to 6 Mbps |
| 21 | Audio Compression | G.711a/G.711u |
| 22 | Audio Bit Rate | 32-128Kbps |

| External Interface | | |
|----------------------|-------------------------|--|
| 23 | Audio | 1-ch audio in (Mic in/Line in)/out interface |
| 24 | Communication Interface | 1 RJ45 10M/100M/1000M Ethernet port 1 RS-485 interface |
| 25 | Alarm | 1 input, 1 output |
| 26 | Video Output | 1 Vp-p composite output (75 Ω/BNC) |
| 27 | On-board storage | Built-in Micro SD/SDHC/SDXC slot, supports up to 128 GB |
| Audio | | |
| 28 | Audio I/O | Support |
| 29 | Audio Sampling Rate | 16kHz / 32kHz / 44.1kHz / 48kHz |
| Intelligent Features | | |
| 30 | Behavior Analysis | Line crossing detection, Intrusion detection, |
| 31 | Exception Detections | Scene change detection, Defocus detection, Face detection and face capture |
| Network | | |
| 32 | Alarm Trigger | Motion detection, Tampering alarm, Network disconnect, IP address conflict |
| 33 | Protocols | TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, IPv6 |
| 34 | Security | User Authentication, IP address filtering, Anonymous access, Blacklist & whitelist, account security, telnet access control. |
| 35 | Standard | ONVIF Profile |
| General | | |
| 36 | Operating Temperature | 0°C – 60°C (-4 °F – 140 °F) |
| 37 | Humidity | 90% (non-condensing) |
| 38 | Power Supply | 24 V AC ± 10%, 12 V DC ± 10%, PoE (802.3af) |
| 39 | Power Consumption | Max. 9 W |
| 40 | Regulatory | UL, CE, FCC, BIS |

BOX Camera housing:-

| S.No | Parameter |
|------|-----------------------------------|
| 1 | Indoor/Outdoor Housing |
| 2 | Housing length accommodates |
| 3 | most cameras and zoom lenses |
| 4 | All Weather IK10+ IP66 Protection |
| 5 | Tough, high-impact Aluminum Alloy |
| 6 | Construction |
| 7 | Optional Heater and Blower |
| 8 | CE Certified. |
| 9 | Material Al-alloy |

2) Network Video Recorder -128 Channel: -

| SL.No | Parameters | Description |
|-------|------------|---|
| 1 | | 128 channel NVR with all required license. |
| 2 | Processor | Xeon E5 Series (Minimum), 2.40GHz or better |

| | | |
|----|----------------------------|---|
| 3 | Memory : | 16 GB DDR4 or better |
| 4 | OS Drive :- | 500GB and 15MB Cache or better |
| 5 | Network Interface | Minimum Two (2) 1GBE NICs or better |
| 6 | Video Storage | Support up to 120 TB |
| 7 | Video Recording throughput | 550 Mbps recording throughput to disc |
| 8 | Platform | Linux/Windows |
| 10 | Storage support | iSCSI support for external storage |
| 11 | Certification- | UL listed, (UL/IEC/EN60950-1),FCC part 15; ICES-003; EN55032; CISPR22, EN61000-3-2, 3-3) Security immunity (EN55024) Environmental: RoHS (EN50581), EU |
| 12 | Cyber security | UL-2900-2-3 and FISMA-ready software |
| 13 | RAID Support | RAID 5, RAID 1 Supported |
| 14 | Out put | VGA /HDMI/DVI |
| 15 | Power Supply | Redundant Power Supply Two hot-plug redundant high-efficient PSU |

3) Network Video Recorder -64 Channel: -

| SL. No | Parameters | Description |
|--------|----------------------------|---|
| 1 | | 64 Channel NVR with all required license. |
| 2 | Processor | Professional high performance multi-media network processor |
| 3 | Image Decoding Standard | H.265/H.264 |
| 4 | Network Interface | Minimum Two (2) 1GBE NICs or better |
| 5 | Video Storage | Support up to 64 TB |
| 6 | Video Recording throughput | Total 800 Mbps throughput |
| 7 | Platform | Linux/Windows |
| 8 | Failover feature | Supports N+1 system level protection and backup |
| 9 | Certification- | CE, FCC, UL, BIS |
| 10 | RAID Support | RAID 5, Supported |
| 11 | Out put | VGA, HDMI/DVI |
| 12 | Power Supply | 100 ~ 240 VAC,5A, Power Consumption <30W(without hard disk) |

4) **Video Management Software :-**

| Sr. No | REQUIRED PARAMETERS |
|--------|--|
| 1 | The VMS shall run on a Linux / Windows Platform to enable support a secure operating system, ability to run on a wide range of hardware platforms, and operate efficiently. |
| 2 | While operators are actively using the system and accessing the live and recorded video / audio, a single NVR shall support any combination of supported IP cameras or encoders that meet the following criteria: a) Maximum of 64 streams can be supported simultaneously on a single NVR. |
| 3 | The VMS shall support the completion of a motion search over recorded video of a scene containing an average level of motion throughout, regardless of codec or resolution of the recorded video, within 2 minutes. |
| 4 | The VMS shall natively support intelligent video analytics that can be enabled with the software license. The build in intelligent video analytics shall be easily switched between any of the video channels. |
| 5 | The VMS shall synchronize audio and video streams and maintain synchronization to within half- a-second. |
| 6 | The VMS software operates on a 64-bit Linux / Windows based OS. |
| 7 | The VMS shall be available as software only to be installed on any hardware that meets or exceeds the system requirements and is supported by the Enterprise Linux Operating System/ Windows. |
| 8 | Camera and VMS should be of same make so as provide seamless integration and also single point of contact for post-sales support |
| 9 | Shall provide ease of installation and a simple wizard mode of operation. |
| 10 | The VMS shall support the following video compression technologies as native operation: a) M-JPEG b) H.264 c) H.265 |
| 11 | The VMS shall support the following audio compression technology as native operation: a) G.711a/ G.711u/AAC b) G.726/MP2L2 |
| 12 | It should support multicasting |
| 13 | The VMS shall operate in client architecture as a network appliance and simultaneously supports live viewing, recording, and playback of video while managing all alarms, alerts, analytics generation and system management. |
| 14 | The VMS for NVR shall provide required functionality in the following areas: a) System Performance b) Initial Installation / Configuration wizard c) Video Recording, Live Viewing & Playback d) Audio Recording, Live & Playback e) Event or Alarm Generation / Management(Camera tamper detection; Intrusion detection; Line Crossing; Object left/removed; Loitering) f) External Storage g) Supported IP Cameras & Peripheral Devices h) Local Client on supported hardware systems |

| | |
|----|--|
| | <ul style="list-style-type: none"> i) Web Client / Application based Client j) Maintenance / Software Upgrades k) SDK for integrations with other systems |
| 15 | VMS shall support dynamic bandwidth management with no need to add additional hardware or software that provides video format (CODEC), a |
| 16 | VMS shall provide the ability to transcode high quality high frame rate h.264 video for the purpose of transmitting over narrow bandwidth communication channels and for the purpose of streaming to thick clients or smart phone apps. |
| 17 | VMS shall auto-detects whether a connected client is on a Local-Area or Wide Area Network and automatically, seamlessly switches streaming protocols |
| 18 | The VMS shall minimizes bandwidth and eliminates video interruptions due to network packet collisions by supporting multiple networks |
| 19 | The client network shall be used for outbound video transmission to client applications and two- way communication via the Web Client / Application based Client for administration and configuration |
| 20 | The camera network shall be used for transmission of video and events from supported IP cameras and encoders to the VMS client pc/work station and for communication of configuration and other settings from the VMS client pc/work station to each individual IP camera and encoder |
| 21 | The storage network shall be used for communication between the NVR VMS and supported external iSCSI /SAS RAID storage |
| 22 | VMS shall support network time protocol (NTP) for date and time synchronization. |
| 23 | It should support dewarping feature for 360 deg cameras |
| | <u>Redundancy and Failover</u> |
| 1 | <p>The VMS shall support the following redundancy and failover functions:</p> <ul style="list-style-type: none"> a) The VMS shall be designed to provide both redundancy and high availability as standard built-in features b) The VMS shall include NVR fail-over so when an VMS is setup to be a redundant standby fail-over NVR, it is setup to monitor one or more active NVR (N+1 configurations) c) When a failure is detected, the standby fail-over NVR automatically takes control over all cameras for access and recording d) The standby fail-over NVR shall have its own storage resources, on the same network segments, and licensed to support the Network Video Recorder with the largest number of camera slots |
| | <u>Video Management System</u> |
| 1 | VMS client shall only be restricted to local computer access when using Express, the single computer version of the VMS solution, or multi-computer access when using Professional site manager. |
| 2 | VMS client installed on a hardware platform meeting the recommended specification shall support the simultaneous display of up to 64 video streams across all connected monitors. |
| 3 | VMS client shall provide the ability to view live and recorded video on the same camera within a single application layout. |
| 4 | VMS client shall provide a completely user-customizable 'Site View': enabling the organization of cameras, recorders, tours, salvos into user-defined, multi-level folders, similar to Windows Explorer-style file organization. |

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| 5 | VMS client shall support the ability to have an Event Priority Window to display Camera Call-Up Actions associated with events in prioritization sequence based on license settings. |
| 6 | VMS client shall support a Bi-Directional interface to enable ability to easily integrate with other 3rd party systems over a serial or TCP/IP connection. |
| 7 | VMS Client shall support customized On-Screen Display text within the video panes in the Surveillance windows. |
| 8 | VMS Client shall support time line filters and a jump to next button for quicker searchers over longer periods of recorded video. |
| 9 | VMS Client shall support advanced integrated mapping BMP / JPEG files. It shall allow creation of one or more layers to organize the objects, video pop-up when hovering over a camera icon or during an event, nest maps, and dynamically show animated state changes of any object. |
| 10 | VMS Client shall support ability to execute video intelligence analytic searches on NVR. The analytic search types can be conducted on cameras that had analytic search feature enabled |
| 11 | VMS Client shall support searching on alarm rules that were defined on NVR VMS |
| 12 | VMS Client shall support dynamic bandwidth management with NVR by selecting the current bandwidth connection speed to help optimize the viewing experience over a WAN environment. For policy management, it shall also support enforcing the maximum bandwidth allowed based on the Role or Operator. |
| 13 | <p>VMS client shall have the ability to choose either Windows Authentication for Domain/Site Manager or Basic Authentication to log into. VMS client shall provide end users and administrators with functionality in the following areas:</p> <ul style="list-style-type: none"> a) Camera Management / Organization b) Video Live Viewing & Playback c) Audio Live & Playback d) Video Overlay of On-Screen Display e) Video / Analytic / Alarm Rule Search & Export f) Still Image Capture g) Event / Alarm Management h) Advanced Integrated Mapping i) Virtual Matrix j) CCTV Keyboard Support k) Reporting: Reporting with printout of event generation l) User Management / Permission Controls m) Recorder Management n) Integrated Web Browser o) Maintenance / Software /License Upgrades p) SDK |
| 14 | VMS client interface shall be user-customizable. |
| 15 | VMS client shall support the ability of the end user to create a customized application layout for the client software. The client application shall support multiple application layouts that can be assigned to each role. |
| | Advanced Integrated Mapping |
| 1 | The VMS shall support the following advanced integrated mapping functions: |

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| 2 | VMS client shall support maps to allow visual management of a unified security system. The maps shall be created by importing standard raster image files (e.g. JPG, PNG). |
| 3 | VMS client shall be able to create single layer, multi-layer, and nested maps with the ability to turn on/off layers to show/hide the associated icons. Maps images shall support ability to pan and zoom. |
| 4 | VMS client shall be able to enable hover over a map icon and have the associated camera(s) pop- up a live video window. |
| <u>Video Live Viewing and Playback</u> | |
| 1 | The VMS shall support the following live video viewing and video playback functions: |
| 2 | VMS client shall support the simultaneous display of MJPEG, MPEG-4 and H.264 video streams within a single video view. |
| 3 | VMS client shall provide a common user interface and functionality associated with every camera in the system, regardless of the recorder it is connected to or the video codec used. |
| 4 | VMS client shall group the available layouts into three types and each one can be available by setting the preferences via System Values: <ul style="list-style-type: none"> a) Standard b) Wide Screen c) Portrait |
| 5 | VMS client shall allow video streams to be displayed in any of the following views and support three most recent selections: <ul style="list-style-type: none"> a) 1x1, 2x2, 3x3, 4x4, 6x6, 8x8 |
| 6 | VMS client shall be able to name and save different camera window displays as salvos or fixed views. |
| 7 | VMS client shall provide for each live window pane a popup menu, available via right mouse click, to access the settings for the pane. |
| 8 | VMS shall support Instant View to be displayed side-by-side or to send it to another display monitor. |
| 9 | VMS shall provide the ability to play, fast forward, rewind directly from video recorded into the NVR database as well as jump to any point in time where the feature is supported by the recorder. |
| 10 | VMS client shall provide the ability to quickly jump back to any user-specified date / time on all visible cameras without interrupting or obscuring video viewing. |
| 11 | VMS client shall provide the user the ability to select some or all of the video panes in a Saved View and view recorded video on those panes, while simultaneously displaying Live video on other panes within the same view. |
| 12 | VMS client shall provide the ability to view live and recorded video on the same camera within a single application layout. |
| 13 | VMS client shall provide Digital PTZ capability on all connected IP fixed cameras (Mega-Pixel and standard resolution). Digital PTZ capability shall include Picture-in-Picture display. |
| 14 | VMS client shall provide virtual PTZ controls that support ability to create, mouse wheel zoom, and Picture-in-Picture display. PTZ shall be utilized on clip streams to enable cropping and magnifying the video pane during normal surveillance. |
| 15 | VMS client shall provide an interface for operators to define video tours of related cameras. |
| 16 | VMS client shall support playing live and recorded audio streams. |

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| 17 | VMS shall support unlimited operator configurable events, including the action-based trigger of events. |
| 18 | VMS client shall allow the user to configure the system as a Virtual Matrix – controlling which cameras, tours or salvos are displayed in each pane of each monitor connected to the Client. |
| 19 | The virtual matrix shall consist of a combination of operator client workstations. |
| 20 | The virtual matrix shall support up to ten client connections or sessions. |
| 21 | Each video wall agent shall support up to four monitors natively. |
| 22 | Left blank |
| 23 | Virtual Matrix control shall be via CCTV keyboard or PC keyboard and mouse. |
| 24 | VMS client shall allow for the creation of an unlimited number of Virtual Matrix profiles. Each Profile shall have its own unique name, camera pseudo-numbering, salvo pseudo-numbering and monitor pseudo-numbering scheme for maximum flexibility of system configuration. |
| 25 | The Virtual Matrix Editor shall auto-assign camera pseudo-numbers and gives the user the ability to manually edit these auto-assigned values. |
| 26 | VMS shall be capable of displaying a log of all activity that occurs in the system, from object state changes and operator logon/logoff to video alert information. |
| <u>Storage Video Vault</u> | |
| 1 | VMS shall protect access to objects via role based security permissions. |
| 2 | VMS shall provide an interface to allow the user to add, edit or delete recorders to / from the system. |
| 3 | VMS client shall include an integrated Web Browser tab / Application based Client that can be combined with other user interface components (Video Views, Site View, Event Viewer, etc) into an Application Layout. The Web Browser tab shall allow operators to continue monitoring their security system while also receiving weather or news updates from web-based information sources. |
| 4 | Access to the Web Browser tab / Application based Client can be restricted via roles and permissions. |
| 5 | VMS shall support AES 256-bit encrypted communications between NVR and VMS client. |
| 6 | The VMS shall support the following dynamic bandwidth management functions: |
| 7 | VMS client shall receive native video stream that may be in an attempt to provide it at a lower data rate that can be consumed within the constraints of the surveillance pane's dimension and connection capability. |

5) Video Analytics software & Hardware:

| Video Analytics | |
|-----------------|--|
| Sl.No. | REQUIRED PARAMETERS |
| A | VMS & Video Analytics software must be integrated so as to provide seamless functionality throughout the network |
| B | <u>Video Analytics</u> |
| 1 | The VMS shall support motion detection with up to a maximum of 10 configurable motion alarm rules. Up to a maximum of 64 simultaneous channels set to low sensitivity is supported to generate the motion detection meta-data. |
| 2 | The Video Analytics software shall be licensed to the Analytics Hardware and can be used by any camera on the NVR with no need to update, change or download a new license. |

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| 3 | Video Analytics software shall support at a minimum the following types of configurable alarm rules: a) Object Detection b) Object Abandoned/ Removed c) Direction d) Linger e) Enter & Exit an area/Line crossing f) Queue Length Monitoring g) Crowd Formation/Loitering h) Perimeter Protection i) Queue Length Monitoring j) Dwell |
| 4 | Video Analytics software can be moved between cameras on the Analytics Hardware up to the maximum number of cameras |
| 5 | The software shall require, at minimum an MJPEG stream set in 4 fps and CIF resolution to analyze the video stream |
| 6 | The software shall support video compression options such as MPEG4 with at least 4 fps and CIF resolution to analyze the video stream |
| 7 | The system shall allow a selectable percentage to ensure that the appropriate minimum values can be utilized based on the required field-of-view to trigger the desired video analytics results |
| 8 | In case an event is detected in Video Analytics software, it should be able to detect 3 types of alarms: a. Alarm through Siren/Hooter b. Alarm through alert on Display c. Alarm through email |
| C | Face Recognition Software (FRS) [Software should capable of detecting people's faces in live video streams or video footage and store anonymous information for each appearance of person in front of camera. Software should be able to analyze both recorded video(offline) and live cameras(Online) feeds at the same time in the same view; synchronization of multiple databases; should support encryption of passwords for security enhancements; web based UI for alarm monitoring, addition and modification of subject record; system should be ready for 4K resolution; Should be capable of viewing the logs of a previous days in excel/ Pdf format] |
| 1 | Quick recognition of known faces including VIPs and unwanted persons |
| 2 | Reduces investigation time with lightning fast forensic face searching |
| 3 | Alerts operators to take immediate action when a face is detected |
| 4 | Automatic facial matching across locations from a single workstation |
| 5 | Reduced investigation time with forensic facial searching of images within the database |
| 6 | Instantly alert operators to take immediate action when a known face is detected |
| 7 | Detected faces that enter the camera's field of view. |
| 8 | Unrecognized faces that enter the camera's field of view. |
| D | Automatic Number Plate Recognition (ANPR)[Features to be present: Details of all vehicle number plates should be available in.pdf or excel format and video should also be there, and alarm to be generated for any blacklisted]. |
| 1 | Fuzzy Match allows for enhanced detection of commonly confused characters: 0, D, O, Q, 1, 7, I, 2, Z, etc |
| 2 | Utilize asterisk (*) and question marks (?) with Smart Search for plates when characters are missing |
| 3 | Real-time alarms for blacklisted license plates alert operators when a restricted vehicle has entered the area |
| 4 | White list vehicles that arrive daily, such as employees, to avoid unnecessary matches |
| 5 | Stop & Go and low speed monitoring for varying traffic conditions |
| 6 | Global support for vehicle plate identification improves match quality |
| 7 | Integrate with other 3rd party cameras that meet technical specifications |
| E | Video Analytics Hardware Specification |
| 1 | Processor :-Xeon E5 Series(Minimum), 2.40GHz or better |

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| 2 | Memory :- 32 GB DDR4 or better |
| 3 | OS Drive :- 500GB and 15MB Cache or better |
| 4 | Network Interface : - Minimum 2 x 10 GigE NiCs; 2 x 1 GigE NiCs or better |
| 5 | Video Storage :- Support up to 140 TB |
| 6 | Video Recording (write to disc) : -Min 550 Mbps recording throughput to disc |
| 7 | OS : Linux/Windows |
| 8 | Minimum 2 x 10 GigE NiCs; 2 x 1 GigE NiCs |
| 9 | iSCSI support for external storage |
| 10 | Certification- UL listed, (UL/IEC/EN60950-1),FCC part 15; ICES-003; EN55032; CISPR22, EN61000-3-2, 3-3) Security immunity (EN55024) Environmental: RoHS (EN50581), EU |
| 11 | UL's CybersecurityUL-2900-2-3 and FISMA-ready software. |
| 12 | RAID 5, RAID 1 Supported |
| 13 | Redundant Power Supply Two hot-plug redundant high-efficient PSU |

6) IP IR HD Fix Dome Camera :-

| S/N | Parameter | Specification |
|-----|-------------------------|---|
| 1 | Image Sensor | 1/2.8" Progressive Scan CMOS or better |
| 2 | Min. Illumination | 0.02 Lux @(F1.2,AGC ON), 0 Lux with IR 0.05 Lux @ (F2.0, AGC ON) ,0 Lux with IR |
| 3 | Shutter Speed | 1/5 s to 1/100,000s |
| 4 | Lens | 2.8mm(Fix Lens) @ F2.0, Angle of view:100° |
| 5 | Angle Adjustment | Pan: 0°- 350°, Tilt: 0° - 75°, Rotation: 0-350° |
| 6 | Day & Night | IR cut filter with auto switch |
| 7 | Digital Noise Reduction | 3D DNR |
| 8 | WDR | Digital WDR |
| 9 | IR Range | 20 Mtrs |
| 10 | Min. Resolution | 2 MP or better |
| 11 | Frame Rate | 50Hz: 25fps(1920 × 1080),25fps(1280×960), 25fps(1280×720) 60Hz: 30fps(1920×1080),30fps(1280×960), 30fps (1280×720) |
| 12 | Image Setting | Rotate mode, Saturation, Brightness, Contrast adjustable |
| 13 | Backlight compensation | Supported |
| 14 | ROI Supported | ROI Supported |
| 15 | Video Compression | H.264/MJPEG |
| 16 | Video Bit Rate | 32 Kbps – 8 Mbps |
| 17 | Dual Stream | Supported |
| 18 | Network Storage | Local storage: Built-in Micro SD/SDHC/SDXC card slot, min 128 GB |
| 19 | Alarm Trigger | Motion detection, Tampering alarm, Network disconnect, IP address conflict, Storage full, Storage error. |
| 20 | Protocols | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, |
| 21 | Security | User Authentication, Watermark |

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| 22 | ONVIF | Supported |
| 23 | Communication Interface | 1 RJ45 10M/100M Ethernet interface |
| 24 | Operating Temperature | 0 °C to +60 °C |
| 25 | Humidity | 95% or less (non-condensing) |
| 26 | Power Consumption | Max. 5W |
| 27 | Power Supply | 12 VDC \pm 10% PoE (802.3af) |
| 28 | Protection Level and Regulatory | UL,CE,FCC,IP66, IK10 |

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Annexure-III

SPECIFICATION OF IP BASED SURVEILLANCE SYSTEM - NIFT SHILLONG

| SPECIFICATION OF IP BASED SURVEILLANCE SYSTEM - NIFT SHILLONG | | | | |
|---|--|---|------|------|
| Sl. No. | Description | Revised Description | Qty. | UoM |
| 1 | IP IR Bullet Camera (Indoor & Outdoor) | <p>Supply, Installation, Testing & Commissioning of IP IR Bullet Camera (Indoor & Outdoor) Full HD (1080p) camera with motorized varifocal and SD Card having 1/2.8" CMOS, 2 MP @25fps or better, Quad stream with each stream support H.265 compression simultaneously, Min. Illumination required 0.01 lux @ F1.6 (color), 120dB True WDR with Scene Adaptive Control, Min. Pixels 1920 × 1080, Shutter Speed 1/5 - 1,00,000;</p> <p>Advance Video Compression technology such as H.265,H.264, MJPEG or better , Quad streams @25/30 fps; 2.8–12 mm motorized focus & zoom lens; BLC, HLC,WDR, Slow Shutter, ROI, 3DNR;; Minimum Edge Intelligence Video Analytics : Motion Detection, Video Tampering, Face Detection, Intrusion; Line Crossing, perimeter intrusion detection , cross counting, Audio Detection, Object Abandoned, Object Missing, video tampering, Alarm I/O -1/1; Audio I/O - 1/1; BNC Output; Privacy Mask, IR</p> <p>with up to 50m IR distance, Watermarking; HTTPS & IEEE 802.1x compliant; SSL/TLS; IP address filtering; Dual channel Audio G.711a/ G.711Mu/ AAC/G.726, 128GB SD card support; In-built Transient Voltage Suppressors of 2000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP 67, IK 10 vandal proof, Having Operating temp range: -10°C to 60° C. Certifications: ONVIF Profile S, G and T, UL, CE, FCC. (UL must be listed as per quoted Model/Part No/Part Code/Part Reference-wise).</p> | 65 | Nos. |

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| 2 | IP IR Dome Camera (Indoor) | Supply, Installation, Testing & Commissioning of IP based fixed dome indoor Full HD (1080P) camera without motorized varifocal and SD slot having 1/2.8" CMOS, 2 MP @25fps or better, triple stream, Min. Illumination required 0.01 lux @ F1.6 (color), 120dB True WDR with Scene Adaptive Control, Min. Pixels 1920 × 1080, Shutter Speed 1/5 - 1,00,000; Advance Video Compression technology such as H.265,H.264, MJPEG or better , quad stream with each stream should support H.265 compression simultaneously@25/30 fps; 2.8–12 mm lens; BLC, HLC,WDR, Slow Shutter, ROI, 3DNR;; Minimum Edge Intelligence Video Analytics : Motion Detection, Video Tampering, Face Detection Intrusion; Line Crossing, cross counting , Audio Detection, Object Abandoned, Object Missing, video tampering, network disconnected, IP address conflict, illegal login; Alarm I/O -1/1; Audio I/O - 1/1; BNC Output; Privacy Mask, IR with up to 40 mtr IR distance, Watermarking; HTTPS & IEEE 802.1x compliant; SSL/TLS; IP address filtering; Dual channel Audio G.711a/ G.711Mu/ AAC/G.726, 128GB SD card support; In-built Transient Voltage Suppressors of 2000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP67, IK 10 vandal proof, Having Operating temp range : –10°C to 60° C. Certifications: ONVIF Profile S ,G and T, UL, CE, FCC. (UL must be listed as per quoted Model/Part No/Part Code/Part Reference-wise). | 132 | Nos. |
| 3 | ANPR Camera | Supply, Installation, Testing & Commissioning of FIXED BOX ANPR Camera with IP67; IK-10 rated Housing with 50 Mtr IR, 1/2.8" CMOX 1944 MP or better @ 25fps, quad stream with each stream should support H.265 compression simultaneously @25 fps; Min. Illumination required 0.01 lux; 120dB True WDR; Quad stream, 5-50mm Or better, C-CS Mount Lens DC Iris; Internal / External Illumination range minimum 50 Mtr IR distance, 128GB SD card support, Alarm: 1 In/ 1 out, - Security; User ID; Passwords, HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; IP 67, IK 10 rated, –10°C to 60° C.; 90% RHNC; Certifications: ONVIF Profile S ,G and T, UL, CE, FCC. The unit must be supplied with all the necessary power supplies; wall mounts/pole mounts as per site requirements to complete the site installation & | 2 | Nos. |

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| | | commissioning required. | | |
| 4 | DRIVER IMAGE & CO - PASSENGER CAMERA | Supply, Installation, Testing & Commissioning of DRIVER IMAGE & CO-PASSENGER CAMERA of 2MP IP Network TDN Low-Light IR Rugged Fixed Camera/ Bullet Camera, 1/2.8" CMOS, 2 MP @25fps or better, Quad stream with each stream should support H.265 compression simultaneously , Min. Illumination 0.01 lux , 120dB True WDR; Shutter Speed 1/5 - 1,00,000; H.265,H.264, MJPEG or better compression , Quad stream @25/30 fps; 2.8–12 mm MFZ; Minimum Edge Intelligence Video Analytics : Motion Detection, Video Tampering, Face Detection, Intrusion; Line Crossing, cross counting, Audio Detection, Object Abandoned, Object Missing; Alarm I/O -1/1; Audio I/O - 1/1; BNC Output; IR with upto40 mtr IR distance, Watermarking; HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; Minimum 128GB SD card support; In-built minimum 2000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP 67, IK 10 rated, –10°C to 60° C.; 90% RHNC; Certifications: ONVIF Profile S & G, UL, CE, FCC. | 2 | Nos. |
| 5 | IP IR PTZ Camera | Supply, Installation, Testing & Commissioning of IP Network TDN Low-Light PTZ Camera with auto tracking, 1/2.8" CMOS, 3MP @50fps, Quad stream s @H.265,H.264, MJPEG respective video compression @25 fps; Min. Illumination required 0.05 lux color @ F1.6 , 0 lux with IR (B/W) or better, 120dB True WDR or better, Min. Pixels 2048 X 1536 , Quad stream , 6mm –180 mm or 4.8 mm to 144 mm or 4.5 to 135mm or 4.3mm to 129mm 30x motorized focus & zoom lens; Illumination range minimum 200 Mtr IR distance, 256 Presets; 128GB SD card support, Alarm: 2 In/ 1 out, 24 VAC / Hi-PoE; On-board Video Analytics - Auto Tracking, Intrusion Detection, Line Crossing Detection, ROI Entrance Detection, Object Removal Detection, Unattended Baggage Detection, Motion Detection, Alarm Input, Alarm Output, Video Tampering Detection, Wrong direction detection , loitering detection; Security - Security Authentication of MACID; User ID; Passwords, HTTPS & IEEE 802.1x compliant; SSL/TLS; IP address filtering; In-built Transient Voltage Suppressors of 4000V Lightning Protection, Surge | 3 | Nos. |

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| | | Protection and Voltage Transient Protection; IP 66, IK 10 vandal proof, Having Operating temp range : -10°C to 50°C. Certifications: ONVIF Profile S G & T , UL, CE, FCC. (UL must be listed as per quoted Model/Part No/Part Code/Part Reference-wise). The unit must be supplied with all the necessary power supplies; wall mounts/pole mounts as per site requirements to complete the site installation & commissioning required. | | |
| 6 | IP PTZ Key Board | Supply, Installation, Testing & Commissioning of 3 axis joystick X/Y/Z for positioning control, The full-size, soft-coated hand rest positions the hand comfortably, and 15 large, soft-touch, function keys allow quick access to frequently used commands. | 1 | Nos. |
| 7 | Server for VMS and Video analytics - Support up to 250 Camera | Supply, Installation, Testing & Commissioning of the Server Hardware for 100 Camera supported Server With Failover (N+1) for VMS and Recording application must have minimum Intel Xeon ten Core Processors; 128 GB RAM; 240 GB SSD (No SATA) ; OS - Licensed Windows ; Licensed Database; 8/4 - I/O, 1200 Mbps through-put; 1 each of DVI-D, HDMI & VGA video output interfaces ; 6 nos of USB; DVD Drive; Key-board & Mouse; Quad NICs of 2X 1000Base-T & 2X 10G SFP Server Network Adapters or Interface Cards; Dual Hot Swappable Power Supplies; 1GB USB NIC; 1 no of read/write hard-wired DVD & 1 no of USB DVD; 1 RS-485 & 1 relay output; CE; FCC; UL; Operating Temperature: -30 Deg C ~+35 Deg C; RH: 10% to 80%. The System must have the capability to support internal storage of minimum 240TB on RAID5/6. | 1 | Lot |

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| 8 | Video Management Software with Camera License | Supply, Installation , Testing and Commissioning of VIDEO MANAGEMENT & RECORDING APPLICATION SYSTEM Suit with all necessary licenses comprising Open SDK/APIs ; compliance to cyber security The software should comply that all client to server and server to server communications are compressed and encrypted and connection specific key should be 256 bit AES and data encryption should be 256 bit AES. VMS software should have the Encryption algorithm of 4096 bit RSA and hashing of SHA -512 for tamper proof data. The exported video should be saved in SEF (Secure Export Format) for secure non tamper file system with Password key which can be set to 24 Characters. The Client application should support dual password mode for each user required to complete the system as per below - The proposed system must come with Video Management System comprising Video Management Software Licenses for minimum 204 IP cameras in (N+1) redundancy; capability also to support in 1+1 & N+N mode of redundancy. The VMS Software must have the capability to support 10000 cameras' per VMS database. The VMS shall support iSCSI extended storage whereby a remote storage unit can appear as a local drive. The VMS must support iSCSI to expand storage with additional NAS' for local & remote as per requirements. The VMS System must come in-built with a minimum 25 user Concurrent Thick Clients & 25 Thin clients - Web/Mobile; mobile microphone support for Mobile Clients. The system must be capable for minimum 12 Monitors support per VMS Client compatible with OS- Windows or Linux or Mac OSX; customizable GUI with option to edit XML and multiple themes & switches among the GUI themes. In-built modules for Video Wall Integrations; Two-way audio communication over IP through SIP Server/EPBAX integration & across the Servers & Clients; in-built multi-level/multi-layer Hierarchical Map Support;; Active Directory and LDAP for single sign-on (SSO) Authentication; RTSP; Encrypted HTTPS communication from Camera to NVR; 3rd Party Camera ONVIF SDK/API; integrated encrypted HTTPS configuration with Web Services; date and time stamping. The System must come with licensed latest Database version of 2016 or better - PostgreSQL/ MYSQL / SQL/ Oracle /Sybase. Licensed OS - Windows/Linux; Macintosh of version 2016. | 1 | Nos. |
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| | | <p>The VMS OS must be installed in SSD drive (No SATA Drive shall be allowed) for superior performance and zero data loss, no other option shall be allowed. The system must have the minimum features of e-mail notification through only SMTPS server for enabled password authentication & SSL ; AD/LDAP integration through only LDAPS server for enabled password authentication for binding, as well as SSL for secured communication; . The VMS shall support 3D calibrated inbuilt Video analytics which runs as a single package as windows service. The VMS and VA software OEM shall be certified partner of OS provider like Microsoft for last 3 consecutive years before the date of release of tender. The Software OEM should be Onvif Profile S or Profile G complied and should be either contributor level member or full member of ONVIF forum – Certificate for the same should be shared. The GUI software should be able to configure Video analytics as well as pre and post alerts from 10 sec to 30 minutes. The Software should have inbuilt “help” tab in the GUI along with “alarm snoozing” feature from 5 minutes to 24 hours. The software should have 2 factor authentications - When user in the group tries to log in for the first time, the user is requested to use or install the 2-factor authentication client (e.g. Authy, Google authenticator, MS Authenticator) on user's mobile device. The VMS and the authentication client will then synchronize the software with VMS. This will happen by transferring the "secret key" generated by the VMS to the authentication software via QR code first time. Thereafter the authentication client generates automatically new one-time passwords. The passwords should change periodically for 30 seconds and should kept in sync as the clocks of the VMS and the authentication app have same time. The software should support unicast, multicast and thrucast technology.</p> | | |
| 9 | Server with Storage for ANPR | Supply, Installation , Testing and Commissioning of System Server for Video Analytics must be with Dual CPU,4 core processors; 8GB RAM; 240GB SSD; 512GB HDD for 30 days' metadata; alerts & events storage of ANPR System | 1 | Nos. |
| 10 | ANPR LICENSE | Supply, Installation, Testing & Commissioning of AI based Automated Number Plate Recognition (ANPR) System & Vehicle of Interest Search & Identification along with | 2 | Each |

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| | | required server hardware as recommended by OEM | | |
| 11 | Storage for Recording for Min. 30 Days | Supply, Installation, Testing & Commissioning of the Surveillance HDDs of 20 nos of 12TBs to cater the need of video recording storage for 30 days on 720P@25/30 fps | 1 | Lot |
| 12 | Server Based Video Analytics System | The proposed System must be provided with minimum Server based Video Analytics Application for 100 IP Cameras which will run in the same server as Video management software comprising the perpetual Server Video Analytics licenses of Intrusion detection; Wrong direction movement detection; Tripwire; Faceblurr; Crowd detection; Fire Detection; People& Object Counting; Camera Tampering ;Loitering; Unattended Object detection; Object Removal detection having alarm manager; health monitoring system & an interface of alarms to control center& customised SOP as required. The proposed system & licenses are required to be used real time all across in any set-up for real-time surveillance each having 2 usecases on an average. The Software should be ISO 9001, 14401 and 27001 and shall be certified partner of OS Provider for last 3 years. | 1 | Lot |
| 13 | Server Hardware for AI based Video Analytics System | Supply, Installation , Testing and Commissioning of System Server for Video Analytics must be with Dual CPU, each of 2.1 - 2.7 Ghz , 12 Core each , RAM - 64 GB DDR RAM , Hard Disk for OS - 1 TB SSD , Storage - 2 TB HDD; 1 TESLA GPU. | 2 | Nos. |
| 14 | Workstation for Live View | Supply, Installation , Testing and Commissioning of Intel Xeon E-2124, 4 Core, 8MB Cache, 3.3GHz, 4.3GHz Turbo, 64 GB 2666MHz DDR4 UDIMM Non-ECC 3.5" 2TB 7200rpm SATA Hard Disk Drive NVIDIA Quadro P400, 2GB, 3 mDP to DP adapter Intel I210 1Gb Ethernet Adapter (1X1GbE) Dell Optical Mouse - MS116 - Black Dell Wired Keyboard KB216 Black Windows 10 Pro for Workstations (up to 4 Cores) | 3 | Nos. |
| 15 | 24 Port PoE Managed Switch | Supply, Installation, Testing and Commissioning of Managed Network Switch 24 ports , 10/100/1000T PoE and 4 1G/10G SFP + ports. Minimum PoE power budget 185 Watt or better, min 128 Gbps or higher Switching capacity, Port Mirroring, IEEE802.1d Spanning Tree , IEEE802.1w Rapid Spanning-Tree, IEEE802.1s Multiple Spanning-Tree, Broadcast Storm Protection, Port Based VLAN, Support SNMPv1/v2c/v3, Web-based configuration, | 14 | Nos. |

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| | | | | |
|----|--|--|------|------|
| | | 4K VLAN entries , MAC based VLAN , IP subnet based VLAN. Support IEEE 802.3ad LACP. L3 features - static routing , DHCP server, Device Management system - topology view, floor view, map view, dashboard, traffic monitoring, cable diagnostics. CE,FCC certified | | |
| 16 | 8 Port Managed Switch | Supply, Installation , Testing and Commissioning of Managed Network Switch with 8 Ports 10/100/1000T PoE, 2 X 1G SFP ports, minimum 75watt PoE or better, min 20 Gbps or higher Switching capacity, min 14Mpps or higher forwarding rate, Port Based VLAN, support Broadcast Storm Protection, Port Mirroring, IEEE802.1d Spanning-Tree, IEEE802.1w Rapid Spanning-Tree, IEEE802.1s Multiple Spanning-Tree, Web-based configuration, 8K MAC address support , Support L2 feature STP, RSTP ,MSTP . Support 802.1Q VLAN, port based VLAN , 4K VLAN entries , MAC based VLAN , IP subnet based VLAN . Support IEEE 802.3ad LACP. L3 features - static routing, DHCP server, Device Management system - topology view, floor view, map view , dashboard , traffic monitoring , cable diagnostics. CE, FCC certified. | 13 | Nos. |
| 17 | 4 Port PoE Industrial Grade Switch - Allied Telesis: AT-IE200-6FP-80 | Supply, Installation , Testing and Commissioning of Industrial Grade Managed Switch with minimum 4x10/100 BaseT PoE+ ports and 2x100/1000 X SFP ports. Minimum PoE budget should be 120 Watt, min.4.8Gbps, Console port : RJ45 x 1 or Equivalent. Min 8K MAC address table and support 4K VLAN simultaneously, 48VDC Redundant power inputs. Min. IP30/31 Metal Case, Switch enclosure should be with Aluminium Shell, DIN Rail/Wallmount support, Operating Temperature :- 10-75°C, Storage Temperature :- 40-85°C, Switch Should be UL, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN60068-2-27, EN60068-2-6, , Rapid Ring Protection / resiliency technology as per the IEEE802.17 / RPR / ERP So equivalent technology providing the convergence time as per the standards specified above for less than / sub 20milli second convergence. VLAN IEEE802.1Q, GVRP, double tagging (Q-in-Q), Port Based VLAN, LACP, RSTP, MSTP, loaded with 2Nos of SM 1G SFP Transceivers. | 4 | Nos. |
| 18 | 6 Core Armoured Single Mode | Supply & Laying of 6 fiber Single Mode, Armoured, Loose-tube, | 4650 | Mtr. |

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| | | | | |
|----|--------------------------------|---|------|------|
| | Fiber Optic Cable | Gel filled cable complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3; suitable for use in direct burial, outdoor ducts and backbone cabling, Single Mode, 9/125 micron primary coated buffers, OS2 (IEC 60793-2-50, B1.3 and ITU T G652.d), Telcordia GR 20 / IEC 794-1, Single PBTP Loose tube filled with water blocking Thixotropic gel, HDPE outer jacket, 2 mm thickness, OEM factory test reports must be provided against each drum / roll of fiber cable. | | |
| 19 | UTP Cable | Supply & Laying of CAT6, 4 pairs, Unshielded Twisted Pair, TIA/EIA 568-C.2, 23 AWG solid bare copper or better, Polyethylene, Sheath Fire retardant PVC Compound (FRPVC) Flame Rating : 60 deg.C As per UL 1685 CM / CMR, Minimum 250 Mhz (certified) support upto 600 MHz, UL Verified, ISO 9001 and 14001 certified | 7015 | Mtr. |
| 20 | STP Cable | Supply & Laying of CAT6, 4-Pair of Solid Insulated Copper 23 AWG, ANSI/TIA/EIA-568 and ISO/IEC11801, Flammability Test: CM, Conductor Dia. Nom.(mm):0.565, Polyester Binder, Outer Diameter:7.30mm+0.2, Tensile Strength (Mpa):≥13.8, Frequency / Attenuation / NEXT / PSNEXT / ACRF / PSACRF / RL / DELAY Tested upto 250 Mhz, ISO 9001:2008, ISO 9001:14001, ISO 50001 certified manufacturing unit | 1525 | Mtr. |
| 21 | Fully loaded 24 Port Mount LIU | Supply, Mounting/Fixing, Splicing & Dressing of 24 port fiber management shelf shall have compact design and be ideal for high density front patching applications, fully loaded and factory fitted assembly, High Density: 1U: 24 Fiber terminations, loaded with SC adapters, splice trays, and fiber management rings, Sealed cable inlets for dust and rodent protection, Pigtailed loaded in Shelf-SC Type, SM 1.5 Mtr., LSZH. | 1 | Nos. |
| 22 | Fully loaded Rack Mount LIU | Supply, Mounting/Fixing, Splicing & Dressing of 12 port fiber management shelf shall have compact design and be ideal for high density front patching applications, fully loaded and factory fitted assembly, High Density: 1U: 12 Fiber terminations, loaded with SC adapters, splice trays, and fiber management rings, Sealed cable inlets for dust and rodent protection, Pigtailed loaded in Shelf-SC Type, SM 1.5 Mtr., LSZH. | 27 | Nos. |
| 23 | Optic Patch cord | Supply & Installation of SC/UPC to SC/UPC Duplex tuned Fiber Optic Patch Cord 3 Mtr, 9/125 Micron, LSZH, 3.6 mm | 60 | Nos. |

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| | | | | |
|----|---------------------|--|----|------|
| | | twin zip, ROHS/ELV Compliant. | | |
| 24 | RJ45 Connector | Supply, Termination & Dressing of RJ45 UTP Connector at CAT6 UTP Cable | 4 | Box. |
| 25 | STP Connector | Supply, Termination & Dressing of RJ45 STP Connector at CAT6 STP Cable | 1 | Box. |
| 26 | Floor Standing Rack | Supply, Mounting/Fixing & Dressing of 42U Rack manufactured out of steel sheet punched, formed and Powder coated, welded frame with side panel and vented top cover, ISO 14001 Certified Company & UL Listed, Front tinted Glass door and Metal perforated dual door at Rear, provision to mount racks on Floor & it should be with castor & levellers, 800MM Wide & 1000MM Deep and Overall height 2095 MM with 19 inch adapter kit, two nos. Rack mount power distribution unit, 1Ph, 230V, 32A, 50/60Hz, Zero U standard with 12 X Indian Round Pin 5/15A, (Inlet Plug Not Installed, Recommended IEC30932A 2P +E), 16A MCB X 2 Circuits- PDU Rating 7.3KVA/Bottom feed-3Mt/ Black, 100% assured compatibility with all equipment conforming to DIN 41494 (General industrial standard for equipment) | 1 | No. |
| 27 | Wall Mount Rack | Supply, Mounting/Fixing & Dressing of 9U Wall Mount Rack has steel sheet punched, formed and Powder coated, 14001 Certified company & UL Listed, welded frame with side panel and vented top cover, 550 MM Wide & 600MM Deep, conforms to DIN41494 or Equivalent EIA/ISO/EN/CEA Standard, 1No.of PDU, 1Ph, 230V, 8A, with 6 Indian Round Pin 5A sockets, 8A Fuse. | 23 | Nos. |
| 28 | 6U Outdoor Rack | Supply, Mounting/Fixing & Dressing of Pole mount Enclosure of size 06UHx600Wx500D, All Round welded construction with through design degree opening with concealed hinges, Front Hinged Single Door with Hood Provision, 130, Top with Rain Canopy and 1no. Fan Provision, Bottom flush type gland plate, with rear wall for wall mounting provision, Foam Gasketing, 04 number 19" recess angle, Finish RAL7035 STR, Rain Canopy of size 600Wx500D - 1No, Pole mounting bracket-2Nos., Pole clamp 'C' Channel Bracket-4 Nos., IP54 Inlet / Outlet Filter-Snap type with PU Gasket Overall Grill Size-148x148-2Nos., Filter Hood for 148x148 Filter -1 No., Fan-1 No., Power | 4 | Nos. |

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| | | | | |
|----|----------------------------|---|------|------|
| | | Distribution Unit - 06 Amp 6 x Sockets | | |
| 29 | Online UPS system | Supply & Installation of Capacity of 3kVA/2.4 kW, Input Voltage 230Vrms, Input Frequency 50Hz., IGBT Based PWM Rectifier, with Backup of 60 min. | 10 | Sets |
| 30 | Electrical Cables | Supply & Laying of 3 Core, 1.5 SQMM copper conductor XLPE insulated PVC sheathed armoured cable confirming to IS 7098 Part I-1988 with accessories | 1600 | Mtr. |
| 31 | Display Unit for Live view | Supply, Fixing/Mounting & Installation of 55"Smart Signage, Embedded Content Management, Embedded Group Manager, Super Sign Control+, Welcome Screen, Audio Out 10W +10W, Web OS4.0, IR Out, USB Cloning, HDMI, RS232, Ethernet, wifi inbuilt, web browser Typical Power 124.1 Watt | 3 | No. |
| 32 | Casing/Conduit | Supply & Laying of 25mm of medium class PVC casing/conduit along with accessories | 5000 | Mtr. |
| 33 | HDPE | Supply & Laying of 25mm dia (nominal), PN12.5 pressure rating, ISI marked HDPE pipe along with all accessories like socket, bend, couplers etc. | 3000 | Mtr. |
| 34 | Pole (Outdoor) | Supply, Mounting/Fixing of Galvanized pole made out of 150mm nominal dia medium class GI pipe of 6 metre long GI Pipe | 4 | Nos. |

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Annexure:-IV

CAMERA DISTRIBUTION LIST AND ETC:-

| Sl. No. | Locations | ANPR Camera | Bullet Camera | Dome Camera | PTZ Camera |
|---------|---------------------------------------|-------------|---------------|-------------|------------|
| 1 | Main Gate 1 (Entry & Exit) | 2 | 2 | 0 | 1 |
| 2 | Security Room - Gate 1 (Entry & Exit) | 0 | 0 | 2 | 0 |
| 3 | House Keeping Room | 0 | 0 | 1 | 0 |
| 4 | Gate 2 | 0 | 1 | 0 | 0 |
| 5 | Admin Building Ground Floor | 0 | 1 | 9 | 0 |
| 6 | Admin Building First Floor | 0 | 0 | 10 | 0 |
| 7 | Designer Shop | 0 | 1 | 1 | 0 |
| 8 | Academic Block A Grnd Floor | 0 | 6 | 2 | 0 |
| 9 | Academic Block A 1st Floor | 0 | 3 | 9 | 0 |
| 10 | Academic Block A 2nd Floor | 0 | 2 | 10 | 0 |
| 11 | Academic Block A 3rd Floor | 0 | 3 | 9 | 0 |
| 12 | Academic Block B Grnd Floor | 0 | 4 | 1 | 0 |
| 13 | Academic Block B 1st Floor | 0 | 1 | 9 | 0 |
| 14 | Academic Block B 2nd Floor | 0 | 2 | 10 | 0 |
| 15 | Academic Block B 3rd Floor | 0 | 0 | 2 | 0 |
| 16 | Academic Block C Grnd Floor | 0 | 4 | 1 | 0 |
| 17 | Academic Block C 1st Floor | 0 | 2 | 8 | 0 |
| 18 | Academic Block C 2nd Floor | 0 | 0 | 5 | 0 |
| 19 | Resource Centre Grnd Floor | 0 | 1 | 5 | 1 |
| 20 | Resource Centre 1st Floor | 0 | 0 | 5 | 0 |
| 21 | Generator Room | 0 | 5 | 0 | 0 |
| 22 | Boys Hostel Grnd Floor | 0 | 6 | 5 | 0 |
| 23 | Boys Hostel 1st Floor | 0 | 0 | 6 | 0 |
| 24 | Boys Hostel 2nd Floor | 0 | 0 | 5 | 0 |
| 25 | Girls Hostel Grnd Floor | 0 | 5 | 5 | 0 |
| 26 | Girls Hostel 1st Floor | 0 | 0 | 5 | 0 |
| 27 | Girls Hostel 2nd Floor | 0 | 0 | 4 | 0 |
| 28 | Staff Residence (Periphery) | 0 | 3 | 0 | 0 |

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| | | | | | |
|--------------|--|----------|-----------|------------|----------|
| 29 | Faculty Quarter (Periphery) | 0 | 2 | 0 | 0 |
| 30 | Director Bungalow | 0 | 1 | 0 | 0 |
| 31 | Guest House | 0 | 0 | 1 | 0 |
| 32 | Shop & Bank | 0 | 2 | 2 | 0 |
| 33 | Pole 1 (Near Resource Center Towards Road) | 0 | 2 | 0 | 0 |
| 34 | Pole 2 (Near Arena (Future)) | 0 | 2 | 0 | 0 |
| 35 | Pole 3 (Near Director Quarter) | 0 | 2 | 0 | 0 |
| 36 | Pole 4 (Near Generator Room) | 0 | 2 | 0 | 0 |
| TOTAL | | 2 | 65 | 132 | 2 |

SWITCH AND UPS DISTRIBUTION LIST:

| Sl. No. | Locations | 24 Port + 4 SFP | 24 Port + 2 SFP | 8 Port + 2 SFP | 4 Port + 2 SFP | 1G SFP | 3 KVA UPS |
|---------|---------------------------------------|-----------------|-----------------|----------------|----------------|--------|-----------|
| 1 | Main Gate 1 (Entry & Exit) | 0 | 0 | 0 | 0 | 0 | 1 |
| 2 | Security Room - Gate 1 (Entry & Exit) | 0 | 0 | 2 | 0 | 2 | |
| 3 | House Keeping Room | 0 | 0 | 0 | 0 | 0 | |
| 4 | Gate 2 | 0 | 0 | 0 | 0 | 0 | |
| 5 | Admin Building Ground Floor | 0 | 1 | 0 | 0 | 2 | 1 |
| 6 | Admin Building First Floor | 2 | 0 | 0 | 0 | 4 | |
| 7 | Designer Shop | 0 | 0 | 1 | 0 | 2 | 0 |
| 8 | Academic Block A Grnd Floor | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | Academic Block A 1st Floor | 0 | 1 | 0 | 0 | 2 | |
| 10 | Academic Block A 2nd Floor | 0 | 1 | 0 | 0 | 2 | |
| 11 | Academic Block A 3rd Floor | 0 | 1 | 0 | 0 | 2 | |
| 12 | Academic Block B Grnd Floor | 0 | 0 | 0 | 0 | 0 | 1 |
| 13 | Academic Block B 1st Floor | 0 | 1 | 0 | 0 | 2 | |
| 14 | Academic Block B 2nd Floor | 0 | 1 | 0 | 0 | 2 | |
| 15 | Academic Block B 3rd Floor | 0 | 1 | 0 | 0 | 2 | |
| 16 | Academic Block C Grnd Floor | 0 | 0 | 0 | 0 | 0 | 1 |
| 17 | Academic Block C 1st Floor | 0 | 1 | 0 | 0 | 2 | |
| 18 | Academic Block C 2nd Floor | 0 | 0 | 0 | 0 | 0 | |
| 19 | Resource Centre Grnd Floor | 0 | 0 | 1 | 0 | 2 | |
| 20 | Resource Centre 1st Floor | 0 | 0 | 1 | 0 | 2 | |

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| | | | | | | | |
|--------------|--|----------|-----------|-----------|----------|-----------|-----------|
| 21 | Generator Room | 2 | 0 | 0 | 0 | 4 | 1 |
| 22 | Boys Hostel Grnd Floor | 0 | 1 | 0 | 0 | 2 | 1 |
| 23 | Boys Hostel 1st Floor | 0 | 0 | 1 | 0 | 2 | |
| 24 | Boys Hostel 2nd Floor | 0 | 0 | 1 | 0 | 2 | |
| 25 | Girls Hostel Grnd Floor | 0 | 1 | 0 | 0 | 2 | 1 |
| 26 | Girls Hostel 1st Floor | 0 | 0 | 1 | 0 | 2 | |
| 27 | Girls Hostel 2nd Floor | 0 | 0 | 1 | 0 | 2 | |
| 28 | Staff Residence (Periphery) | 0 | 0 | 1 | 0 | 2 | 1 |
| 29 | Faculty Quarter (Periphery) | 0 | 0 | 1 | 0 | 2 | |
| 30 | Director Bungalow | 0 | 0 | 1 | 0 | 2 | |
| 31 | Guest House | 0 | 0 | 0 | 0 | 0 | |
| 32 | Shop & Bank | 0 | 0 | 1 | 0 | 2 | 0 |
| 33 | Pole 1 (Near Resource Center Towards Road) | 0 | 0 | 0 | 1 | 2 | 0 |
| 34 | Pole 2 (Near Arena (Future)) | 0 | 0 | 0 | 1 | 2 | 0 |
| 35 | Pole 3 (Near Director Quarter) | 0 | 0 | 0 | 1 | 2 | 1 |
| 36 | Pole 4 (Near Generator Room) | 0 | 0 | 0 | 1 | 2 | |
| TOTAL | | 4 | 10 | 13 | 4 | 60 | 10 |

OTHER ACTIVE COMPONENTS DISTRIBUTION LIST:

| Sl. No. | Locations | VMS Server | Storage | Work Station | 55" Display |
|---------|---------------------------------------|------------|---------|--------------|-------------|
| 1 | Main Gate 1 (Entry & Exit) | 0 | 0 | 0 | 0 |
| 2 | Security Room - Gate 1 (Entry & Exit) | 0 | 0 | 1 | 1 |
| 3 | House Keeping Room | 0 | 0 | 0 | 0 |
| 4 | Gate 2 | 0 | 0 | 0 | 0 |
| 5 | Admin Building Ground Floor | 0 | 0 | 0 | 0 |
| 6 | Admin Building First Floor | 2 | 2 | 2 | 2 |
| 7 | Designer Shop | 0 | 0 | 0 | 0 |
| 8 | Academic Block A Grnd Floor | 0 | 0 | 0 | 0 |
| 9 | Academic Block A 1st Floor | 0 | 0 | 0 | 0 |
| 10 | Academic Block A 2nd Floor | 0 | 0 | 0 | 0 |
| 11 | Academic Block A 3rd Floor | 0 | 0 | 0 | 0 |
| 12 | Academic Block B Grnd Floor | 0 | 0 | 0 | 0 |

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| | | | | | |
|--------------|--|----------|----------|----------|----------|
| 13 | Academic Block B 1st Floor | 0 | 0 | 0 | 0 |
| 14 | Academic Block B 2nd Floor | 0 | 0 | 0 | 0 |
| 15 | Academic Block B 3rd Floor | 0 | 0 | 0 | 0 |
| 16 | Academic Block C Grnd Floor | 0 | 0 | 0 | 0 |
| 17 | Academic Block C 1st Floor | 0 | 0 | 0 | 0 |
| 18 | Academic Block C 2nd Floor | 0 | 0 | 0 | 0 |
| 19 | Resource Centre Grnd Floor | 0 | 0 | 0 | 0 |
| 20 | Resource Centre 1st Floor | 0 | 0 | 0 | 0 |
| 21 | Generator Room | 0 | 0 | 0 | 0 |
| 22 | Boys Hostel Grnd Floor | 0 | 0 | 0 | 0 |
| 23 | Boys Hostel 1st Floor | 0 | 0 | 0 | 0 |
| 24 | Boys Hostel 2nd Floor | 0 | 0 | 0 | 0 |
| 25 | Girls Hostel Grnd Floor | 0 | 0 | 0 | 0 |
| 26 | Girls Hostel 1st Floor | 0 | 0 | 0 | 0 |
| 27 | Girls Hostel 2nd Floor | 0 | 0 | 0 | 0 |
| 28 | Staff Residence (Periphery) | 0 | 0 | 0 | 0 |
| 29 | Faculty Quarter (Periphery) | 0 | 0 | 0 | 0 |
| 30 | Director Bunglow | 0 | 0 | 0 | 0 |
| 31 | Guest House | 0 | 0 | 0 | 0 |
| 32 | Shop & Bank | 0 | 0 | 0 | 0 |
| 33 | Pole 1 (Near Resource Center Towards Road) | 0 | 0 | 0 | 0 |
| 34 | Pole 2 (Near Arena (Future)) | 0 | 0 | 0 | 0 |
| 35 | Pole 3 (Near Director Quarter) | 0 | 0 | 0 | 0 |
| 36 | Pole 4 (Near Generator Room) | 0 | 0 | 0 | 0 |
| TOTAL | | 2 | 2 | 3 | 3 |

PASSIVE COMPONENT DISTRIBUTION LIST:

| Sl. No. | Locations | OFC (Mtr) | OFC Patch Cord | 24 Port LIU | 12 Port LIU | UTP Cable (Mtr) | STP Cable (Mtr) | 42U Rack | 9U Rack | 6U Outdoor Rack | HDPE (Mtr) | PVC (Casing/ Conduit) | Power Cable (Mtr) |
|---------|-----------|-----------|----------------|-------------|-------------|-----------------|-----------------|----------|---------|-----------------|------------|-----------------------|-------------------|
|---------|-----------|-----------|----------------|-------------|-------------|-----------------|-----------------|----------|---------|-----------------|------------|-----------------------|-------------------|

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| | | | | | | | | | | | | Mtr | |
|----|---------------------------------------|------|---|---|---|------|------|---|---|---|------|------|------|
| 1 | Main Gate 1 (Entry & Exit) | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 2 | Security Room - Gate 1 (Entry & Exit) | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 3 | House Keeping Room | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 4 | Gate 2 | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 5 | Admin Building Ground Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 6 | Admin Building First Floor | | 4 | 0 | 0 | | | 1 | 0 | 0 | | | |
| 7 | Designer Shop | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 8 | Academic Block A Grnd Floor | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 9 | Academic Block A 1st Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 10 | Academic Block A 2nd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 11 | Academic Block A 3rd Floor | 4650 | 2 | 0 | 1 | 7015 | 1525 | 0 | 1 | 0 | 3000 | 5000 | 1600 |
| 12 | Academic Block B Grnd Floor | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 13 | Academic Block B 1st Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 14 | Academic Block B 2nd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 15 | Academic Block B 3rd Floor | | 2 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 16 | Academic Block C Grnd Floor | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 17 | Academic Block C 1st Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 18 | Academic Block C 2nd Floor | | 0 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 19 | Resource Centre Grnd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 20 | Resource Centre 1st Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 21 | Generator Room | | 4 | 1 | 1 | | | 0 | 1 | 0 | | | |

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| | | | | | | | | | | | | | |
|-------|---|--|------|----|---|--|--|----|------|------|--|--|--|
| 22 | Boys Hostel Grnd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 23 | Boys Hostel 1st Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 24 | Boys Hostel 2nd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 25 | Girls Hostel Grnd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 26 | Girls Hostel 1st Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 27 | Girls Hostel 2nd Floor | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 28 | Staff Residence (Periphery) | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 29 | Faculty Quarter (Periphery) | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 30 | Director Bunglow | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 31 | Guest House | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | |
| 32 | Shop & Bank | | 2 | 0 | 1 | | | 0 | 1 | 0 | | | |
| 33 | Pole 1 (Near Resource Center Towards Road | | 2 | 0 | 1 | | | 0 | 0 | 1 | | | |
| 34 | Pole 2 (Near Arena (Future) | | 2 | 0 | 1 | | | 0 | 0 | 1 | | | |
| 35 | Pole 3 (Near Director Quarter) | | 2 | 0 | 1 | | | 0 | 0 | 1 | | | |
| 36 | Pole 4 (Near Generator Room) | | 2 | 0 | 1 | | | 0 | 0 | 1 | | | |
| TOTAL | | | 4650 | 60 | 1 | | | 27 | 7015 | 1525 | | | |

These numbers mentioned above may be differing from the actual and payment will be done as per the actual quantity only and not on the basis the above quantity mentioned.

Annexure:-V

Price Bid

| | | |
|----------------------|--|--|
| Financial Bid | | |
|----------------------|--|--|

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| Sl. No. | Description | Revised Description | Qty. | UOM | Unit Price | Gst(As applicable) | Total Amount |
|---------|--|---|------|-----|------------|--------------------|--------------|
| 1 | IP IR Bullet Camera (Indoor & Outdoor) | Supply, Installation, Testing & Commissioning of IP IR Bullet Camera (Indoor & Outdoor) Full HD (1080p) camera with motorized varifocal and SD Card having 1/2.8" CMOS, 2 MP @25fps or better, triple stream, Min. Illumination required 0.005 lux @ F1.6 (color), 120dB True WDR with Scene Adaptive Control, Min. Pixels 1920 × 1080, Shutter Speed 1/3 - 1,00,000; Advance Video Compression technology such as H.265,H.264, MJPEG , Triple streams @25/30 fps; 2.8–12 mm motorized focus & zoom lens; BLC/ HLC,WDR, Slow Shutter, ROI, 3DNR; Pan 360° endless, tilt of 45° each axis; Minimum Edge Intelligence Video Analytics : Motion Detection, Video Tampering, Face Detection, Intrusion; Line Crossing, SD Card Error, SD Card Capacity Warning, Audio Detection, Object Abandoned, Object Missing, video tampering, network disconnected, IP address conflict, illegal login; Alarm I/O -1/1; Audio I/O - 1/1; BNC Output; Privacy Mask, Smart IR (Internal/External) with up to 50m IR distance, Watermarking; HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; Dual channel Audio G.711a/ G.711Mu/ AAC/G.726, 128GB SD card support; In-built Transient Voltage Suppressors of 2000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP 67, IK 10 vandal proof, Having Operating temp range : –10°C to 60° C. Certifications: ONVIF Profile S & G, UL, CE, FCC. (UL must be listed as per quoted Model/Part No/Part Code/Part Reference-wise). | 65 | Nos | | | |

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| | | | | | | | |
|---|----------------------------|--|-----|------|--|--|--|
| 2 | IP IR Dome Camera (Indoor) | Supply, Installation, Testing & Commissioning of IP based fixed dome indoor Full HD (1080P) camera without motorized varifocal and SD slot having 1/2.8" CMOS, 2 MP @25fps or better, triple stream, Min. Illumination required 0.005 lux @ F1.6 (color), 120dB True WDR with Scene Adaptive Control, Min. Pixels 1920 × 1080, Shutter Speed 1/3 - 1,00,000; Advance Video Compression technology such as H.265,H.264, MJPEG , Triple streams @25/30 fps; 2.8–12 mm lens; BLC/HLC,WDR, Slow Shutter, ROI, 3DNR; Pan 360° endless, tilt of 45° each axis; Minimum Edge Intelligence Video Analytics : Motion Detection, Video Tampering, Face Detection, Intrusion; Line Crossing, SD Card Error, SD Card Capacity Warning, Audio Detection, Object Abandoned, Object Missing, video tampering, network disconnected, IP address conflict, illegal login; Alarm I/O -1/1; Audio I/O - 1/1; BNC Output; Privacy Mask, Smart IR (Internal/External) with up to 30m IR distance, Watermarking; HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; Dual channel Audio G.711a/ G.711Mu/ AAC/G.726, 128GB SD card support; In-built Transient Voltage Suppressors of 2000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP 65, IK 10 vandal proof, Having Operating temp range : –10°C to 60° C. Certifications: ONVIF Profile S & G, UL, CE, FCC. (UL must be listed as per quoted Model/Part No/Part Code/Part Reference-wise). | 132 | Nos. | | | |
| 3 | ANPR Camera | Supply, Installation, Testing & Commissioning of FIXED BOX ANPR Camera with IP67; IK-10 rated Housing with 50 Mtr IR array to support 90 degree IR Beam, 1/2.8" CMOS, 2560 × 1440 MP or better @ 25fps, triple stream s @ H.265,H.264, MJPEG respective video compression @25 fps; Min. Illumination required 0.05 lux; 120dB True WDR; triple stream, 5-50mm Or better, C-CS Mount Lens DC Iris; Internal / External Illumination range minimum 50 Mtr IR | 2 | Nos. | | | |

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| | | distance, 128GB SD card support, Alarm: 2 In/ 1 out, 1 RS485 port; Security - Security Authentication of MACID; User ID; Passwords, HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; IP 67, IK 10 rated, -10°C to 60° C.; 90% RHNC; Certifications: ONVIF Profile S & G, UL, CE, FCC. The unit must be supplied with all the necessary power supplies; wall mounts/pole mounts as per site requirements to complete the site installation & commissioning required. | | | | | |
| 4 | DRIVER IMAGE & CO - PASSENGER CAMERA | Supply, Installation, Testing & Commissioning of DRIVER IMAGE & CO-PASSENGER CAMERA of 2MP IP Network TDN Low-Light IR Rugged Fixed Camera/ Bullet Camera, 1/2.8" CMOS, 2 MP @25fps or better, triple stream, Min. Illumination 0.005 lux , 120dB True WDR; Shutter Speed 1/3 - 1,00,000; H.265,H.264, MJPEG compression , Triple streams @25/30 fps; 2.8-12 mm MFZ; Minimum Edge Intelligence Video Analytics : Motion Detection, Video Tampering, Face Detection, Intrusion; Line Crossing, Audio Detection, Object Abandoned, Object Missing; Alarm I/O -1/1; Audio I/O - 1/1; BNC Output; IR (Internal/External) with upto 50m IR distance, Watermarking; HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; Minimum 128GB SD card support; In-built minimum 2000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP 67, IK 10 rated, -10°C to 60° C.; 90% RHNC; Certifications: ONVIF Profile S & G, UL, CE, FCC. | 2 | Nos. | | | |
| 5 | IP IR PTZ Camera | Supply, Installation, Testing & Commissioning of IP Network TDN Low-Light PTZ Camera with auto tracking, 1/2.8" CMOS, 2 MP @ 25fps, triple stream s @ H.265,H.264, MJPEG respective video compression @25 fps; Min. Illumination required 0.0005 lux @ F1.6 (B/W) & 0.005 lux @ F 1.6(Colour); 0 Lux with IR or better, 120dB True WDR or better, Min. Pixels 1920 × 1080, triple stream, 6mm – 180 mm or 4.8 mm to 144 mm or 4.5 to 135mm 30x motorized focus & zoom lens; Internal / External Illumination range minimum 150 Mtr IR distance, 256 Presets; 128GB SD card support, Alarm: 2 In/ 1 out, 24 VAC and Hi-PoE; On-board Video Analytics - Auto Tracking, Face Detection, Intrusion Detection, Line Crossing Detection, ROI Entrance Detection, ROI Exit Detection, Object Removal Detection, | 3 | Nos. | | | |

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| | | Unattended Baggage Detection, Motion Detection, Alarm Input, Alarm Output, Video Tampering Detection, ROI Tracking; Security - Security Authentication of MACID; User ID; Passwords, HTTPS & IEEE 802.1x compliant; SSL/TLS ; IP address filtering; In-built Transient Voltage Suppressors of 4000V Lightning Protection, Surge Protection and Voltage Transient Protection; IP 66, IK 10 vandal proof, Having Operating temp range : -10°C to 65° C. Certifications: ONVIF Profile S & G, UL, CE, FCC. (UL must be listed as per quoted Model/Part No/Part Code/Part Reference-wise). The unit must be supplied with all the necessary power supplies; wall mounts/pole mounts as per site requirements to complete the site installation & commissioning required. | | | | | |
| 6 | IP PTZ Key Board | Supply, Installation, Testing & Commissioning of 3 axis joystick X/Y/Z for positioning control, The full-size, soft-coated hand rest positions the hand comfortably, and 15 large, soft-touch, function keys allow quick access to frequently used commands. | 1 | Nos. | | | |
| 7 | Server for VMS - Support up to 250 Camera | Supply, Installation, Testing & Commissioning of the Server Hardware for 100 Camera supported Server With Failover (N+1) for VMS and Recording application must have minimum Intel Xeon Quad Core Processors; 16 GB RAM; 240 GB SSD (No SATA) ; OS - Licensed Windows /Linux; Licensed Database; 8/4 - I/O, 1200 Mbps through-put; 1 each of DVI-D, HDMI & VGA video output interfaces ; 6 nos of USB; DVD Drive; Key-board & Mouse; Quad NICs of 2X 1000Base-T & 2X 10G SFP Server Network Adapters or Interface Cards; Dual Hot Swappable Power Supplies; 1GB USB NIC; 1 no of read/write hard-wired DVD & 1 no of USB DVD; 1 RS-485 & 1 relay output; CE; FCC; UL; Operating Temperature: -30 Deg C ~+35 Deg C; RH: 10% to 80%. The SYstem must have the capability to support internal storage of minimum 240TB on RAID5/6. | 1 | Lot | | | |

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| 8 | Video Management Software with Camera License | Supply, Installation , Testing and Commissioning of VIDEO MANAGEMENT & RECORDING APPLICATION SYSTEM Suit with all necessary licenses comprising Open SDK/APIs ; compliance to cyber security standarad of FISMA & RMF required to complete the system as per below - The proposed system must come with Video Management System comprising Video Management Software Licenses for minimum 204 IP cameras in (N+1) redundancy; capability also to support in 1+1 & N+N mode of redundancy. The VMS Software must have the capability to support 10000 cameras' per VMS database. The VMS shall support iSCSI extended storage whereby a remote storage unit can appear as a local drive. The VMS must support iSCSI to expand storage with additional NAS' for local & remote as per requirements. The VMS System must come in-built with a minimum 25 user Concurrent Thick Clients & 25 Thin clients - Web/Mobile; mobile microphone support for Mobile Clients. The system must be capable for minimum 12 Monitors support per VMS Client compatible with OS - Windows, Linux, Mac OSX; customizable GUI with option to edit XML and multiple themes & switches among the GUI themes. In-built modules for Video Wall Integrations; Two-way audio communication over IP through SIP Server/EPBAX integration & across the Servers & Clients; in-built multi-level/multi-layer Hierarchical Map Support; GIS MAP ordinates capability; HMAC; AES 128/256 bit encryption; SSL; TLS; Active Directory and LDAP for single sign-on (SSO) Authentication; RTSP; Encrypted HTTPS communication from Camera to NVR; 3rd Party Camera ONVIF SDK/API; integrated encrypted HTTPS configuration with Web Services; date and time stamping. The System must come with licensed latest Database version of 2016 or better - PostgreSQL/ MYSQL / SQL/ Oracle /Sybase. Licensed OS - Windows/Linux; Macintosh of version 2016. The VMS OS must be installed in SSD drive (No SATA | 1 | Nos. | | | |
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| | | Drive shall be allowed) for superior performance and zero data loss, no other option shall be allowed. The system must have the minimum features of e-mail notification through only SMTPS server for enabled password authentication & SSL ; AD/LDAP integration through only LDAPS server for enabled password authentication for binding, as well as SSL for secured communication; TLS enabled HTTPS web services; Encrypt/ACME web services for secured communication; TLS - Certificates - VeriSign, DigiCert; etc for external -Thin clients/ web services. with 200 Camera Connect License | | | | | |
| 9 | Server with Storage for ANPR | Supply, Installation , Testing and Commissioning of System Server for Video Analytics must be with Dual CPU,4 core processors; 8GB RAM; 240GB SSD; 512GB HDD for 30 days' metadata; alerts & events storage of ANPR System | 1 | Nos. | | | |
| 10 | ANPR LICENSE | Supply, Installation, Testing & Commissioning of AI based Automated Number Plate Recognition (ANPR) System & Vehicle of Interest Search & Identification along with required server hardware as recommended by OEM | 2 | Each | | | |
| 11 | Storage for Recording for Min. 30 Days | Supply, Installation, Testing & Commissioning of the Surveillance HDDs of 20 nos of 12TBs to cater the need of video recording storage for 30 days on 720P@25/30 fps | 1 | Lot | | | |
| 12 | Server Based Video Analytics System | The proposed System must be provided with minimum Server based Video Analytics Application for 100 IP Cameras comprising the perpetual Server Video Analytics licenses of Intrusion detection;Wrong direction movement detection; Tripwire; Face detection; Crowd | 1 | Lot | | | |

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| | | detection; Smoke/Fire Detection; People & Object Counting; Camera Tampering ;Loitering; Unattended Object detection; Object Removal detection having alarm manager; health monitoring system & an interface of alarms to control center & customised SOP as required. The proposed system & licenses are required to be used realtime all across in any set-up for real-time surveillance each having 2 usecases on an average. | | | | | |
| 13 | Server Hardware for AI based Video Analytics System | Supply, Installation , Testing and Commissioning of System Server for Video Analytics must be with Dual CPU, each of 2.1 - 2.7 Ghz , 12 Core each , RAM - 64 GB DDR RAM , Hard Disk for OS - 1 TB SSD , Storage - 2 TB HDD; 1 TESLA GPU. | 2 | Nos. | | | |
| 14 | Workstation for Live View | Supply, Installation , Testing and Commissioning of Intel Xeon E-2124, 4 Core, 8MB Cache, 3.3GHz, 4.3Ghz Turbo, 16GB (2x8GB) 2666MHz DDR4 UDIMM Non-ECC 3.5" 2TB 7200rpm SATA Hard Disk Drive NVIDIA Quadro P400, 2GB, 3 mDP to DP adapter Intel I210 1Gb Ethernet Adapter (1X1GbE) Dell Optical Mouse - MS116 - Black Dell Wired Keyboard KB216 Black Windows 10 Pro for Workstations (up to 4 Cores) | 3 | Nos. | | | |
| 15 | 24 Port PoE Managed Switch | Supply, Installation , Testing and Commissioning of Managed Network Switch 20 ports, 10/100/1000T PoE and 4 Combo ports. Minimum PoE power budget 185 Watt or better, min 56 Gbps or higher Switching capacity, min 41 Mpps or higher forward ingrate, Port Mirroring, IEEE802.1d Spanning-Tree, IEEE802.1w Rapid Spanning-Tree, IEEE802.1s Multiple Spanning-Tree, Broadcast Storm Protection, Port Based VLAN, Support SNMPv1/v2c/v3, Web-based configuration, Compliant UL 1950, UL 94V-0, WEEE, IEC68-2-32, IEC68-2-29, IEC68-2-36, FCC/EN55022 ClassA, VCCI ClassA, C-Tick, EN60950 (TUV), EN55024, CE, CSA/C UL and RoHS, loaded with 2 Nos of SM 1G SFP Transceivers. (All Switches and Transceivers are from same OEM) | 14 | Nos. | | | |

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| 16 | 8 Port Managed Switch | Supply, Installation , Testing and Commissioning of Managed Network Switch with 8 Ports 10/100/1000T PoE, 2 combo ports, minimum 75watt PoE or better, min 20 Gbps or higher Switching capacity, min 14Mpps or higher forwarding rate, Port Based VLAN, support Broadcast Storm Protection, Port Mirroring, IEEE802.1d Spanning-Tree, IEEE802.1w Rapid Spanning-Tree, IEEE802.1s Multiple Spanning-Tree, Web-based configuration, Complaint of UL1950, UL94V-0, WEEE, IEC68-2-32, IEC68-2-29, IEC68-2-36, FCC/EN55022 ClassA, VCCI ClassA, C-Tick, EN60950 (TUV), EN55024, CE, CSA/C UL and RoHS, loaded with 2Nos of SM 1G SFP Transceivers. (All Switches and Transceivers are from same OEM) | 13 | Nos. | | | |
| 17 | 4 Port PoE Industrial Grade Switch - Allied Telesis: AT-IE200-6FP-80 | Supply, Installation , Testing and Commissioning of Industrial Grade Managed Switch with minimum 4x10/100 Base-T PoE+ ports and 2x100/1000 X SFP ports. Minimum PoE budget should be 120 Watt, min.4.8Gbps, Console port : RJ45 x 1 or Equivalent. Min 2K MAC address table and support 2K VLAN simultaneously, 48VDC Redundant power inputs. Min. IP30/31 Metal Case, Switch enclosure should be with Aluminium Shell, DIN Rail/Wallmount support, Operating Temperature :- 10-75°C, Storage Temperature :- 40-85°C, Switch Should be UL, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN60068-2-27, EN60068-2-6, RoHS and NEMA TS2, Rapid Ring Protection / resiliency technology as per the IEEE802.17 / RPR / ERP So equivalent technology providing the convergence time as per the standards specified above for less than / sub 50 milli second convergence. VLAN IEEE802.1Q, GVRP, double tagging (Q-in-Q), Port Based VLAN, LACP, RSTP, MSTP, loaded with 2 Nos of SM 1G SFP Transceivers. (All Switches and Transceivers are from same OEM) | 4 | Nos. | | | |
| 18 | 6 Core Armoured | Supply & Laying of 6 fiber Single Mode, Armoured, Loose-tube, Gel filled cable | 4650 | Mtr. | | | |

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| | Single Mode Fiber Optic Cable | complying to ISO/IEC 11801, EN50173, ANSI/TIA 568-C.3; suitable for use in direct burial, outdoor ducts and backbone cabling, Single Mode, 9/125 micron primary coated buffers, OS2 (IEC 60793-2-50, B1.3 and ITU T G652.d), Telcordia GR 20 / IEC 794-1, Single PBTP Loose tube filled with water blocking Thixotropic gel, HDPE outer jacket, 2 mm thickness, OEM factory test reports must be provided against each drum / roll of fiber cable. | | | | | |
| 19 | UTP Cable | Supply & Laying of CAT6, 4 pairs, Unshielded Twisted Pair, TIA/EIA 568-C .2 , 23 AWG solid bare copper or better, Polyethylene, Sheath Fire retardant PVC Compound (FRPVC) Flame Rating : 60 deg.C As per UL 1685 CM / CMR, Minimum 250 Mhz (certified) support upto 600 MHz, UL Verified, ISO 9001 and 14001 certified | 7015 | Mtr. | | | |
| 20 | STP Cable | Supply & Laying of CAT6, 4-Pair of Solid Insulated Copper 23 AWG, ANSI/TIA/EIA-568 and ISO/IEC11801, Flammability Test :CM, Conductor Dia. Nom.(mm):0.565, Polyester Binder, Outer Diameter:7.30mm+-0.2, Tensile Strength (Mpa):≥13.8, Frequency / Attenuation / NEXT / PSNEXT / ACRF / PSACRF / RL / DELAY Tested upto 250 Mhz, ISO 9001:2008, ISO 9001:14001, ISO 50001 certified manufacturing unit | 1525 | Mtr. | | | |
| 21 | Fully loaded 24 Port Mount LIU | Supply, Mounting/Fixing, Splicing & Dressing of 24 port fiber management shelf shall have compact design and be ideal for high density front patching applications, fully loaded and factory fitted assembly, High Density: 1U: 24 Fiber terminations, loaded with SC adapters, splice trays, and fiber management rings, Sealed cable inlets for dust and rodent protection, Pigtailed loaded in Shelf-SC Type, SM 1.5 Mtr., LSZH. | 1 | Nos. | | | |
| 22 | Fully loaded Rack Mount LIU | Supply, Mounting/Fixing, Splicing & Dressing of 12 port fiber management shelf shall have compact design and be ideal for high density front patching applications, fully loaded and factory fitted assembly, High Density: 1U: 12 Fiber terminations, loaded with SC adapters, splice trays, and fiber management rings, Sealed cable inlets for dust and rodent protection, Pigtailed loaded in Shelf-SC Type, SM 1.5 Mtr., | 27 | Nos. | | | |

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| | | LSZH. | | | | | |
| 23 | Optic Patch cord | Supply & Installation of SC/UPC to SC/UPC Duplex tuned Fiber Optic Patch Cord 3 Mtr, 9/125 Micron, LSZH, 3.6 mm twin zip, ROHS/ELV Compliant. | 60 | Nos. | | | |
| 24 | RJ45 Connector | Supply, Termination & Dressing of RJ45 UTP Connector at CAT6 UTP Cable | 4 | Box. | | | |
| 25 | STP Connector | Supply, Termination & Dressing of RJ45 STP Connector at CAT6 STP Cable | 1 | Box. | | | |
| 26 | Floor Standing Rack | Supply, Mounting/Fixing & Dressing of 42U Rack manufactured out of steel sheet punched, formed and Powder coated, welded frame with side panel and vented top cover, ISO 14001 Certified Company & UL Listed, Front tinted Glass door and Metal perforated dual door at Rear, provision to mount racks on Floor & it should be with castor & levellers, 800MM Wide & 1000MM Deep and Overall height 2095 MM with 19 inch adapter kit, two nos. Rack mount power distribution unit, 1Ph, 230V, 32A, 50/60Hz, Zero U standard with 12 X Indian Round Pin 5/15A, (Inlet Plug Not Installed, Recommended IEC30932A 2P +E), 16A MCB X 2 Circuits- PDU Rating 7.3KVA/Bottom feed-3Mt/ Black, 100% assured compatibility with all equipment conforming to DIN 41494 (General industrial standard for equipment) | 1 | Nos | | | |
| 27 | Wall Mount Rack | Supply, Mounting/Fixing & Dressing of 9U Wall Mount Rack has steel sheet punched, formed and Powder coated, 14001 Certified company & UL Listed, welded frame with side panel and vented top cover, 550 MM Wide & 600MM Deep, conforms to DIN41494 or Equivalent EIA/ISO/EN/CEA Standard, 1No.of PDU, 1Ph, 230V, 8A, with 6 Indian Round Pin 5A sockets, 8A Fuse. | 23 | Nos. | | | |

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| 28 | 6U Outdoor Rack | Supply, Mounting/Fixing & Dressing of Pole mount Enclosure of size 06UHx600Wx500D, All Round welded construction with through design degree opening with concealed hinges, Front Hinged Single Door with Hood Provision, 130, Top with Rain Canopy and 1no. Fan Provision, Bottom flush type gland plate, with rear wall for wall mounting provision, Foam Gasketing, 04 number 19" recess angle, Finish RAL7035 STR, Rain Canopy of size 600Wx500D - 1No, Pole mounting bracket-2Nos., Pole clamp 'C' Channel Bracket-4 Nos., IP54 Inlet / Outlet Filter-Snap type with PU Gasket Overall Grill Size-148x148-2Nos., Filter Hood for 148x148 Filter -1 No., Fan-1 No., Power Distribution Unit - 06 Amp 6 x Sockets | 4 | Nos. | | | |
| 29 | Online UPS system | Supply & Installation of Capacity of 3kVA/2.4 kW, Input Voltage 230Vrms, Input Frequency 50Hz., IGBT Based PWM Rectifier, with Backup of 60 min. | 10 | Sets | | | |
| 30 | Electrical Cables | Supply & Laying of 3 Core, 1.5 SQMM copper conductor XLPE insulated PVC sheathed armoured cable confirming to IS 7098 Part I-1988 with accessories | 1600 | Mtr. | | | |
| 31 | Display Unit for Live view | Supply, Fixing/Mounting & Installation of 55"Smart Signage, Embedded Content Management, Embedded Group Manager, Super Sign Control+, Welcome Screen, Audio Out 10W +10W, Web OS4.0, IR Out, USB Cloning, HDMI, RS232, Ethernet, wifi inbuilt, web bowser Typical Power 124.1 Watt | 3 | No. | | | |
| 32 | Casing/Conduit | Supply & Laying of 25mm of medium class PVC casing/conduit along with accessories | 5000 | Mtr. | | | |
| 33 | HDPE | Supply & Laying of 25mm dia (nominal), PN12.5 pressure rating, ISI marked HDPE pipe along with all accessories like socket, bend, couplers etc. | 3000 | Mtr. | | | |
| 34 | Pole (Outdoor) | Supply, Mounting/Fixing of Galvanized pole made out of 150mm nominal dia medium class GI pipe of 6 metre long GI Pipe | 4 | Nos. | | | |

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Annexure:-VI



LIST OF LOCATIONS, NIFT(SHILLONG)

| Sl. No. | Locations |
|---------|---------------------------------------|
| 1 | Main Gate 1 (Entry & Exit) |
| 2 | Security Room - Gate 1 (Entry & Exit) |
| 3 | House Keeping Room |
| 4 | Gate 2 |
| 5 | Admin Building Ground Floor |
| 6 | Admin Building First Floor |
| 7 | Designer Shop |
| 8 | Academic Block A Ground Floor |
| 9 | Academic Block A 1st Floor |
| 10 | Academic Block A 2nd Floor |
| 11 | Academic Block A 3rd Floor |
| 12 | Academic Block B Ground Floor |

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|----|-------------------------------|
| 13 | Academic Block B 1st Floor |
| 14 | Academic Block B 2nd Floor |
| 15 | Academic Block B 3rd Floor |
| 16 | Academic Block C Ground Floor |
| 17 | Academic Block C 1st Floor |
| 18 | Academic Block C 2nd Floor |
| 19 | Resource Centre Grnd Floor |
| 20 | Resource Centre 1st Floor |
| 21 | Generator Room |
| 22 | Boys Hostel Ground Floor |
| 23 | Boys Hostel 1st Floor |
| 24 | Boys Hostel 2nd Floor |

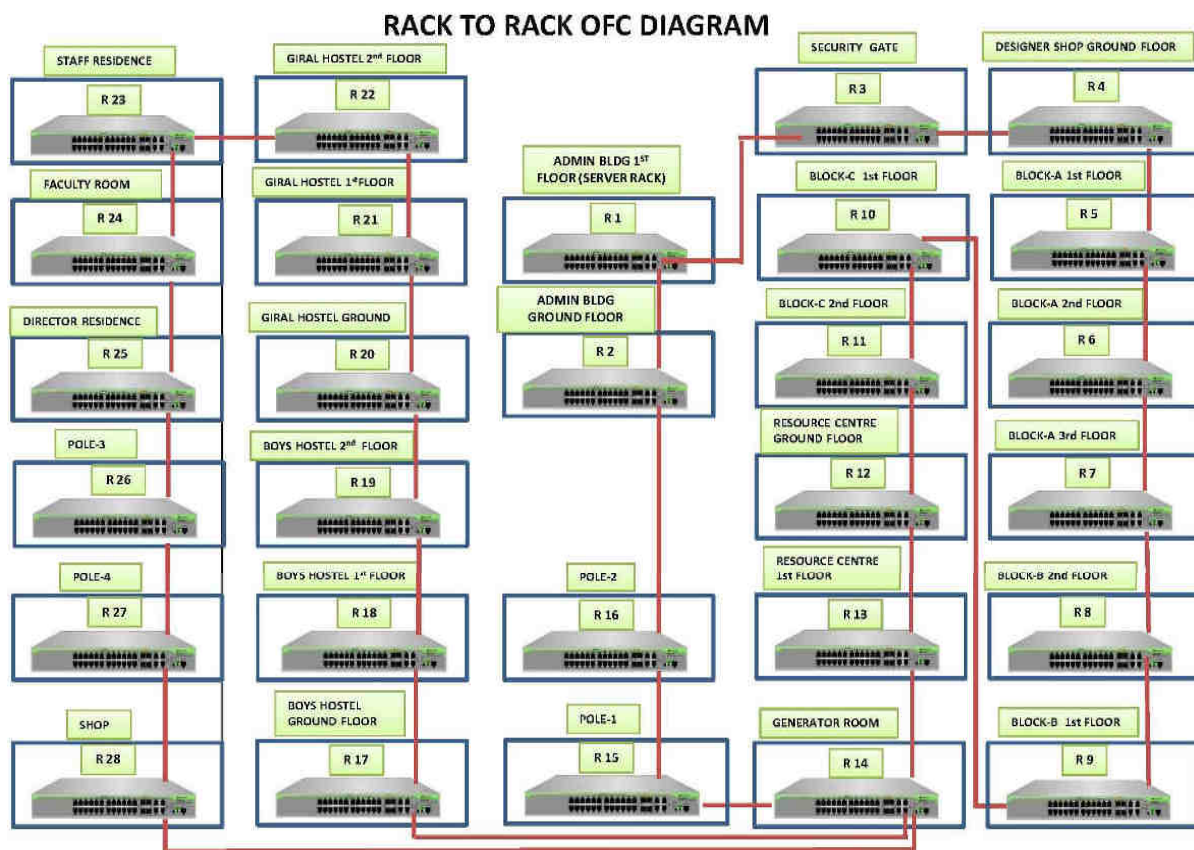
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| 25 | Girls Hostel Grnd Floor |
| 26 | Girls Hostel 1st Floor |
| 27 | Girls Hostel 2nd Floor |
| 28 | Staff Residence (Periphery) |
| 29 | Faculty Quarter (Periphery) |
| 30 | Director Bungalow |
| 31 | Guest House |
| 32 | Shop & Bank |
| 33 | Pole 1 (Near Resource Center Towards Road) |
| 34 | Pole 2 (Near Arena (Future)) |
| 35 | Pole 3 (Near Director Quarter) |
| 36 | Pole 4 (Near Generator Room) |



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Annexure:-VII

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Annexure:-VIII

Camera Lay Out Diagram

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NIFT PERIPHERY (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM





A hand-drawn floor plan of a school building, showing the layout of rooms and the placement of fire extinguishers. The rooms and their extinguisher counts are as follows:

- ACCOUNT OFFICE:** 1 extinguisher (D-1).
- EXAMINATION HALL:** 3 extinguishers (A-3).
- ADMIN OFFICE:** 3 extinguishers (A-3).
- RECORD ROOM:** 2 extinguishers (A-2) and 5 extinguishers (D-5).
- RECEPTION:** 3 extinguishers (D-3).
- LOBBY:** 1 extinguisher (D-1).
- STORE:** 7 extinguishers (D-7).
- F. TRAIN:** 1 extinguisher (D-1).
- M. TOI:** 1 extinguisher (D-1).

The building has a central entrance area with a door marked with a red '1'. The layout is irregular, with rooms of varying sizes and shapes.



A hand-drawn floor plan of a building, likely a school or office. The plan is irregular in shape, with a central corridor and several rooms branching off. The rooms are labeled as follows:

- DIRECTORS ROOM**: Located on the left side, with a red heart symbol and the number "D-11" next to it.
- P.A. ROOM**: Located below the Directors Room, with a red heart symbol and the number "D-9" next to it.
- VISITOR ROOM**: Located to the right of the P.A. Room, with a red heart symbol and the number "D-12" next to it.
- MEETING ROOM**: Located below the P.A. Room, with a red heart symbol and the number "D-10" next to it.
- TERRACE**: Located to the left of the Meeting Room, with a red heart symbol and the number "D-13" next to it.
- JOINT DIRECTOR**: Located on the right side, with a red heart symbol and the number "D-15" next to it.
- FEMALE TOILET**: Located to the right of the Joint Director room.
- MALE TOILET**: Located to the right of the Female Toilet.
- SERVER ROOM**: Located at the bottom left, with a red heart symbol and the number "D-14" next to it.
- UPS ROOM**: Located to the right of the Server Room, with a red heart symbol and the number "D-16" next to it.
- ACADEMIC AFFAIRS**: Located to the right of the UPS Room, with a red heart symbol and the number "D-17" next to it.

The plan also includes a central corridor, a small square room with a cross symbol, and a set of stairs at the bottom.

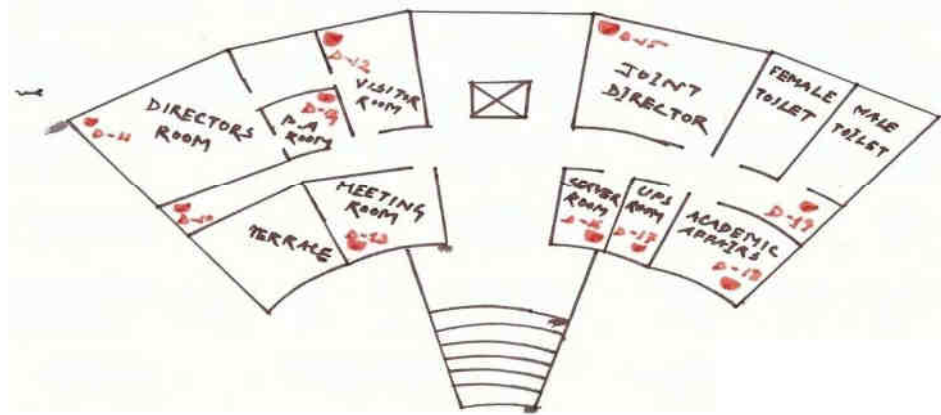


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ADMINISTRATION FIRST FLOOR (SHILLONG)

CAMERA LAYOUT FLOOR DIAGRAM

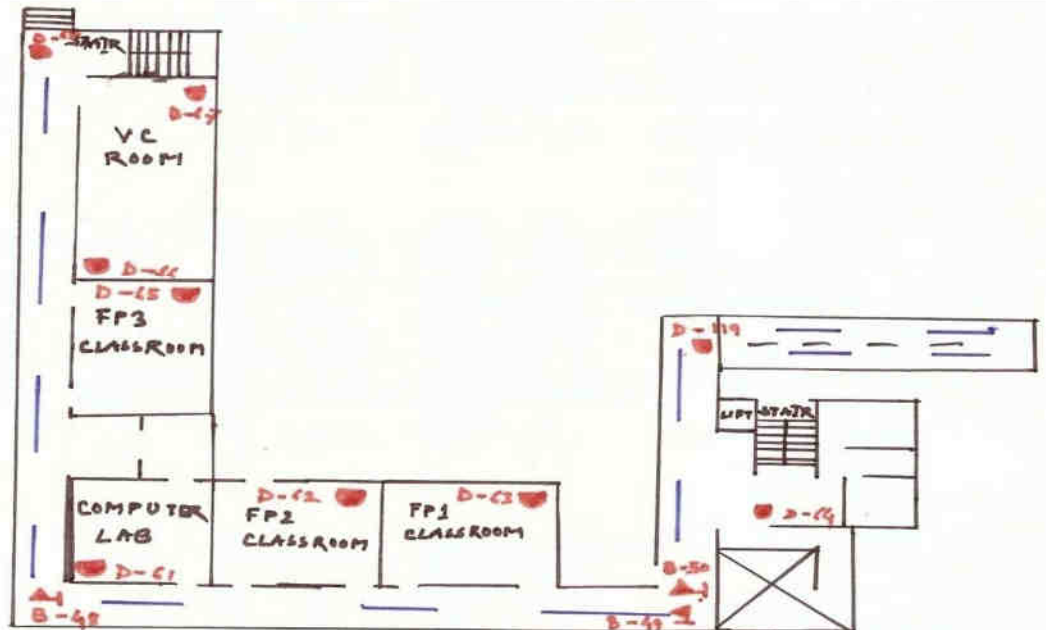


PTZ CAMERA BULLET CAMERA DOME CAMERA



BLOCK-A FIRST FLOOR (SHILLONG)

CAMERA LAYOUT FLOOR DIAGRAM

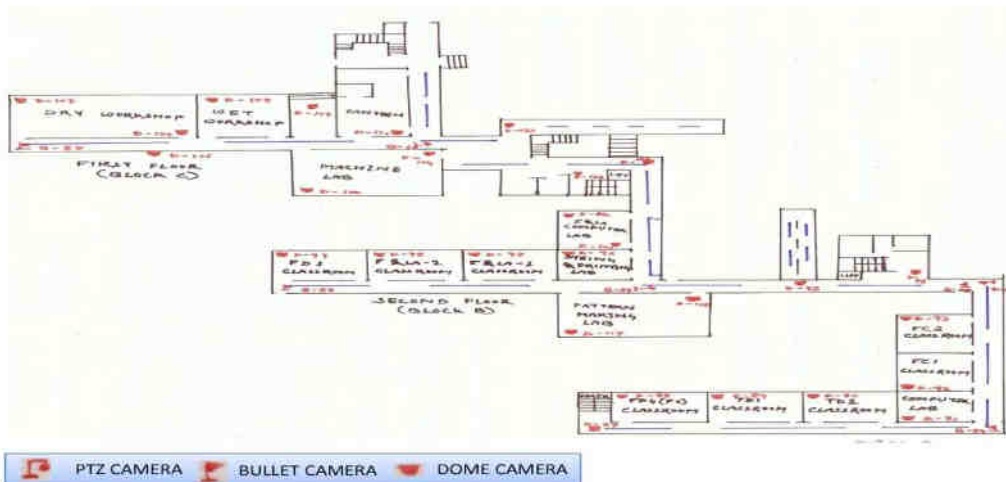


PTZ CAMERA BULLET CAMERA DOME CAMERA

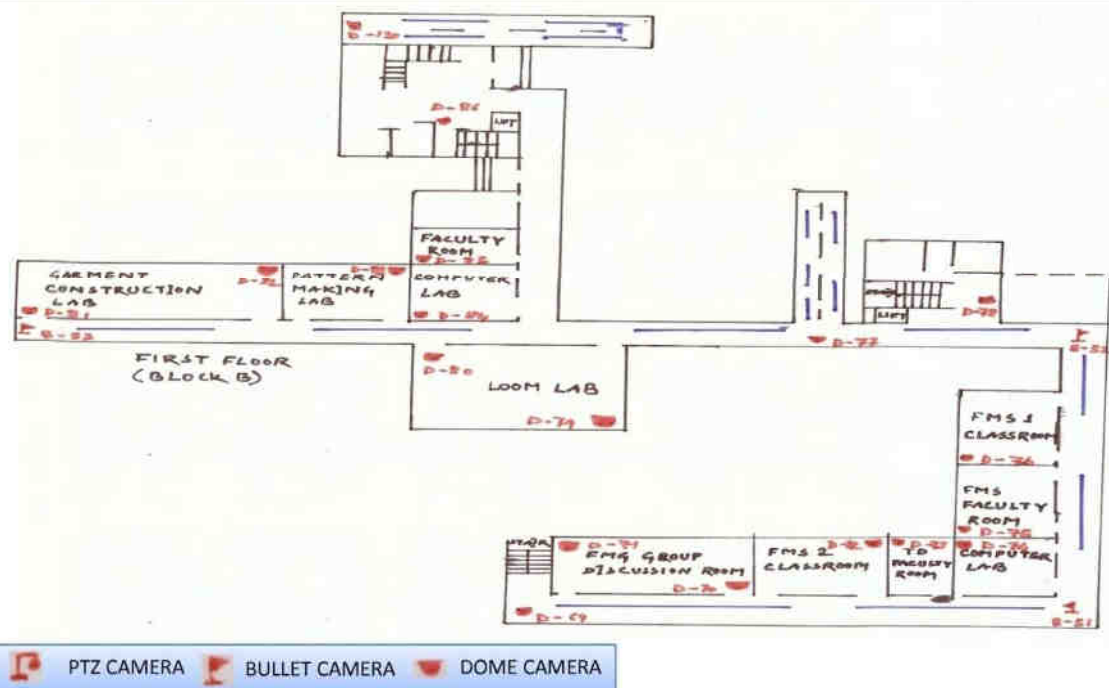
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BLOCK-A THIRD & BLOCK-B SECOND & BLOCK-C FIRST FLOOR
(SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM



BLOCK-A SECOND & BLOCK-B FIRST FLOOR (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM

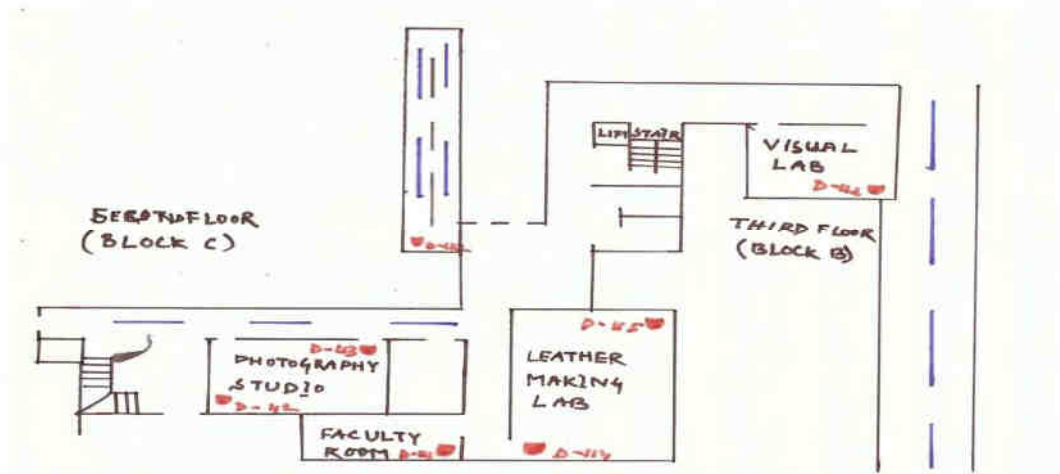


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BLOCK-C SECOND & BLOCK-B THIRD FLOOR (SHILLONG)

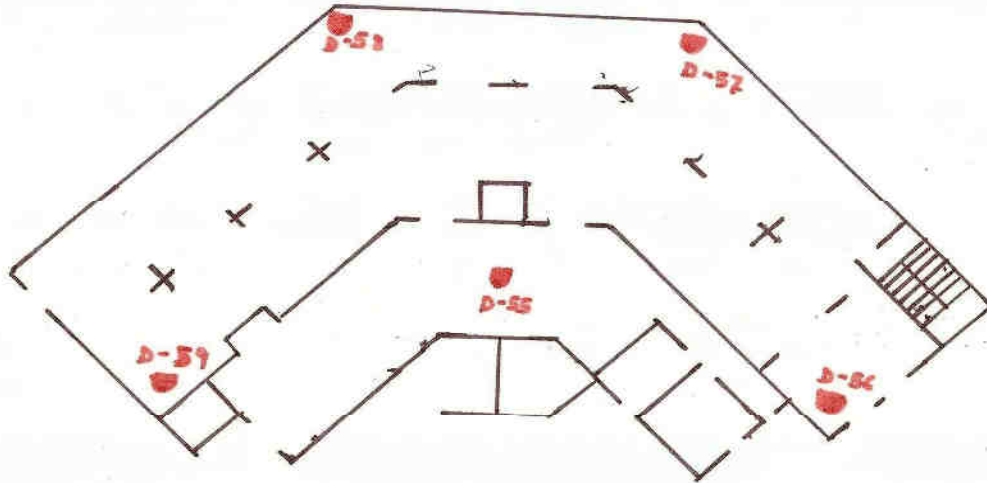
CAMERA LAYOUT FLOOR DIAGRAM



NIT No.: NIFT/SHL/PO/2018-19/E03-Fur



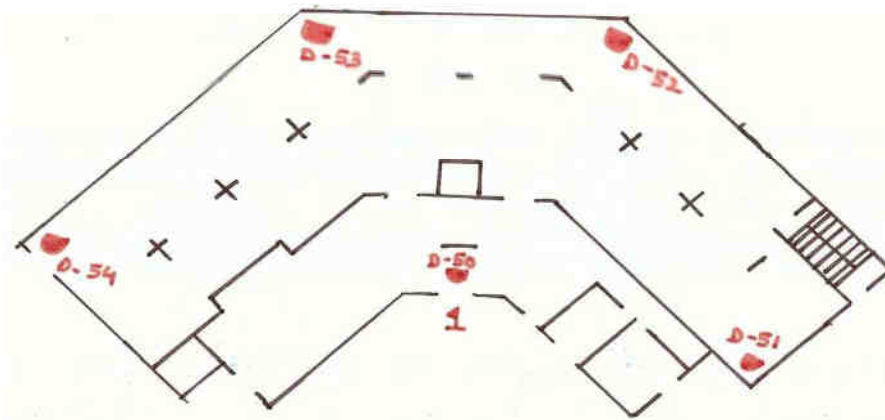
RESOURCE CENTRE GROUND FLOOR (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM



PTZ CAMERA BULLET CAMERA DOME CAMERA



RESOURCE CENTRE FIRST FLOOR (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM

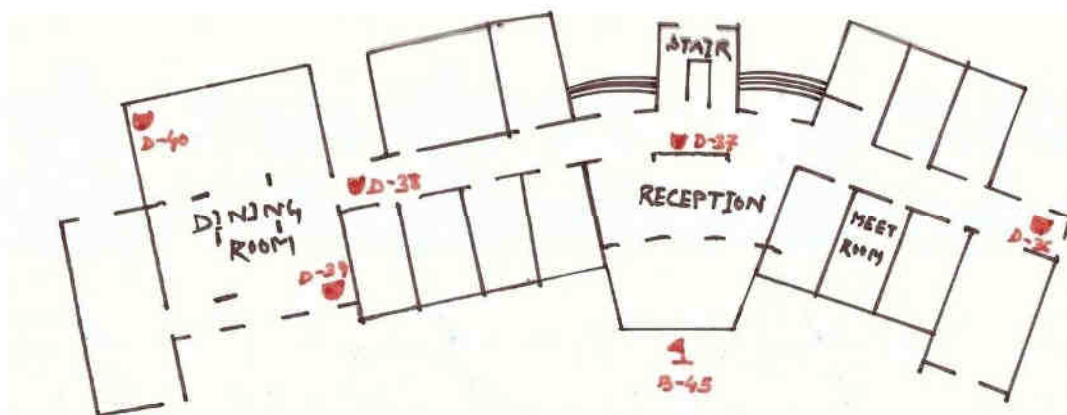


PTZ CAMERA BULLET CAMERA DOME CAMERA

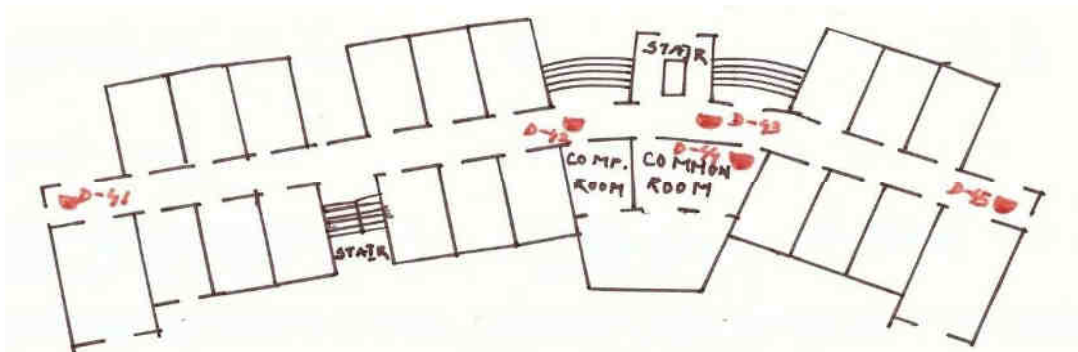
NIT No.: NIFT/SHL/PO/2018-19/E03-Fur



GIRLS HOSTEL GROUND FLOOR (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM



GIRLS HOSTEL FIRST FLOOR (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM

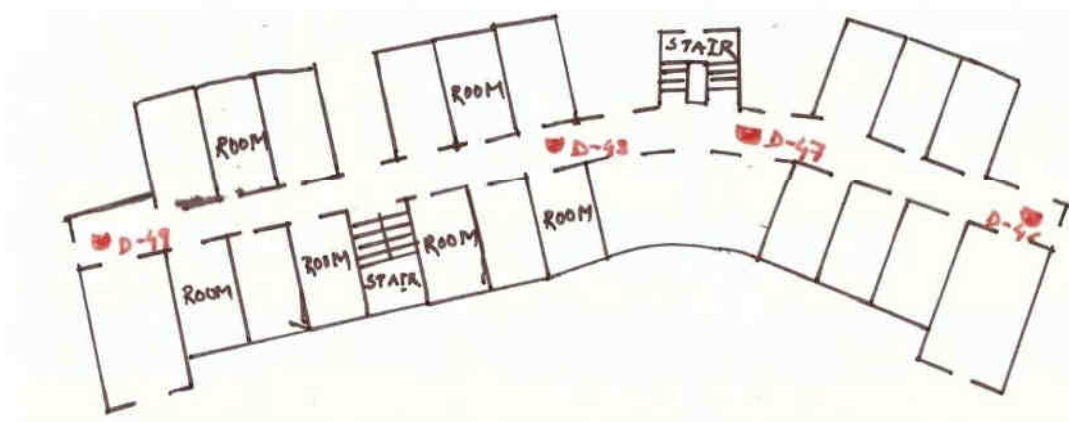


NIT No.: NIFT/SHL/PO/2018-19/E03-Fur



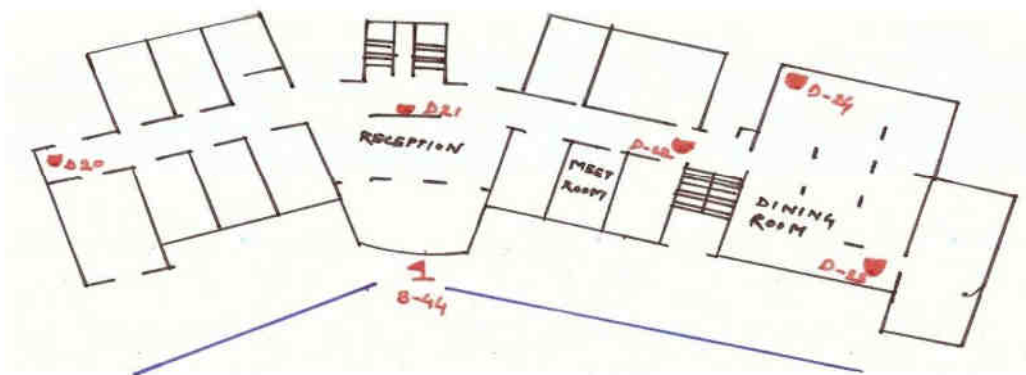
GIRLS HOSTEL SECOND FLOOR (SHILLONG)

CAMERA LAYOUT FLOOR DIAGRAM



BOYS HOSTEL GROUND FLOOR (SHILLONG)

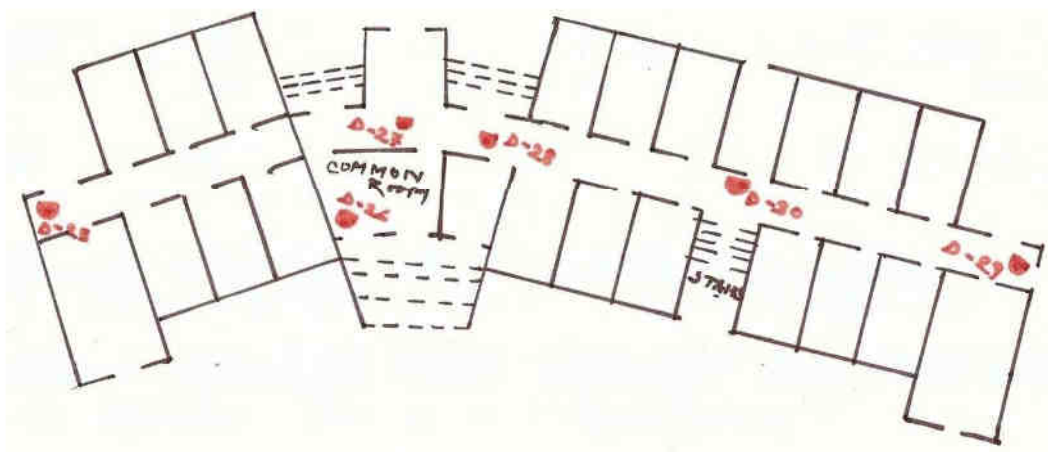
CAMERA LAYOUT FLOOR DIAGRAM



NIT No.: NIFT/SHL/PO/2018-19/E03-Fur



BOYS HOSTEL FIRST FLOOR (SHILLONG)
CAMERA LAYOUT FLOOR DIAGRAM



Annexure:-IX

List of Govt. Organizations / Dept.

List of Government Organizations for whom the Bidder has undertaken such work during last Two years (must be supported with work orders)to submitted online.

| Name of the organization | Name of the Contact Person | Contact No. |
|--------------------------|----------------------------|-------------|
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NIT No.: NIFT/SHL/PO/2018-19/E03-Fur

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Name of application specialist/ Service Engineer who have the technical Competency to handle and support the quoted product during the warranty period.

| Name of the organization | Name of Contact person | Contact No. |
|---------------------------------|-------------------------------|--------------------|
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Signature of Bidder

Name: _____