

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
HUMAN SPACE FLIGHT CENTRE (HSFC)
BENGALURU**

Tender for CCTV System

Bids to be submitted online

Tender No.: HSFC/Group-C/HS202400019401 dated 02-09-2024

A. Tender Details

Tender No :	HSFC/Group-C/HS202400019401
Tender Date :	02-09-2024
Tender Classification:	GOODS
Purchase Entity :	Group-C
Centre :	HUMAN SPACE FLIGHT CENTRE (HSFC)

CCTV System

1] This is Public Tender -Two Part bid basis.

2] The bid shall be submitted in Two Parts i.e TECHNO-COMMERCIAL (PART-1) and PRICE BID (PART-2). Price details should NOT be disclosed in the Part-1 (Technical and Commercial Bid) and in any other attachments enclosed in the technical bid. In case, price details are mentioned in Part-1, the same will be rejected. Tenderers are advised to go through the RFP documents and submit quotation accordingly.

3] Overall L1 will be considered for evaluation. Hence, Vendors should quote including Installation as a Turnkey Project excluding (optional item (Resident Engineer for 03 years)

4] Vendors should supply the items and carry out the installation including cable laying, testing, training and documentation.

5] Bill of Material without Price Breakup shall be submitted with along with technical bid.

6] Bill of Materials with price Breakup shall be submitted along with price bid.

7] Datasheet and Catalogues of the products being offered shall be submitted along with technical bid.

8] Purchase Order already executed shall be submitted along with technical bid.

9] General and Technical compliance documents shall be submitted along with technical bid.

A.1 Tender Schedule

Bid Submission Start Date : 02-09-2024 18:00

Bid Clarification Due Date : 05-09-2024 14:00

Bid Submission Due Date : 30-09-2024 14:00

Bid Opening Date : 30-09-2024 14:30

Price Bid Opening Date : 15-10-2024 14:00

B. Tender Attachments

Technical Write-up/Drawings

Document : CCTV System

Document : CCTV System

Document : CCTV System

Document : CAMC ServEngr TANDC

Document : General Conditions

Instructions To Vendors

1. INSTRUCTIONS TO DOMESTIC TENDERERS AND GENERAL TERMS AND CONDITIONS

1. 1. Chapter 1

1.0 Important:

1.1 Foreign vendors are not permitted to participate in this tender. Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the tender. Quotations directly from Foreign OEM/or from Agent quoting on behalf of Foreign OEMs are not allowed to participate in this tender.

1.2 The Product/Price Preference applicable as per the guidelines of Government of India applicable to MSEs and other agencies shall not be applicable for procurement under Gaganyaan Programme.

1.3 Registered Tenderers or Tenderers who have already applied for Renewal of Registration, Central PSUs/PSEs/Autonomous Bodies, Micro, Small and Medium Enterprises or any other authority are exempted from the payment of EMD/Bid Security. MSEs are only entitled for[a] issue of Tender documents Free of Cost [b] Exemption of Earnest Money Deposit [EMD] against production of a valid Udayam Certificate or any other registration certificate provided by any other Body specified by Ministry of MSEs. However, for MSEs Performance Security is mandatory for Goods and Services and policy does not provide benefits for Exemption from Performance Security.

1.4 The intending Tenderers are advised to read the Technical specifications, terms and conditions and other details carefully relating to the work contemplated in the Bid document and fully acquaint

themselves as to all conditions and matters which may in anyway affect the work or cost thereof. The Tenderer shall be deemed to have known the nature, scope and magnitude of the work. Tenderer should bid only if he considers himself eligible and if it is in possession of all documents required as per the tender. The intending Tenderers are required to bid after carefully examining all instructions, eligibility criteria, forms, terms standards and specifications as per the tender document with full understanding of its implications.

1.5 If the Tenderer is found ineligible after opening of tenders, his tender shall become invalid ipso facto, and costs of the tender document if any and processing fees as applicable shall not be refunded. Offers which are not in compliance with the tender conditions will be rejected without assigning any reasons thereof. Failure to furnish all requisite information or and/or documents shall result in repudiation of the Offer. Notwithstanding the foregoing, Human Space Flight Centre [HSFC], Bengaluru reserves the right to assess the capability of the Tenderer to perform the contract keeping in view the overall interest of HSFC. In the event, if the Tenderer capability and capacity are found to be unsatisfactory; HSFC reserves the right to reject the bid, without assigning any reasons thereof.

1.6 Any neglect or omission or failure on the part of the Tenderer in obtaining necessary information as stated above or in any other matter affecting the Tenderer shall not relieve him from any risks or liabilities or the entire responsibility for completion of the work in accordance with the bid documents.

1.7 Predatory Pricing: The Vendor[s] shall specifically take note that Predatory Pricing will not be accepted and such Bids not meeting even the Basic Cost of input i.e., Quoting unreasonably low prices to undercut and obtain the Contract are liable to be ignored/rejected. In order to obtain Quality, Products/Services the assessment of the Purchaser about the Predatory Pricing will be final.

1.8 All requirements stated herein below are a minimum and HSFC reserves the right to request for any additional information and also reserves the right to reject the proposal of any Tenderer, if in the opinion of HSFC, if the qualification or data is incomplete or if the Tenderer is found not qualified to satisfactorily perform the contract. The Tenderer shall bear all costs and expenses associated with preparation and submission of bid including post bid discussions, technical and other presentations and HSFC will in no case be responsible or liable for such costs, regardless of the outcome of the bidding process. The Tenderer shall also not be entitled to claim any costs, charges and expenses incidental to or incurred by him through or in connection with the submission of the Bid or its consideration by H SFC even though HSFC may elect to modify or withdraw the invitation to Bid or not to accept the Bid.

1.9 At any time prior to the deadline for submission of bids, HSFC may for any reason on his own initiative modify the bidding document by amendment. The amendment will be notified in writing or by fax or e-mail to the prospective Tenderers or uploaded online on the website. HSFC shall bear no responsibility or liability arising out of non-receipt of the same in time or otherwise. Notwithstanding the above, HSFC may at its discretion extend the deadline for submission of bids in order to afford reasonable time to prospective Tenderers to consider the amendment in preparing the bids.

1.10 All the bids in prescribed form enclosed with tender documents must be submitted before the time and date fixed for the receipt of offers as set forth in the tender document. HSFC will not be responsible for non-receipt of tender[s]/offer[s] due to any postal delays/loss of tender documents in transit and delay due to courier, etc. and it shall be the sole responsibility of the Tenderer to ensure delivery of the tender[s]/offer[s] within the time fixed. HSFC reserves the right to accept or reject any of the tender in full or part without assigning any reason thereof. Offers received after stipulated time and date will be rejected.

1.11 Public Tender documents will be also be uploaded on the HSFC website i.e. www.isro.gov.in and CPP Portal. Interested Tenderers may download the tender documents from website and submit their offers as per details mentioned in the Tender Notification.

1.12 If the tender opening date happens to be on an unidentified Holiday due to any reasons, including Force Majeure, tender[s] shall be opened on the next working day.

1.13 Tenderers shall submit quotations through online or offline as the case may be. The Tender shall be complete in respect of all technical specifications, instructions, drawing, pamphlets and catalogues, as per the tender document. Failure to furnish all information as per the requirements of the tender document and submission of bid not substantially responsive to the tender document shall render the tender liable for rejection. Any/All Bids by way of Fax/E-mail unless called for shall not be accepted.

1.14 Tenderers shall quote Prices in Indian Rupees Only for Indigenous Stores in accordance with the Price Template.

1.15 All available technical literature, catalogues, Original Equipment Manufacturer Certificate [OEM] and other data in support of the specifications and details of the items should be furnished along with the offer wherever necessary.

1.16 Samples, if called for, should be submitted free of charges by the Tenderers and Human Space Flight Centre [HSFC] shall not be responsible for any loss or damages thereof, due to any reason whatsoever. In the event of non-acceptance of tender, the Tenderer will have to remove/take away the samples at his own expenses.

1.17 Approximate Net and Gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

1.18 The Price quoted must be firm and should indicate quantity wise unit rate separately which have to be filled online. The percentage of GST where legally leviable and intended to be claimed shall be calculated and indicated in the column provided in online forms explicitly.

1.19 All amounts shall be indicated both in words as well as in figures. Where there is difference

between amount quoted in words and figures, the amount quoted in words shall prevail over the amount mentioned in figures. The Bid and the prices quoted shall remain valid for three calendar months initially from the date of the bid opening. A bid valid for a shorter period shall be rejected by Purchaser as non-responsive.

1.20 The Tenderer should provide along with his tender the name of his Bankers, Account details if required by Human Space Flight Centre [HSFC], Bengaluru.

1.21 Human Space Flight Centre [HSFC] reserves the right to place order on the successful Tenderers for additional quantity at the rates quoted or as mutually agreed for a period up to 18 months from the date of release of original order.

2. 2. Chapter - 2

2.0 Instructions to E-Procurement Tenders:

2.1 Human Space Flight Centre has implemented new e-tender system to obtain quotations through ONLINE. HSFC invites offer[s] through e-tender portal <https://www.eproc.isro.gov.in> for the supply of Stores. The Suppliers need to get enrolled in the e-tender portal to access tender and submit their offer online.

2.2 The Pre-requisites for Vendor Registration and Bidding are as follows:

- a] Tenderers may please note that without registering in our e-procurement portal, tenderers will not be able to quote for this e-tender.
- b] The vendor registration process shall be approved by the selected ISRO Centers.
- c] All registered vendors can download and participate in Public Tender.
- d] In case of Limited Tenders and Single Tenders, vendors can bid, if the tender is available in his dashboard.
- e] Vendor should enroll their Digital Certificate with the login ID.
- f] The client software should be up and running. This can be installed from the downloads link of login page.
- g] Tenderers can contact Help Desk No: 0471-2565454 in case of any difficulties for Registration and subsequent process.

MANUAL/POSTAL/COURIER/E-MAIL/FAX OFFERS WILL NOT BE CONSIDERED.FURTHER, IT MAY BE NOTED THAT NO MANUAL TENDER DOCUMENT WILL BE ISSUED BY HSFC.

2.3 Interested Tenderers may login to <https://www.eproc.isro.gov.in> and submit their offers via Online/internet submission only through the aforesaid website.

2.4 No Tender Fee/EMD shall be payable for submission of Tender through e-procurement.

2.5 The Quotation should be valid for 120 days from the date of opening of the Tender.

2.6 Specification: The description of the system in the documents supplied by the Tenderer along with the Bid shall be such as to ensure a clear understanding of the same and to permit its comparative evaluation. Stores offered should strictly conform to our specification. Deviations, if any, should be clearly indicated by the Tenderer in their quotation. The Tenderer should also indicate the Make/Type/Model Number of the Stores offered and upload catalogues, technical literature along with the quotations and provide samples wherever necessary. Test Certificates wherever necessary should be forwarded along with Supplies. Whenever options are called for and specifically mentioned by us, the Tenderer could suggest changes to specifications with appropriate response for the same.

2.7 GST or Other Duties/Levies where leviable and intended to be claimed should be distinctly shown separately in the Tender otherwise the Offer will not be considered.

2.8 For the Procurement/providing of Services, the Tenderer[s] are requested to quote the correct percentage of GST.

2.9 The document solicited from Tenderer should be submitted online. Document has to be a single PDF file and attached online.

2.10 The Tenderers are requested to submit the Bids online at least two days prior to closing date to avoid last minute computer network related problems. Tenders will be automatically closed on the due date last minute clarification on tenders and extension of the due date will not be considered.

2.11 Once the offer is submitted through online mode by the Tenderer, he will not be able to provide/submit a revised offer or make any alteration or change to the offer or any terms contained therein.

2.12 Human Space Flight Centre [HSFC] shall be under no obligations to accept the lowest offer or any tender and reserve the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the Tenderers shall supply the same at the rates quoted.

2.13 All the Tenderers should regularly browse/check the e-mail/s being sent to them from e-procurement portal for initiating appropriate action or for any updates on the Tender.

2.14 If Human Space Flight Centre [HSFC] disqualifies the Tenderer from the Tender process prior to the awarding of the Project, the Security Deposit/Performance Bank Guarantee furnished, if any, along with the offer, as per terms of the Invitation of Tender, shall also be forfeited. The Tenderer[s] understand and agree that this will be in addition to the disqualification and exclusion of the Tenderer[s]/Tender as may be imposed by Human Space Flight Centre [HSFC].

2.15 The Quotation should be submitted in Single/Two Parts as the case may be specified in the respective Tender Enquiry.

2.16 The Tender Enquiry contains technical requirements and specification. The detailed technical specification along with Commercial Terms and Conditions of the offer should be covered in Technical Bid i.e. Part-1 [Technical and Commercial Terms] and Part-2 [Price Bid].

2.17 In case of Two-Part Tender price details should NOT be disclosed in Part-1 [Technical and Commercial] and in any other attachments enclosed in the Technical Bid. In case, price details are mentioned, the same will be rejected. The Technical documents need to be attached online as a single PDF file without any price information.

2.18 In case of Two Part Tender, Commercial Terms to be covered in the Part-1 [Technical Bid] are Delivery Terms, Delivery Period, Payment Terms (without mentioning the price or amount), acceptance of Bank Charges Performance Security for performance of Contract and also for fulfillment of Warranty obligation, Validity of the Offer, Warranty/Guarantee, Liquidated Damages [for delayed supplies] and all available technical literature, catalogues and other data in support of the specifications and details of the items, etc. which have to be filled up online.

2.19 Prices are required to be quoted according to the units indicated, in the Part-2 [Price Bid] only.

2.20 In case of Two-Part Public/Open Tender, the exact date and time of opening of Price Bid of successful Tenderers will be intimated later.

2.21 The Part-1 [Technical Bid and Commercial Bid] opening date and time indicated is tentative. There may be changes/delay due to Network/Computer Server related problems and the tender opening may get delayed by one or two days under such circumstances, the exact date and time of opening will be intimated later in case of Public or Open Tender.

2.22 As per Office Memorandum No. 6/9/2020-PPD dated 24.08.2020 of Department of Expenditure, it shall be mandatory for sellers providing Goods and Services to Central Government Organisations to be registered on GeM and obtain a Unique GeM Seller ID, at the time of placement of Order/Acceptance of contract. Tenderers shall ensure the same.

3. 3. Chapter - 3

3.0 Public Procurement [Preference to Make in India]:

3.1 This order is issued pursuant to Rule 153[iii] of General Financial Rules-2017:

3.2 Government of India, Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade [DPIIT], Public Procurement Division issued order No. P-45021/2/2017-PP(BE

II)dated 16.09.2020and as amended from time to time in order to encourage Make in India and promote manufacturing and production of goods and services in India with a view to support the Indian industries. ISRO has implemented " Make in India - Purchase Preference Policy". The "Purchase Preference" is applicable for the "Class I Supplier" for the goods/ services/works covered in this tender, subject to the following terms and conditions: -

- a) The subject items fall under divisible category.
- b) The offers are sought from Class I and Class II Local suppliers.

3.3 Definition for Class of Suppliers:

A supplier or service provider, whose goods, services or works offered for procurement, has local content:

- i. Equal to or more than 50% for Class-I Local Supplier.
- ii. Equal to or More than 20% but less than 50% for Class-II local supplier.
- iii. Less than 20%: Non-Local Supplier.

3.4 'Local Content' means the amount of value added in India [i.e. indigenous items/services added in the offered products/services/works] be the total value of the item offered [excluding net domestic indirect taxes] minus the value of imported content in the item [including all customs duties/IGST] as a proportion of the total value [excluding net domestic indirect taxes], in percent.

3.5 The margin of Purchase Preference shall be up to 20%.

3.6 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 [landed cost].

3.7 'L1' means the lowest technically accepted tender / bid / quotation [i.e. lowest landed cost including duties, taxes and freight & Insurance].

3.8 Works means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'. Works includes Engineering, Procurement and Construction [EPC] contracts and services include System Integrator [SI] contracts.

3.9 Purchase Preference Policy: -

Goods/Works which are divisible in nature [required quantity is greater than 1 or not a package basis]:

- i. If L1 is 'Class-1 local supplier', the order/contract for full quantity shall be awarded to L1 bidder.
- ii. If L1 bid is not from a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1.

Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference [i.e. 20%] and contract for that quantity shall be awarded to such Class-I local supplier subject to matching the L1 price [inclusive of duties, taxes and freight & insurance].

iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In cases where none of the 'Class-I local supplier' within the margin of purchase agree to match L1 price, in such cases 100% quantity shall be ordered on original L1 bidder.

iv. In case no offers are received from 'Class-I local supplier' or none of the 'Class-I local supplier' falls within the margin of purchase preference of 20%, the order shall be processed on L1 vendor.

v. In case L1 bidder [not a 'Class-I local supplier'] is not accepting splitting of order on 50:50 basis, in that case the order/contract shall be awarded to such 'Class-I local supplier' for full quantity subject to matching the L1 price.

3.10 Goods/Works which are not divisible [i.e. required quantity is 1 or as a package] and Services:

i] If L1 is from a 'Class-I local supplier' the contract will be awarded to L1 bidder.

ii] If L1 is not from a 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference [i.e. 20%] and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price [inclusive of duties, taxes and freight & insurance].

iii] In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on, and order/contract shall be awarded accordingly. In case where none of the 'Class-I local supplier' within the margin of purchase preference agree to match the L1 price then the order/contract shall be awarded to the original L1 Bidder.

3.11 Applicability in tenders where contract is to be awarded to multiple bidders:

In tenders where contract is awarded to multiple bidder subject to matching of L 1 rates or otherwise, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

i] In case there is sufficient local capacity and competition for the item to be procured, as notified by the nodal Ministry, only Class I local suppliers shall be eligible to bid. As such, the multiple suppliers, who would be awarded the contract, should be all and only 'Class I Local suppliers'.

ii] In other cases. 'Class II local suppliers' and 'Non-local suppliers' may also participate in the bidding process along with 'Class I Local suppliers' as per provisions of this Order.

iii] If 'Class I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class I local supplier' over 'Class II local suppliers' ('Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.

iv] First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

v) To avoid any ambiguity during bid evaluation process, the procuring entities may stipulate its own tender specific criteria for award of contract amongst different bidders including the procedure for purchase preference to 'Class-I local supplier' within the broad policy guidelines stipulated in sub-paras above.

3.12 Exemption of small purchases: Notwithstanding anything contained in paragraph 3, procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.

3.13 The 'Class-I & II local supplier' should provide a "Self-Certification" along with technical offer indicating that the item offered meets the minimum local content [as per Definitions] as called for in the tender and provide the percentage of local content along with details of the location[s] at which the local value addition is made. In case of two bid tenders, it is mandatory to indicate compliance to MLC [minimum Local Content] in technical bid zone.

3.14 In cases the quoted price is in excess of Rs.1000 Lakhs [including duties, taxes and freight & Insurance] the 'Class-I & II local supplier shall provide a certificate from the statutory auditor or cost auditor of the company [in the case of companies] or from a practicing cost accountant or practicing chartered accountant [in case of suppliers other than companies] giving the percentage of local content.

3.15 A committee [with an external expert from a practicing cost accountant or practicing chartered accountant, if required] constituted for independent verification shall verify the self-declarations & auditor's / accountant's certificates on random basis, as per the requirements.

3.16 In case of a complaint received from any local supplier indicating a need for review/ verification of Local content of successful vendor / awarded vendor, for accepting a complaint from such complainant [w.r.t the false declaration given by the successful vendor on the local content], a complaint fee of Rs.2 Lakhs or 1% of the locally manufactured items being procured [subject to a maximum Rs. 5 Lakhs], whichever was higher, to be paid by demand draft by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

3.17 False declarations will be in breach of code of the integrity for which a bidder or its successor's will not be eligible/debarred for purchase preference from further tenders / pending tenders for two years along with other actions as may be applicable.

3.18 Further, in case the violation/false declaration established, in such case, a penalty amount up to 2% value of the each order will be deducted on such defaulted bidders.

3.19 Any terms and conditions not covered under this chapter shall be as per "Public Procurement (Preference to Make in India) as per Government of India, Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade [DPIIT], Public Procurement Division issued order P-45021/2/2017-PP (BE II) dated 16.09.2020 and as amended from time to time"

The above declared percentage of local content does not include in any item the cost of Transportation, Insurance, Installation, Commissioning, Training and After Sales Service Support like AMC/CMC. etc.

Eligibility conditions to participate Tender in HSFC for Countries Sharing Land Border with India:

The Bidder shall mandatorily submit the copy of valid Registration Certificate issued by DPIIT along with the tender without which the offer will be treated as invalid.

Requirement of Registration:

Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade [DPIIT]. Hence, Bidder or Agent from a country sharing border with India shall mandatorily submit the copy of valid Registration Certificate registered with DPIIT along with the tender, without which the offer will be treated as invalid.

Model Clauses of Tenders:

1. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority.

2. Bidder [including the term tenderer, consultant or service provider in certain contexts] means any person or firm or company, including any member of a consortium or joint venture [that is an association of several persons, or firms or companies], every artificial juridical person not falling in any of the descriptions of bidders stated herein before, including any agency branch or office controlled by such persons, participating in a procurement process.

3. "Bidder (or entity) from a country which shares a land border with India" for the purpose of this Order means:

An entity incorporated, established or registered in such a country; or A subsidiary of an entity incorporated, established or registered in such a country; or An entity substantially controlled through entities incorporated, established or registered in such a country; or An entity whose beneficial owner is situated in such a country; or An Indian (or other) agent of such an entity; or A natural person who is a citizen of such a country; or A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

4. The beneficial owner for the purpose of [3] above will be as under:

i] In case of a company or Limited Liability Partnership, the beneficial owner is the natural person[s], who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation----

a. Controlling ownership interest means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company;

b. Control shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

ii] In case of a partnership firm, the beneficial owner is the natural person[s] who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

iii] In case of an unincorporated association or body of individuals, the beneficial owner is the natural

person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

iv] Where no natural person is identified under [i] or [ii] or [iii] above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

v] In case of a trust, the identification of beneficial owner[s] shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

5. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

6. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

7. The registration shall be valid at the time of submission of bid and at the time of acceptance of bid.

8. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

Model Certificate for Tenders:

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the DPIIT, I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the DPIIT shall be attached]

Model Certificate for Tenders for Works involving possibility of sub-contracting:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Model Certificates for Tenders for Work involving possibility of Sub-Contracting:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. Where applicable, evidence of valid registration by the Competent Authority shall be attached.]'

The bidders, who have beneficial ownership in countries which share land border with India and intend to participate in public procurement in India, shall directly approach the DPIIT for Registration as per Format as Appendix . Bidders are also required to submit application for Security Clearance as per the Format as Appendix . The Appendix and Format are available in DPIIT website [i.e. www.dipp.gov.in] vide Office Memorandum No. P-45021/112/2020-PP(BE-II (E-43780) dated 24.08.2020. Complete application containing both Registration and Security Clearance formats duly filled in, may be directly submitted in the Office of Joint Secretary [MKN], DPIIT, Room No. 236A, Udyog Bhawan, New Delhi. The registration granted by DPIIT shall be only for the purpose of bid participation under Rule 144[xi] of General Financial Rules, 2017.

4. 4. Chapter 4:

Terms and Conditions:

4.0 Definitions: In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them: -

a] Acceptance shall mean conditional determination by Purchaser of the completion of the Work or any element thereof in accordance with the Contract, by issuance of a Certificate of Substantial Completion of Work as provided in the Contract.

b] Approval shall mean approval in writing issued by the Purchaser in terms of the tender.

c] Contract shall mean the documents forming the tender, the offer, the award of tender and the formal agreement executed between the competent authority on behalf of Purchaser and the Contractor, together with the documents referred to therein including the conditions enumerated herein, specifications, designs, drawings and instructions issued from time to time by the competent authority of Purchaser and all these documents taken together, shall be deemed to form one Contract and shall be complementary to one another.

d] Contractor shall mean the individual, firm, Limited Liability Partnership [LLP] or company, undertaking the works and shall include the legal representatives, nominees, affiliates, successors-in-

interest, permitted assigns, Heirs, Executors and Administrators of such individual, LLP, Firm or Company, unless repugnant to the context or meaning thereof.

e] Contract Value shall mean the sum for which the tender is accepted as per the Letter of Award.

f] Date of commencement of work The date of start of Contract shall be reckoned from the date of issue of Letter of Award.

g] Drawings shall mean the drawings referred to in the Contract document including modifications if any and such other drawings as may be from time to time, be furnished or approved by Purchaser.

h] Letter of Award shall mean Purchaser letter or notification conveying its acceptance of the tender, subject to such conditions as may have been stated therein.

i] Market Rate shall be the rate as decided by the competent authority of the Purchaser on the basis of the prevailing cost of materials and labour at the site where the work is to be executed plus the percentage mentioned elsewhere in the tender document to cover, all overheads and profits.

j] Month means English calendar month and Day means a calendar day of 24 hours each.

k] Purchaser shall mean The President of India represented by its Director or Sr Head/Head, Purchase and Stores, Human Space Flight Centre [HSFC] Bengaluru or his successors or assigns.

l] Purchase Order shall mean the communication signed on behalf of the Purchaser by an officer duly authorized intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to therein accepting the Tender or offer of the Contractor.

m] Template shall mean the standard template of rates to be read with any of receipt amendments thereto issued up to the date of receipt of tender.

n] Stores shall mean what the Contractor agrees to supply under the Contract/Tender as specified in the Purchase Order including erection of plant and machinery and subsequent testing should such a condition be included in the Purchase Order. o] Words indicating the singular only also includes the plural and vice versa, where the context so requires.

p] Words indicating Male Gender shall also include the Female or Neuter Gender, and vice versa, where the context so requires.

4.1 Contract Agreement:

The Tenderer shall enter into a Contract Agreement with the Purchaser within 45 [Forty Five] days from the date of Letter of Award or within such extended time, as may be granted by Purchaser failing

which no payment shall be released to the Contractor. The cost of stamp paper/s, stamp duty, registration, if applicable on the Contract, shall be borne by the Contractor. In case, the contractor does not sign the Agreement as above or fails to start the work within 10 [Ten] days of the issue of Letter of Award and the same stands withdrawn.

4.2 Transparency:

Tenderers are free to ask Purchaser for clarifications on the Bidding/Tender terms and conditions, process, etc., during the procurement process. All such queries and clarifications shall be sought for in writing via e-mail and sent to the officer authorized by the Purchaser to issue such clarifications, as may be required. No verbal request will be entertained.

4.3 Prices:

Tenders offering Fixed Prices will be considered. Where a price variation clause is insisted upon by a Tenderer, quotations will be with prices subject to adjustment up or down as per specific variation formula with reference to the base prices of major raw materials/components which will be detailed in the bid along with the respective percentage costs in the composite price for the finished goods. The Contractor shall be bound to carryout and complete the stipulated work irrespective of the variation in individual items as specified herein above.

For Indigenous Supplies, the Tenderer shall quote prices separately furnishing break-up of cost towards Basic Cost of Items Packing, Forwarding, Freight, Handling, Insurance, Installation if any, and GST.

4.4 Price Variation for Long Term Contracts:

Where Tenderer[s] quote delivery period beyond 18 months, the illustrative formula for Price Variation Clause [PVC] shall be referred under General Financial Rules [GFR], 2017, Appendix-11 [see Rule 225 [viii] [b]. It may please be noted that the formula for Price Variation is available on the Website.

4.5 Goods and Service Tax:

Government of India has implemented Goods and Services Tax [GST] w.e.f 01.07.2017. The Tenderer[s] should mandatorily possess a valid GSTIN along with the GST Registration Certificate. Please send duly self-attested certificate of GST Registration along with offer[s], in the absence of which your offer[s] will be invalid and shall not be considered

4.6 Concessional Goods and Services Tax:

Human Space Flight Centre [HSFC], Bengaluru is eligible for availing Concessional GST in terms of following Notifications issued by Government of India and Government of Karnataka for the

procurement of Goods against production of Certificate issued by an Officer not below the rank of Deputy Secretary to Government of India certifying that the Goods being procured will be used for launch vehicles, satellites and payloads only.

SI No Notification Concessional GST 1 i Government of India, Ministry of Finance, Department of Revenue, under S. No. 243A [now 243B] vide Notification No. 6/2018-Integrated Tax [Rate] dated 25.01.2018 and as amended vide Notification No. 24/2018-Integrated Tax [Rate] dated 31.12.2018 CGST @ 2.5% ii Government of Karnataka Finance Secretariat, under S. No. 243A [now 243B] vide Notification No. [6/2018] No. FD 48 CSL 2017, Bengaluru Dated 25.01.2018 and as amended as Notification No. [24/2018] No. FD 48 CSL 2017, Bengaluru Dated 31.12.2018 SGST @ 2.5%.

2 Government of India, Ministry of Finance, Department of Revenue, under S. No. 243A [now 243B] vide Notification No. 7/2018-Integrated Tax [Rate] dated 25.01.2018 and as amended vide Notification No. 25/2018-Integrated Tax [Rate] dated 31.12.2018 IGST @ 5%.

Tenderers are here by requested to take note of this aspect and submit the Quotation accordingly. Necessary GST Declaration Certificate shall be issued by respective Centres on Demand from the tenderer.

In the event, if the tenderers specifically not mentioned the GST Percentage or GST Amount while submitting their offer it will be deemed and considered as the prices quoted by the tenderers are inclusive of GST.

4.7 Customs Duty:

Human Space Flight Centre, Bengaluru is partially exempted from payment of Customs Duty vide Notification No.12/12-Cus dated 17.03.2012 superseded by Notification No. 50/17-Customs dated 30.06.2017 and as amended vide Notification No. 5/2018-Customs dated 25.01.2018 SI. No. 539A. The necessary Customs Duty Concessional Certification [CDCC] shall be provided. In case of Imported bought out Items if any, HSFC/Respective identified ISRO Centres/Units shall provide necessary Customs Duty Concessional Certificate [CDCC] only. All charges towards Import of items shall be borne by the tenderers. While requesting for issue of CDCC for the bought out Imported Items if any, the Tenderer[s] should mention the Item Description, Quantity and Value for which CDCC is to be provided for the bought out Imported Items. The necessary proof should be produced while requesting for issue of CDCC from HSFC/Respective identified ISRO Centres/Units.

4.8 Evaluation of Tenders:

The Evaluation/Loading criteria in respect of Payment Terms, Bank Guarantee towards Free Issue of Materials [FIM], etc., having financial implications will be considered to arrive at L-1 status.

4.9 Clarification Regarding Contents of the Bids:

During evaluation and comparison of bids, the Purchaser may, at its discretion, ask the Tenderer for clarification of his bid. The request for clarification will be given in writing and no change in prices or substance of the bid will be sought, offered or permitted.

However, at the time when tenders are under consideration, the Tenderers are advised to refrain from contacting by any means, either HSFC and/or their employees/representatives on matters related to the tender which are under consideration.

The tender evaluation and process of award of works is done by duly authorized Tender Scrutiny Committee and this Committee is authorized to discuss and get clarification/s from the Tenderers, if any. The Tenderer/s may be asked to give a presentation on his technical bid and arrange for functional demonstration of the stores offered. No change in the substance of the bid or the price thereof shall be sought/offered/permitted.

4.10 Bank Guarantee towards Free Issue Materials [FIM]:

The successful Tenderers shall furnish Bank Guarantee [BG] towards the cost of Free Issue Materials issued by Purchaser towards adequate Security for the FIM for the execution of the Contract and the said Tenderer will be duly authorized by PURCHASER to collect the free issue materials from HSFC site subject to the furnishing of the aforesaid Bank Guarantee. The BG is to be kept valid till supply and acceptance of the final product.

In the case of Central Public Sector Undertaking/Public Sector Enterprises/Autonomous Bodies and Government Organization, Indemnity Bond [IB] together with Insurance shall be considered in place of BG.

For Fabrication of items, in case FIM issued by HSFC, the Supplier should provide a material consumption statement indicating the quantity of FIM issued, actual quantity used, balance material returned, scrap returned etc. should be attached by the Fabricator to his final bill.

4.11 Payment Terms:

All payments are subject to permissible legal deductions from the contract price as per the Contract. All payments shall be released only after successful and satisfactory completion of quantum and type of work, specified for respective activity. All payments shall be directly made by the Purchaser to the Tenderer.

All interim payments made shall be regarded as payments by way of advance against the final payment only, and not as payment for work actually completed and shall not preclude defective/imperfect/incomplete work to be removed. It will not be considered as an admission on the part of the Purchaser of the due performance of Contract or any part thereof nor shall it preclude,

determine or affect in any way the powers of the Purchaser to determine the quality and quantity of work and issue such directions, as may be necessary to the Contractor.

4.12 Terms of Payment in case of Indigenous Supplier[s]:

The Contractor[s] Bill will be processed for payment only after the Stores have been received, inspected and accepted by the Purchaser. Normally payment will be made for the accepted Stores within 30 days from the date of Receipt and Acceptance of the Material at Human Space Flight Centre [HSFC] against production of the following documents:

- a) Original Tax Invoice describing the Stores delivered, Quantity Unit Rate and their Total Value and applicable GST.
- b) Delivery Challan
- c) Warranty and Guarantee Certificates.
- d) Test Certificate, if any.

4.13 Bank Charges:

Any Bank Charges payable to our Bank shall be payable by Purchaser. Similarly, any Bank charges payable to your bank shall be payable by the Contractor.

4.14 Packaging: The Contractor wherever applicable shall pack all Stores in crates or cartons or as applicable so as to protect it from damages and deterioration in transit by road, Rail for Space Qualified Stores. The Contractor[s] shall be held responsible for all losses and damages caused due to improper packaging.

4.15 Performance Security [PS]:

Within 15 days from the date of issue of the Purchase Order or with in such extended time as may be granted by the Purchaser in writing, the Contractor shall execute an irrevocable interest free Performance Security for 3% of the Contract value to ensure due Performance of the Contract including the fulfillment of the Warranty obligation. The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Tenderer failure to complete his obligations under the contract. The Purchaser shall discharge the performance security bond after completion of Tenderer performance obligations including the warranty and post-warranty obligations under the contract.

The Performance Security may either be furnished in the form of an Account Payee Demand Draft; or Fixed Deposit Receipt from a Nationalized Bank, or Bank Guarantee from a Nationalized Bank or Online Payment in favour of Accounts Officer, Human Space Flight Centre [HSFC], Bengaluru. The Bank Guarantee must be valid for the entire contract period and an additional period of 60 days beyond the date of completion of all contractual obligations of the Tenderer including the Warranty obligations. In the event the work is not completed within the stipulated period, the contractor shall get

the Performance Security extended. The Bank Guarantee shall be executed on a Non-judicial stamp paper of appropriate value as per Specimen. The Performance Security will not carry any interest and shall be returned after completion of all the obligations of the Contract.

In the event the Contractor fails to furnish the Performance Security within 15 Days as stipulated hereinabove, i.e. after the receipt of Purchase Order or on signing of the Contract or any extension thereof, the Purchase Order/ Contract shall be cancelled and terminated at the Contractor risk, cost and liability. The Earnest Money Deposit, if any executed shall be forfeited and appropriate penal and legal action shall be initiated.

Central Public Sector Undertakings [PSUs]/Public Sector Enterprises [PSEs]/Autonomous Bodies are exempted from payment of Performance Security, and instead, an Indemnity Bond shall be executed in lieu of Performance Security.

4.16 Guaranteed Time of Delivery:

The time for and the date of delivery of Stores will be deemed to be the essence of the Purchase Order/Contract failing which Purchaser reserves the right to terminate/cancel the Order/Contract at his discretion.

4.17 Ultimate Consignee:

Purchase & Stores Officer [Stores], Human Space Flight Centre, ISRO HQ Campus, Anthariksh Bhavan, New BEL Road Bengaluru-560 094 or any other ISRO Centers/Units as specified in Purchase Order.

4.18 Insurance of the Stores: No Insurance is required at Human Space Flight Centre [HSFC] cost. The Contractor shall be responsible for insuring the Stores wherever considered necessary.

4.19 Inspection and Acceptance Tests:

The Purchaser representatives shall also be entitled at all reasonable times during manufacture to Inspect examine and test at the Contractor premises, the material and workmanship of all Stores to be supplied under this Contract and if part of the said Stores is being manufactured on other premises, the Contractor shall obtain the Purchaser representative permission to inspect, examine and test and shall not release the Contractor from the obligations under this Contract.

For tests conducted at the premises of the Contractor or any of his sub-contractors, the Contractor shall Provide Free of Cost Assistance, Labour, Materials, Electricity, Fuel and Instruments as may be required or as may be reasonably needed by the Purchaser representative to carry out the tests efficiently.

When the Stores have passed the specified test, the Purchaser representative shall furnish a certificate to this effect in writing to the Contractor. The Contractor shall provide copies of Test Certificate to the Purchaser as may be required.

4.20 Acceptance of Stores:

The Stores shall be tendered by the Contractor for Inspection at such places as may be specified by the Purchaser at the Contractor own risk, expenses and cost.

It is expressly agreed that the acceptance of the Stores contracted for, is subject to final approval by the Purchaser, whose decision shall be final.

If, in the opinion of the Purchaser, all or any of the Stores that do not meet the performance or quality requirements specified in the Purchaser Order, they will be rejected and the decision as to the rejection by the Purchaser shall be final and binding on the Contractor.

If the whole or any part of the Stores supplied are rejected the Purchaser shall be at liberty, with or without notice to the Contractor, to Purchase in the open market at the expense of the Contractor, Stores meeting the necessary performance and quality contracted for in place of those rejected, provided that either the Purchaser or the agreement to Purchase from another supplier is made six months from the date of rejection of the Stores as aforesaid.

4.21 Contractor[s] Default Liability:

The Purchaser upon a written notice of default to the Contractor, shall be entitled to terminate the Contract by giving 30 days prior notice, in whole or in part, at the sole risk and cost of the Contractor, in circumstances detailed hereunder: -

If in the judgment of the Purchaser, the Contractor fails to make delivery of Stores within time specified in the Contract/Agreement or within the period for which extension has been granted by the Purchaser to Contractor.

If in the judgment of the Purchaser, the Contractor fails to comply with any of the other provisions of this Contract.

In the event of Purchaser Terminating the Contract in whole or in part thereof, as provided herein above, the Purchaser reserves the right to purchase, upon such terms and in a manner as he may deem appropriate, Stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional cost for such similar Stores, and/or for Liquidated Damages for delays as defined in Clause 4.25 until such reasonable time as may be required for the final supply of Stores.

If Contract is terminated as provided in Clause 4.21 the Purchaser in addition to any other rights

provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following cases in the manner and as directed by the Purchaser.

Any completed Stores.

The Purchaser shall pay to the Contractor, the Contract price for completed Stores delivered to and accepted by the Purchaser and for manufacturing materials delivered and accepted.

In the event, the Purchaser does not exercise its right to terminate the Contract as provided in Clause 4.21, the Contractor shall continue the performance of the Contract, in which case he shall be liable to the Purchaser for Liquidated Damages for delay as set out in Clause 32.0 until the Stores are accepted.

4.22 Replacement:

If the Stores or any portion thereof, is damaged or lost during the transit, the Purchaser shall give notice to the Contractor setting forth particulars of such Stores damaged or lost during transit. The replacement of such Stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. The payment for the replacement of Stores shall be in accordance as per contract.

4.23 Rejection:

If the Stores supplied by the Contractor are found to be defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specification, the Purchaser shall either reject the Stores or request the Contractor in writing to repair, rectify, replace the same. The Contractor, on receipt of such notification shall either rectify or replace the defective Stores free of cost to the Purchaser. If the Contractor fails to do so, the Purchaser may either: -

a) Repair, Replace or rectify such defective Stores and recover extra cost so involved from the Contractor; or

b) Terminate the Contract for default as provided under Clause 3.23 above. The right to terminate and the right to replace the Stores shall not be derogatory to one another and shall mutually complement one another. In other words, the Purchaser shall be entitled to take either decision, or both.

4.24 Force Majeure:

Neither party shall bear responsibility complete or partial non-performance of any of his obligations [except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the Purchase Order/Contract], if the non-performance results from such force majeure circumstances such as, but not restricted to, flood, fire, earthquake, civil commotion, sabotage,

explosion, epidemic, quarantine restriction, strike, lock out, freight embargo, acts of the Government either in its sovereign or its contractual capacity, hostility, acts of public enemy and other acts of God as well as war or revolution, military operation, blockade, acts or actions of state authorities or any other circumstances beyond the control of the parties that have arisen after the conclusion of Purchase Order/Contract. In such circumstances, the time stipulated for the performance of an obligation under the Purchase Order/Contract may be proportionately extended.

The party for whom it has become impossible to meet the obligation under this contract due to force majeure condition shall notify the other party in writing not later than 7 days from the date of the occurrence and cessation of the force majeure condition/s. In the event of delay lasting over one month, arising from force majeure causes, the Purchaser reserves the right to cancel the contract without any obligation to compensate the Tenderer in any manner. Unless agreed by both the parties, in writing, the Contractor shall continue to perform his obligations under the Purchase Order/Contract as far as is practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

Any Certificate issued by the Chamber of Commerce or any other competent authority or organization of the respective country shall be sufficient proof of commencement and cessation of the above circumstances. In case of failure to carry out complete or partial performance of an obligation for more than 60 days, either party shall reserve the right to terminate the Contract totally or partially. A prior written notice of 30 days to the other party will be given informing of the intention to terminate without any liability.

The Force Majeure condition is applicable only to the prime Contractor and Purchaser.

4.25 Delay in Completion/Liquidated Damages:

The time and date stipulated in the contract for completion of the work shall be deemed to be the essence of the contract. If the Contractor fails to deliver the Stores within the time specified in the Contract or any extension thereof or if the Contractor fails to maintain the required progress or comply with the relevant provisions of the general conditions of contract or special conditions of contract, if any and clear the site on or before the contract or extended date of completion, the Purchaser shall, without prejudice to any other right or remedy available under the law to Purchaser on account of such breach, recover from the Contractor as Liquidated Damages a sum one-half of one percent [0.5 percent] of the Contract price of the undelivered Stores for each calendar week of delay or part thereof. The total Liquidated Damages shall not exceed Ten percent [10 percent] of the Contract price of the unit or units so delayed.

In case of delay in delivery of the Stores beyond the delivery date stipulated in the Purchase Order/Contract or any extension thereof, such Stores shall be received without prejudice to the right of the Purchaser to claim Liquidated Damages and without prejudice to the terms and conditions of the Purchase Order/Contract. In case if Advance Payment is Drawn by the suppliers, HSFC will be

charging interest at appropriate rate in case of any delay attributable to the contractor/supplier in effecting the supply after the prescribed delivery date. The levy of interest in such cases shall be for the period beyond the specified delivery date, on the amount of balance advance payment.

4.26 Erection of Plant, Machinery and Installation of Software:

Wherever Erection of Plant or Machinery and Installation of Software is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the Erection and Installation of the Software as and when called upon to do so within the period specified by the Purchaser, the Purchaser shall have the right to get the Erection and Installation of the Software etc., done through any source/agency of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the Purchaser is liable to incur towards erection. The Contractor, shall, however, not be entitled to any gain/payment due to such an action by the Purchaser.

If it appears to the authorised representative of the Purchaser that any work has been executed with unsound, imperfect or unskilful workmanship or with materials of any inferior quality or description, or that any materials or articles procured by the tenderer for the execution of the work are of unsound quality or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the tenderer shall on demand in writing within 03 Months of the completion of the work from the said Authorised Representative notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part as the case may require remove the materials or articles so specified and provide other proper and suitable materials or articles at its own cost. In the event Tenderer fails to rectify or remove and re-execute the work or remove and replace with others, the material or articles complained of as the case may it shall be so strictly at the risk and expense in all respects of the Tenderer, including the right to refund of payment received and also cost of rectification.

4.27 Standard Warranty/Guarantee:

All products/stores supplied against the bid shall be of high reliability and shall carry comprehensive free of cost warranty. The Contractor shall guarantee and certify that the Stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance. The Purchaser expects the stores to be highly reliable which would result in lower maintenance and repair cost.

Guarantee for the period as indicated in the tender documents shall be after acceptance of the Stores. If any defects are discovered, therein or any defects therein are found to have developed under proper use arising from faulty materials, design or workmanship, Contractor shall remedy such defects at his own cost provided, he is called upon to do so within a period of 12 months from the date of Acceptance thereof, by the Purchaser who shall state in writing in what respect the Stores or any part thereof, are faulty.

If in the opinion of the Purchaser, it becomes necessary to repair, replace or renew any defective

Stores, such repair, replacement or renewal shall be made by the Contractor Free of all Cost to the Purchaser, provided the notice informing the Contractor of the defect is given by the Purchaser in this regard within the said period of 12 Months from the date of acceptance of Stores thereof.

If Contractor fail to rectify the defects, the Purchaser shall have right to reject or repair or replace, at the cost of the Contractor the whole or any portion of the defective Stores. The warranty for such replaced/repared items/stores shall be for 12 months from the date of handing over of such replaced/repared stores in complete and satisfactory condition to the Purchaser.

The decision of the Purchaser, notwithstanding any prior approval or acceptance or inspection thereof, on behalf of the Purchaser, as to whether or not the Stores supplied by the Contractor are defective or any defect has developed within the said period of 12 Months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor. The Warranty/Guarantee certificate has to accompany the shipment.

All the replacement Stores shall also be guaranteed for a period of 12 months from the date arrival of Stores at Purchaser site.

4.28 Termination:

Under the normal circumstances, Termination/Short Closing of the Purchase Order/Contract is not foreseen. However, the Purchaser reserves the right to terminate the Contract in whole or in part by giving 30 days prior notice under the following circumstances:

a] For repeated non-performance in the execution of Purchase Order/Contract.

b] If the Contractor fails to deliver the final Product within the stipulated delivery schedule or any extension thereof, granted by Human Space Flight Centre [HSFC].

c] If the Stores repeatedly fails in the Inspection and does not pass Inspection and Quality requirements of Purchase Order/Contract and/or the Contractor is not in a position to either rectify the defects or offer the Stores conforming to the contracted Quality Standards.

d] If the Contractor is unable to rectify the defects or offer replacements in lieu of defective items

e] If the final Product does not pass Inspection and Quality requirements of Purchase Order/Contract.

f] If the Contractor fails to perform any other obligations under Purchase Order/Contract.

g] If the Contractor becomes bankrupt or otherwise insolvent.

h] Owing to deficiency of service, breach of Contract.

l] For inefficiency, indiscipline, irregularity, insincerity, indifference in work, indulges in corrupt practices, disobedience, doubtful credentials/integrity, etc., at any point of time during the Contract period.

j] To terminate the Purchase Order/Contract at any time by giving 30 days prior notice.

4.29 Parallel Contract:

Purchaser reserves the right to enter into Parallel Contract/s with one or more Contractors for procurement of Stores or any portion thereof that is covered by this Contract.

4.30 Subletting/Assignment of the Contract:

The Contract shall not be sublet, transferred or assigned to any other third-party Firm/Agencies/Person, etc., without the prior written permission of Purchaser. In case of violation of this clause, the Service Provider/Contractor shall be solely responsible for any legal action besides termination of Contract.

4.31 Secrecy:

The technical information, drawings, specifications and other related documents provided by the Purchaser and forming part of the Contract are the property of Purchaser and shall not be used or disclosed for any other purpose, except for execution of the Contract. All rights, including rights in the event of grant of patent and registration of designs are reserved in favour of the Purchaser. The technical information, drawings, specifications, records and other documents provided by the Purchaser shall not be copied, transcribed, traced or reproduced in any other form or otherwise in whole and/ or duplicated, modified, divulged and/or disclosed to a third party nor misused in any other form whatsoever without Purchaser consent in writing except to the extent required for the execution of this Contract. These technical information, drawings, specifications and other related documents which were originally provided by the Purchaser shall be returned to the Purchaser with all approved copies and duplicates, if any, immediately after they have been used for the agreed purpose, and shall be accompanied with a certificate of the Contractor signed by an authorised signatory that such technical information, drawings, etc. have been returned to the Purchaser and that the Contractor has not retained any copy/ies thereof with him.

4.32 Arbitration:

In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30

days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 together with amendments thereto or any modification thereof. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre Bengaluru [Domestic and International] as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The Seat for Arbitration shall be Bengaluru and the Arbitration proceedings shall be conducted in English Language only.

Work under the contract shall be continued by the Contractor during the pendency of Arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the Purchaser or unless the matter is such that the work cannot be possibly continued until the decision [whether final or interim] of the Arbitrator is obtained.

4.33 Arbitration with Public Sector Undertakings:

In case of any dispute or difference of opinion arises between the parties connected to this Contract, such disputes or difference of opinion shall be resolved amicably by mutual consultation. Failing which, either party may take recourse of any alternative dispute settlement mechanism.

Notwithstanding anything contained in above para, in case of any dispute or difference of opinion falling under the exception to the ambit of Administrative Mechanism for Resolution of CPSEs Disputes [AMRCD] the party to this Contract with mutual consent may take recourse of any alternative dispute settlement mechanism including arbitration for settlement of such disputes as per applicable law and procedure. Further, also that all the differences or disputes including publication related disputes concerning intellectual property rights arising out of any activities performed under this agreement shall be in first attempt settled through mutual deliberations, failing which shall be further settled in terms of applicable laws and procedure.

4.34 Language and Measures:

All documents pertaining to the Contract including specification schedule notices, correspondence, operating and maintenance instruction drawings or any other writing shall be written in English language only. The metric system of measurement shall be used exclusively in the Contract. Any document originally in a language other than English must be accompanied with certified English translation and the same shall be considered for evaluation.

4.35 Applicable Law and Jurisdiction:

The Contract shall be interpreted, construed and governed by the Laws of India and the Courts in Bengaluru City alone shall have exclusive jurisdiction in this regard, to the extent permissible under the

Arbitration and Conciliation Act, 1996.

4.36 Indemnity:

The Contractor shall warrant and deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any third party Patent, Copy Right or Trademark and shall at all times indemnify the Purchaser against all claims which may be made in respect of the Stores for infringement of any third party right protected by Patent, Registration of the design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the Contract. The Contractor shall indemnify and keep indemnified the Purchaser against payments to be made under and for the observance of the applicable laws without prejudice to his right to claim indemnity from his sub-contractors, if any.

4.37 Counter Terms & Conditions:

Where counter terms and conditions printed or cyclostyled condition have been offered by the supplier as part of its bid, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof, is obtained and incorporated into the Agreement to be entered into between the Parties, upon award of the Tender/Contract.

4.38 Security Interest:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payment have been made in accordance with the Terms of the Contract. Purchaser shall have a Security Interest in such items which shall be deemed to be released only at the time when the applicable deliverable items is finally accepted and delivered to the Purchaser in accordance with the terms of Contract. Such Security Interest of the Purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any other entity.

4.39 Training: The Contractor shall, if required by the Purchaser, provide facilities for the Practical Training of Purchaser Engineering or Technical Personnel from India and for their active association on the manufacturing process throughout the manufacturing period of the Contract/Stores, number of such personnel to be mutually agreed upon.

4.40 Risk Purchase: Risk Purchase Clause will be applicable for all Contracts.

4.41 Fall Clause:

The Price[s] charged for the Stores/Services supplied under the Contract by the Contractor shall be no event exceed the lowest price at which the Contractor sells the Stores/Services or offer to sell the Stores/Services of identical description to any Person[s], Firm, Party, Organisation[s] including the

Purchaser or any Department of Central Government or any Department of State Government or any statutory undertaking of the Central/State Government as the case may be during the period till the performance of all supply orders placed during the currency of the Contract is completed.

If at any time during the said period, the Contractor reduces the sale price, sells or offers to sell such Stores/Services to any person[s], Organisation[s], including the Purchaser or any Department of Central Government or any Department of State Government or any statutory undertaking of the Central or a State Government as the case may be, at a price lower than the price chargeable under the Contract, he shall forthwith notify such reduction or sale of offer to the Purchaser and the price payable under the Contract for the Stores/Services supplied after the date of coming into force of such reduction or sale or offer of sale stand correspondingly reduced to the same lower rate.

4.42 Limitation of Liability:

The remedies stated in the Contract are exclusive and in no event shall the Contractor be liable for any, special, incidental, consequential or punitive damages of any nature. Notwithstanding any other provision of the contract, the Contractor total liability to the Purchaser, whether in Contract shall not exceed the total amount paid to the Contractor under the Contract.

The Purchaser shall be under no obligations to accept the lowest or any tender and reserve the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the Tenderer[s] shall supply the same at the rates quoted.

The Purchaser shall not be liable to the Contractor for any loss or damages suffered by it during the term of the Contract or subsequently, and in no event shall the Contractor be liable for any, special, incidental, consequential or punitive damages of any nature. Notwithstanding any other provision of the Contract, the Contract having been satisfactorily completed, the Purchaser total liability to the Contractor, shall not exceed the total amount to be paid to the Contractor under the Contract.

4.43 Buy Back Offer:

Wherever it is considered necessary, the Quotation shall be given separately with Buy-Back Offer and also without Buy-Back Offer so as to enable Purchaser either to Trade or not to Trade the item while purchasing the new one.

4.44 Rejection of Bids:

Canvassing by the Tenderer in any form, unsolicited letter and post-tender correction may invoke summary rejection of Bids. Conditional Tenders will be rejected. The Tenderer shall not impose any conditions on the bid i.e. the bid must be unconditional.

4.45 Conditional Discount Offer: Conditional Discounts Offers will not be considered.

4.46 Lowest Offer:

The Lowest Offer [L-1] shall be decided based on the aggregate value of all items put together for which Quotation have been called for wherever necessary.

4.47 Splitting of Order[s]: The Volume/Quantity for certain specialized nature of jobs is considerably large and it is necessary the orders are split with more than one party in order to ensure timely delivery/services. Purchaser reserves right to split the Purchase Orders to more than one party. However, every effort will be made to bring the Commercial aspect including price of the parties on a single common platform.

4.48 Changes in the Name and Address of the Supplier:

In the event of Change in Name and Address of Tenderer/Contractor, Documentary Proof issued by the Appropriate Government Authorities shall be produced for making such change in the Contract and its procedures, in the absence of which PO/Amendment/Payment will not be released.

4.49 Annual Maintenance Contract [AMC]/Extended Warranty:

Tenderers are requested to quote separately towards Annual Comprehensive Maintenance Service/Extended Warranty and Non-Comprehensive Maintenance besides attending to unlimited Break-Down calls wherever specification calls for after expiry of Standard Warranty.

4.50 Public Procurement for Start-ups:

The facilities/benefits will be extended for start-ups as per the Guidelines issued by Government of India.

4.51 Validity of Offer: The offer should be valid for a minimum period of 120 days from the date of opening of the tender. The Authority of person signing the Tender, if called for shall be produced.

4.52 Instruction/Operation Manual containing all assembly details including wiring diagrams should be sent wherever necessary in duplicate. All documents/ correspondence should be in English language only.

4.53 The Purchaser reserves the right to accept or reject any offer in whole or in part without assigning any reason.

4.54 It is expressly agreed that the acceptance of the Stores contracted for is subject to final approval in writing by the Purchaser.

4.55 Inspection/Test/Certificate should be provided for the goods after testing it thoroughly at the Contractors works. If any inspection by Lloyds or any other Third-Party Agency is considered necessary, it shall be arranged by Contractors on the instructions of the Purchaser.

4.56 Where Erection, Assembly or Commissioning is a part of the Contract, it should be done immediately on notification. The Contractor shall be responsible for any loss/damages sustained due to delay in fulfilling this responsibility.

4.57 For items having Shelf Life, the same shall be supplied with maximum Shelf Life if order is placed.

4.58 Average Financial Turnover for the preceding 03 Financial Years has to be provided by the Tenderer along with the Quotation. This should be supported with three years Profit and Loss Account and Balance Sheet duly authenticated by Chartered Accountant.

4.59 Details of Financial capacity of the Firm Viz., details of Audited Balance Sheet including Profit and Loss account for the last 03 years certified by Chartered Accountant along with comments of Auditors has to be submitted by the Tenderer along with the Quotation.

4.60 Self-assessment technical and organizational competence to Supply the Stores of this nature and magnitude.

4.61 The Tenderer shall propose a viable Financial Plan/Model for successful execution of the Project, explaining Liquidity and Solvency capacity of the Firm which is equivalent to 100% of the Contract Value. The same shall be supported with documentary proof obtained from the Bankers.

4.62 Preparation of Comparative Statement of Tenders: While preparing Comparative Statement of Tenders [CST] appropriate Marginal Cost of Funds based lending rate [MCLR] or any other rate as notified by Reserve Bank of India from time to time, shall be loaded in all cases where the Vendors have demanded for Advance Payment/Milestone Payment in order to arrive at landed cost of the Quotations received and evaluation of Quotations shall be made accordingly.

4.63 Pre-Delivery Inspection: Pre-Delivery Inspection if required, shall be carried out by HSFC Engineers at the Contractors Factory Premises at our cost. The Contractor need not extend any Hospitality to our representatives.

4.64 Additional Quantity [Optional Clause]:

The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted till final delivery date (or the extended delivery date of the Contract).

C. Bid Templates

C.1 Technical Bid - CCTV System

1. CCTV System - Indoor Fixed Bullet Camera

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Image Sensor Type	CMOS	Yes / No / Explain		
2	Image Sensor Size	0.344 inch or better	Yes / No / Explain		
3	Camera Image Sensing capacity (Picture Mode)	2MP	Yes / No / Explain		
4	Resolution	2MP(1920×1080) or better	Yes / No / Explain		
5	Day/Night Capable	Yes	Yes / No / Explain		
6	IR illumination Range(mtr)	20 or better	Yes / No / Explain		
7	CAMERA TYPE	Details to be provided	Yes / No / Explain		
8	Type of Camera Housing	BULLET CAMERA	Yes / No / Explain		
9	IP Camera	Yes	Yes / No / Explain		
10	PTZ Camera	No	Yes / No / Explain		
11	OPTICS	Details to be provided	Yes / No / Explain		
12	Lens Type	Fixed Lens	Yes / No / Explain		
13	Focal Length(mm)	3.2 mm or better	Yes / No / Explain		
14	Iris Control	No	Yes / No / Explain		
15	Focus Mode	Fixed	Yes / No / Explain		

16	VIDEO	Details to be provided	Yes / No / Explain		
17	Frame Rate (fps)	25	Yes / No / Explain		
18	Video Compression	H.264,H.265, MJPEG	Yes / No / Explain		
19	Video Streaming	Five individual Full HD compressed stream	Yes / No / Explain		
20	PAN / TILT / ZOOM	Details to be provided	Yes / No / Explain		
21	Panning Range	NA	Yes / No / Explain		
22	Pan Speed (deg/sec)	NA	Yes / No / Explain		
23	Tilt Range below horizontal (deg)	NA	Yes / No / Explain		
24	Tilt Range above horizontal (deg)	NA	Yes / No / Explain		
25	Tilt Speed (deg/sec)	NA	Yes / No / Explain		
26	Optical Zoom	NA	Yes / No / Explain		
27	Digital Zoom	NA	Yes / No / Explain		
28	AUDIO	Details to be provided	Yes / No / Explain		
29	Audio Support	NA	Yes / No / Explain		
30	Audio Compression	NA	Yes / No / Explain		
31	Audio Streaming	NA	Yes / No / Explain		
32	Number of Audio Input Channel	NA	Yes / No / Explain		
33	Number of Audio Output Channel	NA	Yes / No / Explain		
34	External Microphone Support	NA	Yes / No / Explain		
35	ALARM	Details to be provided	Yes / No / Explain		

36	Alarm Support	Yes	Yes / No / Explain		
37	Number of Alarm Digital Input	1	Yes / No / Explain		
38	Number of Alarm Relay Output	1	Yes / No / Explain		
39	Pre/Post Alarm Buffer	Yes	Yes / No / Explain		
40	SECURITY	Details to be provided	Yes / No / Explain		
41	Multi Level User ID/Password	Yes	Yes / No / Explain		
42	IP Address Filtering	Yes	Yes / No / Explain		
43	Encrypted Data Transmission	HTTPS (SSL/TSL)	Yes / No / Explain		
44	PERFORMANCE	Details to be provided	Yes / No / Explain		
45	Minimum Illumination for Capturing Color Image	0.16 lux	Yes / No / Explain		
46	Electronic Shutter Speed(sec)	1/5 to 1/19000	Yes / No / Explain		
47	WDR (Wide Dynamic Range)	110 db	Yes / No / Explain		
48	SNR (Signal to Noise Ratio)	NA	Yes / No / Explain		
49	Auto Exposure	Auto Level Control, Electronic Level Control	Yes / No / Explain		
50	FEATURES	Details to be provided	Yes / No / Explain		
51	White Balance (Indoor/Outdoor/Manual Selectable)	Yes	Yes / No / Explain		
52	Auto Gain Control (On/Off selectable)	Yes	Yes / No / Explain		
53	Back Light Compensation	Yes	Yes / No / Explain		
54	Remote Administration (Remote configuration and status using web based tool)	Yes	Yes / No / Explain		

55	Remote System Update Over Network	Yes	Yes / No / Explain		
56	PC Client (PC application client with a channel recording feature support)	Yes	Yes / No / Explain		
57	Web Client (Viewer through HTTP system configuration)	Yes	Yes / No / Explain		
58	On Screen Display in English	Yes	Yes / No / Explain		
59	ONVIF Support	Yes	Yes / No / Explain		
60	Presets	NA	Yes / No / Explain		
61	Group Touring	NA	Yes / No / Explain		
62	Privacy Zones	4	Yes / No / Explain		
63	NETWORK AND INTERFACE	Details to be provided	Yes / No / Explain		
64	Supported Protocols	IPv4, IPv6 USGv6, HTTP, HTTPSb, HTTP/2, TLSb, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, DHCPv4/v6, SSH, LLDP, MQTT v3.1.1	Yes / No / Explain		
65	IP Support	Static,Dynamic	Yes / No / Explain		
66	Signal Processing	Digital Signal Process	Yes / No / Explain		
67	IPv6 ready	Yes	Yes / No / Explain		
68	Wireless	No	Yes / No / Explain		
69	Simultaneous Connections	8	Yes / No / Explain		

70	STORAGE	Preferred	Yes / No / Explain		
71	On Board SD Card Support	Yes	Yes / No / Explain		
72	SD Card Memory(GB)	512GB or better	Yes / No / Explain		
73	HOUSING	Details to be provided	Yes / No / Explain		
74	Installation Type	Indoor	Yes / No / Explain		
75	Material of the Housing construction	Alluminium	Yes / No / Explain		
76	Protection	IP 66	Yes / No / Explain		
77	Vandal Resistant Housing	Yes	Yes / No / Explain		
78	If Yes, IK rating	IK08	Yes / No / Explain		
79	Mounting bracket	Wall / Ceiling Mounted	Yes / No / Explain		
80	Weight	To state	Yes / No / Explain		
81	Dimensions (mm x mm x mm)	To state	Yes / No / Explain		
82	POWER SUPPLY	If not PoE, suitable adapter to be provided	Yes / No / Explain		
83	Power Input	PoE / Thorough AC adapter	Yes / No / Explain		
84	Power Consumption	To state	Yes / No / Explain		
85	Suitable Midspan Shall be Supplied to Make the Equipment Work on 230 V (+/- 10 %), 50 Hz	Yes	Yes / No / Explain		
86	OPERATING CONDITIONS	Details to be provided	Yes / No / Explain		
87	Operating Temperature Range	-5°C to +50°C	Yes / No / Explain		
88	Relative Humidity Non Condensing (%)	90 or better	Yes / No / Explain		
89	Warranty	3 Years	Yes / No / Explain		

90	Time for Replacement of Defective Product During Warranty Period	72 hour	Yes / No / Explain		
91	Supply of Compatible drivers and software included	Yes	Yes / No / Explain		
92	Availability of facility & infrastructure for verification of all parameters, features, and capability with Seller	Yes	Yes / No / Explain		
93	Availability of facility to test signal to noise ratio of camera at 0-01 lux	Yes	Yes / No / Explain		
94	Conformity to Dry Heat test at 55 degree C for 16 hours as per IS :9000 latest	Yes	Yes / No / Explain		
95	Conformity to Damp heat at 40 degree C - 95% RH (cyclic test): two cycles of 16+8 hours as per IS: 9000 latest	Yes	Yes / No / Explain		
96	Conformity to Cold test at -10 / -20 degree C for 4 hours as per IS: 9000 latest, as applicable	Yes	Yes / No / Explain		
97	BIS Registration for safety general requirements as per IS 13252 (Part 1):latest	Preferred	Yes / No / Explain		
98	Availability of Type Test Report from Central Govt /NABL/ILAC accredited lab to prove conformity to specification	No	Yes / No / Explain		
99	Certification	IS or equivalent	Yes / No / Explain		

2. CCTV System - Indoor Exp Proof PTZ Camera

Item specifications for CCTV System

Sl No	Specification	Value	Compliance	Offered Specification	Remark
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1	IMAGE SENSOR	Details to be provided	Yes / No / Explain		
2	Image Sensor Type	CMOS	Yes / No / Explain		
3	Image Sensor Size	0.833 inch	Yes / No / Explain		
4	Camera Image Sensing capacity (Picture Mode)	2MP or better	Yes / No / Explain		
5	Resolution	2MP(1920×1080) or better	Yes / No / Explain		
6	Day/Night Capable	No	Yes / No / Explain		
7	IR illumination Range(mtr)	0	Yes / No / Explain		
8	CAMERA TYPE	Details to be provided	Yes / No / Explain		
9	Type of Camera Housing	Explosion Proof BULLET CAMERA	Yes / No / Explain		
10	IP Camera	Yes	Yes / No / Explain		
11	PTZ Camera	Yes	Yes / No / Explain		
12	OPTICS	Details to be provided	Yes / No / Explain		
13	Lens Type	Motorized Varifocal	Yes / No / Explain		
14	Focal Length(mm)	*6 to 10 mm Nominal or better	Yes / No / Explain		
15	Iris Control	Yes	Yes / No / Explain		
16	Focus Mode	Auto,Manual	Yes / No / Explain		
17	VIDEO	Details to be provided	Yes / No / Explain		
18	Frame Rate (fps)	seletable upto 30 or better	Yes / No / Explain		
19	Video Compression	H.264,H.265, MJPEG	Yes / No / Explain		
20	*Video Streaming	*Five individual Full HD compressed stream	Yes / No / Explain		

21	PAN / TILT / ZOOM	Details to be provided	Yes / No / Explain		
22	Panning Range	0-360	Yes / No / Explain		
23	*Pan Speed (deg/sec)	100 or better	Yes / No / Explain		
24	Tilt Range below horizontal (deg)	90 degree	Yes / No / Explain		
25	Tilt Range above horizontal (deg)	90 degree	Yes / No / Explain		
26	Tilt Speed (deg/sec)	100 or better	Yes / No / Explain		
27	Optical Zoom	20X or better	Yes / No / Explain		
28	Digital Zoom	6X or better	Yes / No / Explain		
29	AUDIO	Details to be provided	Yes / No / Explain		
30	Audio Support	Yes	Yes / No / Explain		
31	Audio Compression	G.711,AAC,G.726	Yes / No / Explain		
32	Audio Streaming	Two-Way	Yes / No / Explain		
33	Number of Audio Input Channel	1	Yes / No / Explain		
34	Number of Audio Output Channel	1	Yes / No / Explain		
35	External Microphone Support	Yes	Yes / No / Explain		
36	ALARM	Details to be provided	Yes / No / Explain		
37	Alarm Support	Yes	Yes / No / Explain		
38	Number of Alarm Digital Input	1	Yes / No / Explain		
39	Number of Alarm Relay Output	1	Yes / No / Explain		
40	Pre/Post Alarm Buffer	Yes	Yes / No / Explain		
41	SECURITY	Details to be provided	Yes / No / Explain		

42	Multi Level User ID/Password	Yes	Yes / No / Explain		
43	IP Address Filtering	Yes	Yes / No / Explain		
44	Encrypted Data Transmission	HTTPS (SSL/TSL)	Yes / No / Explain		
45	PERFORMANCE		-		
46	Minimum Illumination for Capturing Color Image	0.1 lux	Yes / No / Explain		
47	Electronic Shutter Speed(sec)	2 to 1/37000	Yes / No / Explain		
48	WDR (Wide Dynamic Range)	120 db	Yes / No / Explain		
49	Auto Exposure	Auto Level Control, Electronic Level Control	Yes / No / Explain		
50	FEATURES	Details to be provided	Yes / No / Explain		
51	White Balance (Indoor/Outdoor/Manual Selectable)	Yes	Yes / No / Explain		
52	Auto Gain Control (On/Off selectable)	Yes	Yes / No / Explain		
53	Back Light Compensation	Yes	Yes / No / Explain		
54	Remote Administration (Remote configuration and status using web based tool)	Yes	Yes / No / Explain		
55	Remote System Update Over Network	Yes	Yes / No / Explain		
56	PC Client (PC application client with a channel recording feature support)	Yes	Yes / No / Explain		
57	Web Client (Viewer through HTTP system configuration)	Yes	Yes / No / Explain		
58	On Screen Display in English	Yes	Yes / No / Explain		

59	ONVIF Support	Yes	Yes / No / Explain		
60	Presets	NA	Yes / No / Explain		
61	Group Touring	NA	Yes / No / Explain		
62	Privacy Zones	4	Yes / No / Explain		
63	NETWORK AND INTERFACE	Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T	Yes / No / Explain		
64	Supported Protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPSb, HTTP/2, TLSb, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)	Yes / No / Explain		
65	IP Support	Static,Dynamic	Yes / No / Explain		
66	Signal Processing	Digital Signal Process	Yes / No / Explain		
67	IPv6 ready	Yes	Yes / No / Explain		
68	Wireless	No	Yes / No / Explain		
69	Simultaneous Connections	8	Yes / No / Explain		
70	STORAGE	Details to be provided	Yes / No / Explain		
71	On Board SD Card Support	Yes	Yes / No / Explain		
72	SD Card Memory(GB) Supported Upto	512GB or better	Yes / No / Explain		

73	HOUSING	Details to be provided	Yes / No / Explain		
74	Installation Type	Indoor	Yes / No / Explain		
75	Material of the Housing construction	Stainless Steel / Aluminium	Yes / No / Explain		
76	Protection	IP 66	Yes / No / Explain		
77	Vandal Resistant Housing	Yes	Yes / No / Explain		
78	If Yes, IK rating	IK10	Yes / No / Explain		
79	Mounting bracket	Wall Mounted	Yes / No / Explain		
80	Weight	1500 gram	Yes / No / Explain		
81	Dimensions (mm x mm x mm)	Ø132 x 132 x 280 mm	Yes / No / Explain		
82	POWER SUPPLY	Details to be provided	Yes / No / Explain		
83	Power Input	PoE / Thorough AC adapter	Yes / No / Explain		
84	Power Consumption	To state	Yes / No / Explain		
85	Suitable Adapter Shall be Supplied to Make the Equipment Work on 230 V (+/- 10 %), 50 Hz	Yes (From same Make as Camera)	Yes / No / Explain		
86	WARRANTY / SERVICES	Details to be provided	Yes / No / Explain		
87	Warranty	3 Years	Yes / No / Explain		
88	Time for Replacement of Defective Product During Warranty Period	72 hour	Yes / No / Explain		
89	Supply of Compatible drivers and software included	Yes	Yes / No / Explain		
90	ENVIRONMENTAL / CERTIFICATION	Details to be provided	Yes / No / Explain		

91	BIS Registration for safety general requirements as per IS 13252 (Part 1):latest	Yes	Yes / No / Explain		
92	Certification	RoHS,CE,FCC, Atex,MTBF >100,000 h (Certificates to be provided from OEM)	Yes / No / Explain		
93	Conformity to Damp heat at 40 degree C - 95% RH (cyclic test): two cycles of 16+8 hours as per IS: 9000 latest	Yes	Yes / No / Explain		
94	Conformity to Cold test at -10 / -20 degree C for 4 hours as per IS: 9000 latest, as applicable	Yes	Yes / No / Explain		
95	Availability of Type Test Report from Central Govt /NABL/ILAC accredited lab to prove conformity to specification	No	Yes / No / Explain		
96	Test Report Number and Date	NA	Yes / No / Explain		
97	Name and Address of Test Lab	NA	Yes / No / Explain		
98	IS Certification	IS or equivalent	Yes / No / Explain		

3. CCTV System - Indoor Fixed Explosion Proof Camera

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	IMAGE SENSOR	Details to be provided	Yes / No / Explain		
2	Image Sensor Type	CMOS	Yes / No / Explain		
3	Image Sensor Size	0.833 inch or better	Yes / No / Explain		
4	Camera Image Sensing capacity (Picture Mode)	2MP or better	Yes / No / Explain		

5	Resolution	2MP(1920×1080) or better	Yes / No / Explain		
6	Day/Night Capable	No	Yes / No / Explain		
7	IR illumination Range(mtr)	0	Yes / No / Explain		
8	CAMERA TYPE	Details to be provided	Yes / No / Explain		
9	Type of Camera Housing	Explosion Proof BULLET CAMERA	Yes / No / Explain		
10	IP Camera	Yes	Yes / No / Explain		
11	PTZ Camera	No	Yes / No / Explain		
12	OPTICS		-		
13	Lens Type	Motorized Varifocal	Yes / No / Explain		
14	Focal Length(mm)	*6 to 10 mm Nominal or better	Yes / No / Explain		
15	Iris Control	Yes	Yes / No / Explain		
16	Focus Mode	Auto,Manual	Yes / No / Explain		
17	VIDEO	Details to be provided	Yes / No / Explain		
18	Frame Rate (fps)	Selectable upto 30 or better	Yes / No / Explain		
19	Video Compression	H.264,H.265, MJPEG	Yes / No / Explain		
20	*Video Streaming	*Five individual Full HD compressed stream	Yes / No / Explain		
21	PAN / TILT / ZOOM	Details to be provided	Yes / No / Explain		
22	Panning Range	NA	Yes / No / Explain		
23	Pan Speed (deg/sec)	NA	Yes / No / Explain		
24	Tilt Range below horizontal (deg)	NA	Yes / No / Explain		

25	Tilt Range above horizontal (deg)	NA	Yes / No / Explain		
26	Tilt Speed (deg/sec)	NA	Yes / No / Explain		
27	Optical Zoom	NA	Yes / No / Explain		
28	Digital Zoom	NA	Yes / No / Explain		
29	AUDIO	Details to be provided	Yes / No / Explain		
30	Audio Support	Yes	Yes / No / Explain		
31	Audio Compression	G.711,AAC,G.726	Yes / No / Explain		
32	*Audio Streaming	Two-Way	Yes / No / Explain		
33	Number of Audio Input Channel	1	Yes / No / Explain		
34	Number of Audio Output Channel	1	Yes / No / Explain		
35	External Microphone Support	Yes	Yes / No / Explain		
36	ALARM	Details to be provided	Yes / No / Explain		
37	Alarm Support	Yes	Yes / No / Explain		
38	Number of Alarm Digital Input	1	Yes / No / Explain		
39	Number of Alarm Relay Output	1	Yes / No / Explain		
40	Pre/Post Alarm Buffer	Yes	Yes / No / Explain		
41	SECURITY	Details to be provided	Yes / No / Explain		
42	Multi Level User ID/Password	Yes	Yes / No / Explain		
43	IP Address Filtering	Yes	Yes / No / Explain		
44	Encrypted Data Transmission	HTTPS (SSL/TSL)	Yes / No / Explain		
45	PERFORMANCE	Details to be provided	Yes / No / Explain		

46	Minimum Illumination for Capturing Color Image	0.1 lux	Yes / No / Explain		
47	Electronic Shutter Speed(sec)	2 to 1/37000	Yes / No / Explain		
48	WDR (Wide Dynamic Range)	120 db	Yes / No / Explain		
49	Auto Exposure	Auto Level Control,Electronic Level Control	Yes / No / Explain		
50	FEATURES	Details to be provided	Yes / No / Explain		
51	White Balance (Indoor/Outdoor/Manual Selectable)	Yes	Yes / No / Explain		
52	Auto Gain Control (On/Off selectable)	Yes	Yes / No / Explain		
53	Back Light Compensation	Yes	Yes / No / Explain		
54	Remote Administration (Remote configuration and status using web based tool)	Yes	Yes / No / Explain		
55	Remote System Update Over Network	Yes	Yes / No / Explain		
56	PC Client (PC application client with a channel recording feature support)	Yes	Yes / No / Explain		
57	Web Client (Viewer through HTTP system configuration)	Yes	Yes / No / Explain		
58	On Screen Display in English	Yes	Yes / No / Explain		
59	ONVIF Support	Yes	Yes / No / Explain		
60	Presets	NA	Yes / No / Explain		
61	Group Touring	NA	Yes / No / Explain		
62	Privacy Zones	4	Yes / No / Explain		

63	NETWORK AND INTERFACE	Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T	Yes / No / Explain		
64	Supported Protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPSb, HTTP/2, TLSb, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)	Yes / No / Explain		
65	IP Support	Static,Dynamic	Yes / No / Explain		
66	Signal Processing	Digital Signal Process	Yes / No / Explain		
67	IPv6 ready	Yes	Yes / No / Explain		
68	Wireless	No	Yes / No / Explain		
69	Simultaneous Connections	8	Yes / No / Explain		
70	STORAGE	Details to be provided	Yes / No / Explain		
71	On Board SD Card Support	Yes	Yes / No / Explain		
72	SD Card Memory(GB) Supported Upto	512GB or better	Yes / No / Explain		
73	HOUSING	Details to be provided	Yes / No / Explain		
74	Installation Type	Indoor	Yes / No / Explain		
75	Material of the Housing construction	Stainless Steel / Aluminium	Yes / No / Explain		
76	Protection	IP 66	Yes / No / Explain		

77	Vandal Resistant Housing	Yes	Yes / No / Explain		
78	If Yes, IK rating	IK10	Yes / No / Explain		
79	Mounting bracket	Wall Mounted	Yes / No / Explain		
80	Weight	To state	Yes / No / Explain		
81	Dimensions (mm x mm x mm)	To state	Yes / No / Explain		
82	POWER SUPPLY	Details to be provided	Yes / No / Explain		
83	Power Input	PoE / Thorough AC adapter	Yes / No / Explain		
84	Power Consumption	To state	Yes / No / Explain		
85	Suitable Adapter Shall be Supplied to Make the Equipment Work on 230 V (+/- 10 %), 50 Hz	Yes (From same Make as Camera)	Yes / No / Explain		
86	WARRANTY / SERVICES	Details to be provided	Yes / No / Explain		
87	Warranty	3 Years	Yes / No / Explain		
88	Time for Replacement of Defective Product During Warranty Period	72 hour	Yes / No / Explain		
89	Supply of Compatible drivers and software included	Yes	Yes / No / Explain		
90	ENVIRONMENTAL / CERTIFICATION	Details to be provided	Yes / No / Explain		
91	BIS Registration for safety general requirements as per IS 13252 (Part 1):latest	Yes	Yes / No / Explain		
92	Certification	RoHS,CE,FCC, Atex,MTBF >100,000 h (Certificates to be provided from OEM)	Yes / No / Explain		

93	Conformity to Damp heat at 40 degree C - 95% RH (cyclic test): two cycles of 16+8 hours as per IS: 9000 latest	Yes	Yes / No / Explain		
94	Conformity to Cold test at -10 / -20 degree C for 4 hours as per IS: 9000 latest, as applicable	Yes	Yes / No / Explain		
95	Availability of Type Test Report from Central Govt /NABL/ILAC accredited lab to prove conformity to specification	No	Yes / No / Explain		
96	Test Report Number and Date	NA	Yes / No / Explain		
97	Name and Address of Test Lab	NA	Yes / No / Explain		
98	IS Certification	IS or equivalent	Yes / No / Explain		

4. CCTV System - Outdoor Fixed Bullet Camera

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	IMAGE SENSOR	Details to be provided	Yes / No / Explain		
2	Image Sensor Type	CMOS	Yes / No / Explain		
3	Image Sensor Size	0.357 inch	Yes / No / Explain		
4	Camera Image Sensing capacity (Picture Mode)	2MP	Yes / No / Explain		
5	Resolution	2MP(1920×1080)	Yes / No / Explain		
6	Day/Night Capable	Yes	Yes / No / Explain		
7	IR illumination Range(mtr)	40 or better	Yes / No / Explain		
8	CAMERA TYPE		-		

9	Type of Camera Housing	BULLET CAMERA	Yes / No / Explain		
10	IP Camera	Yes	Yes / No / Explain		
11	PTZ Camera	No	Yes / No / Explain		
12	OPTICS	Details to be provided	Yes / No / Explain		
13	Lens Type	Motorized Varifocal	Yes / No / Explain		
14	Focal Length(mm)	~ 3 to 9mm Nominal	Yes / No / Explain		
15	Iris Control	Yes	Yes / No / Explain		
16	Focus Mode	Auto,Manual	Yes / No / Explain		
17	VIDEO	Details to be provided	Yes / No / Explain		
18	Frame Rate (fps)	50	Yes / No / Explain		
19	Video Compression	H.264,H.265, MJPEG	Yes / No / Explain		
20	Video Streaming	Five individual Full HD compressed stream	Yes / No / Explain		
21	PAN / TILT / ZOOM	Details to be provided	Yes / No / Explain		
22	Panning Range	NA	Yes / No / Explain		
23	Pan Speed (deg/sec)	NA	Yes / No / Explain		
24	Tilt Range below horizontal (deg)	NA	Yes / No / Explain		
25	Tilt Range above horizontal (deg)	NA	Yes / No / Explain		
26	Tilt Speed (deg/sec)	NA	Yes / No / Explain		
27	Optical Zoom	NA	Yes / No / Explain		
28	Digital Zoom	NA	Yes / No / Explain		

29	AUDIO	Details to be provided	Yes / No / Explain		
30	Audio Support	Yes	Yes / No / Explain		
31	Audio Compression	G.711,AAC,G.726,G.722	Yes / No / Explain		
32	Audio Streaming	One-Way	Yes / No / Explain		
33	Number of Audio Input Channel	1	Yes / No / Explain		
34	Number of Audio Output Channel	1	Yes / No / Explain		
35	External Microphone Support	Yes	Yes / No / Explain		
36	ALARM	Details to be provided	Yes / No / Explain		
37	Alarm Support	Yes	Yes / No / Explain		
38	Number of Alarm Digital Input	1	Yes / No / Explain		
39	Number of Alarm Relay Output	1	Yes / No / Explain		
40	Pre/Post Alarm Buffer	Yes	Yes / No / Explain		
41	SECURITY	Details to be provided	Yes / No / Explain		
42	Multi Level User ID/Password	Yes	Yes / No / Explain		
43	IP Address Filtering	Yes	Yes / No / Explain		
44	Encrypted Data Transmission	HTTPS (SSL/TSL)	Yes / No / Explain		
45	PERFORMANCE	Details to be provided	Yes / No / Explain		
46	Minimum Illumination for Capturing Color Image	0.002 lux	Yes / No / Explain		
47	Electronic Shutter Speed(sec)	2 to 1/71,500	Yes / No / Explain		
48	WDR (Wide Dynamic Range)	120 db	Yes / No / Explain		

49	SNR (Signal to Noise Ratio)	>55	Yes / No / Explain		
50	Auto Exposure	Auto Level Control,Electronic Level Control	Yes / No / Explain		
51	FEATURES	Details to be provided	Yes / No / Explain		
52	White Balance (Indoor/Outdoor/Manual Selectable)	Yes	Yes / No / Explain		
53	Auto Gain Control (On/Off selectable)	Yes	Yes / No / Explain		
54	Back Light Compensation	Yes	Yes / No / Explain		
55	Remote Administration (Remote configuration and status using web based tool)	Yes	Yes / No / Explain		
56	Remote System Update Over Network	Yes	Yes / No / Explain		
57	PC Client (PC application client with a channel recording feature support)	Yes	Yes / No / Explain		
58	Web Client (Viewer through HTTP system configuration)	Yes	Yes / No / Explain		
59	On Screen Display in English	Yes	Yes / No / Explain		
60	ONVIF Support	Yes	Yes / No / Explain		
61	Presets	NA	Yes / No / Explain		
62	Group Touring	NA	Yes / No / Explain		
63	Privacy Zones	4	Yes / No / Explain		
64	NETWORK AND INTERFACE		-		

65	Supported Protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPSb, HTTP/2, TLSb, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)	Yes / No / Explain		
66	IP Support	Static,Dynamic	Yes / No / Explain		
67	Signal Processing	Digital Signal Process	Yes / No / Explain		
68	IPv6 ready	Yes	Yes / No / Explain		
69	Wireless	No	Yes / No / Explain		
70	Simultaneous Connections	8	Yes / No / Explain		
71	STORAGE	Details to be provided	Yes / No / Explain		
72	On Board SD Card Support	Yes	Yes / No / Explain		
73	SD Card Memory(GB)	512GB or better	Yes / No / Explain		
74	HOUSING	Details to be provided	Yes / No / Explain		
75	Installation Type	Outdoor	Yes / No / Explain		
76	Material of the Housing construction	Alluminium	Yes / No / Explain		
77	Protection	IP 66	Yes / No / Explain		
78	Vandal Resistant Housing	Yes	Yes / No / Explain		

79	If Yes, IK rating	To state	Yes / No / Explain		
80	Mounting bracket	Wall Mounted	Yes / No / Explain		
81	Weight	To state	Yes / No / Explain		
82	Dimensions (mm x mm x mm)	To state	Yes / No / Explain		
83	POWER SUPPLY	Details to be provided	Yes / No / Explain		
84	Power Input	PoE	Yes / No / Explain		
85	Power Consumption	15 Watt	Yes / No / Explain		
86	Suitable Adapter Shall be Supplied to Make the Equipment Work on 230 V (+/- 10 %), 50 Hz	Yes	Yes / No / Explain		
87	OPERATING CONDITIONS	Details to be provided	Yes / No / Explain		
88	Operating Temperature Range	- 30 to +50 deg C	Yes / No / Explain		
89	Relative Humidity Non Condensing (%)	90	Yes / No / Explain		
90	Warranty	3 year	Yes / No / Explain		
91	Time for Replacement of Defective Product During Warranty Period	72 hour	Yes / No / Explain		
92	Supply of Compatible drivers and software included	Yes	Yes / No / Explain		
93	Availability of facility & infrastructure for verification of all parameters, features, and capability with Seller	Yes	Yes / No / Explain		
94	Availability of facility to test signal to noise ratio of camera at 0-01 lux	Yes	Yes / No / Explain		

95	Conformity to Dry Heat test at 55 degree C for 16 hours as per IS :9000 latest	Yes	Yes / No / Explain		
96	Conformity to Damp heat at 40 degree C - 95% RH (cyclic test): two cycles of 16+8 hours as per IS: 9000 latest	Yes	Yes / No / Explain		
97	Conformity to Cold test at -10 / -20 degree C for 4 hours as per IS: 9000 latest, as applicable	Yes	Yes / No / Explain		
98	BIS Registration for safety general requirements as per IS 13252 (Part 1):latest	Yes	Yes / No / Explain		
99	Availability of Type Test Report from Central Govt /NABL/ILAC accredited lab to prove conformity to specification	No	Yes / No / Explain		
100	Certification	IS or equivalent	Yes / No / Explain		

5. CCTV System - Midspan for Outdoor Fixed Camera populated with Single Mode SFP Module

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Data rate	1000 Mbps or better	Yes / No / Explain		
2	Power	AC input voltage: 100 to 240 V AC AC frequency: 50–60 Hz Output Supported for upto 55 V DC (max 60 W)	Yes / No / Explain		

3	Connectors	Shielded RJ45, EIA 568A and 568B SFP slot Power connector : Vendor shall quote for Indian 3 Pin Power cables compatible with Midspan to support 220VAC with	Yes / No / Explain		
4	Mounting	DIN rail Mount Clips to be provided	Yes / No / Explain		
5	Operating conditions	0 °C to 45 °C or better, Humidity max 90% RH (non-condensing)	Yes / No / Explain		
6	Certifications and Approvals	IEC/EN/UL or better	Yes / No / Explain		
7	Switching capacity	1.25 Gbps or better	Yes / No / Explain		
8	Transceiver type	Single-mode Minimum transfer distance 10 km Hot pluggability Wavelength 1310 nm 1.0625 Gbps fibre channel FC-PI 100-SM-LC-L compliant	Yes / No / Explain		
9	Compatibility	The midspan & SFP Module should be from the same OEM as the camera manufacturer to ensure compatibility	Yes / No / Explain		

6. CCTV System - L3 Core Switch 24-port 10/100/1000T and 100/1000 SFP stackable switch with 4 SFP+ ports and dual hotswap PSU bays with Rack mount kit

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Switch Architecture 1	Shall equipped with 24x 1G SFP slots and 24 x 1G Base T Slots additionally 4 1G/10G SFP/SFP+ Slots uplink. Fibre slots should be backward compatible i.e., 100FX/1000FX. 4 10G SFP+ ports should also support 1G SFP based on network requirement.	Yes / No / Explain		
2	Switch Architecture 2	Shall future upgradable with 2x40G SFP+ slots	Yes / No / Explain		
3	Switch Architecture 3	Internal Hot swappable Redundant Power Supply Equipped	Yes / No / Explain		
4	Switching Capacity	Should support switching fabric of 288Gbps or more	Yes / No / Explain		
5	Forwarding rate	Should support min forwarding rate of 214 Mpps or higher	Yes / No / Explain		
6	Hardware redundancy & Resiliency 1	Two or more Switches in stack should be capable to operate as one logical L3 Virtual switch with synchronisation of L3 & L2 protocols for higher availability .Switch should be supplied with required stacking cables with stacking bandwidth of min 160Gbps per switch	Yes / No / Explain		
7	Hardware redundancy & Resiliency 2	Should support Unidirectional Link Detection (UDLD) or equivalent to detect unidirectional links caused by incorrect fibre optic wiring or port faults and disable on fibre optics interfaces	Yes / No / Explain		
8	Layer 2 Features 1	Support 802.1D, 802.1S, 802.1w, Rate limiting	Yes / No / Explain		
9	Layer 2 Features 2	Support 802.1X Security standards	Yes / No / Explain		

10	Layer 2 Features 3	Support 802.1Q VLAN encapsulation, IGMP v1,v2 and v3 snooping, MLD snooping	Yes / No / Explain		
11	Layer 2 Features 4	Support up to 4096 VLANs	Yes / No / Explain		
12	Layer 2 Features 5	Support IGMP Snooping and IGMP Querying	Yes / No / Explain		
13	Layer 2 Features 6	Should support STP, RSTP, MSTP, ITU-T G.8032	Yes / No / Explain		
14	Layer 3 Features 1	Should support Static routing,	Yes / No / Explain		
15	Layer 3 Features 2	OSPFv2 for IPv4 & OSPFv3 for IPv6	Yes / No / Explain		
16	Layer 3 Features 3	BGP for IPv4 & IPv6	Yes / No / Explain		
17	Layer 3 Features 4	PIM for IPv4 SM, DM and SSM, PIMv6-SM	Yes / No / Explain		
18	VLAN features 1	Should Support 802.1Q Tagged VLAN, port based VLANs and Private VLAN	Yes / No / Explain		
19	VLAN features 2	Should Support IEEE 802.1v VLAN classification by protocol and port	Yes / No / Explain		
20	VLAN features 3	Should Support IEEE 802.1ad Provider bridges (VLAN stacking, Q-in-Q)	Yes / No / Explain		
21	VLAN features 4	Should Support dynamic VLAN Registration or equivalent	Yes / No / Explain		
22	VLAN features 5	Should Support VLAN trunking or equivalent,	Yes / No / Explain		
23	Management 1	Switch needs to have a console port for management via a console terminal or PC	Yes / No / Explain		
24	Management 2	Must have support SNMP V1, V2 and V3	Yes / No / Explain		
25	Management 3	Should support 4 groups of RMON	Yes / No / Explain		

26	Management 4	Should have accessibility using Telnet, SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility or using web interface	Yes / No / Explain		
27	Management 5	Support SNMPv6, Telnetv6 and SSHv6, DHCPv6 relay, DHCPv6 client, NTPv6 client and server,	Yes / No / Explain		
28	Management 6	Support NTP/SNTP, SDN openflow v1.3	Yes / No / Explain		
29	Security 1	Should support ACLs, VLAN ACL's	Yes / No / Explain		
30	Security 2	Support DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI), Support MAC address filtering and MAC address lock-down,	Yes / No / Explain		
31	Security 3	Support Tri-authentication: MAC-based, web-based and IEEE 802.1x	Yes / No / Explain		
32	Security 4	Support DHCPv4 client	Yes / No / Explain		
33	Security 5	Support sflow/netflow, Port mirroring	Yes / No / Explain		
34	Interoperability 1	For ease of integration all switches should be of same OEM	Yes / No / Explain		
35	Environment	Operating Temperature- 0 to 50 C	Yes / No / Explain		
36	Interoperability 2	For ease of operations, all the switches and modules should be from OEM	Yes / No / Explain		

7. CCTV System - Distribution Switch 24-port 10/100/1000T PoE+ Edge Switch with 4 SFP ports and fixed power supply with Rack Mount Kit

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Ports	24 x 10/100/1000 Base-T and additional 4 x 1G Base-X ports. Uplink ports should backward compatible with 100 Mbps. Should support minimum 370 watts poe budget that supports 802.3at	Yes / No / Explain		
2	Layer 2 Features	Should support STP, RSTP, MSTP, IGMP v1/v2/v3 snooping, STP root guard, Voice VLAN, loop protection, MLD snooping (MLDv1 and v2), IEEE 802.3ac, IEEE 802.1v, 16k MAC Table or more	Yes / No / Explain		
3	Resilience	Should support IEEE 802.17/equivalent for sub 50ms ring protection	Yes / No / Explain		
4	Security	Should support ACL, DHCP (relay and client), IP Source guard, DAI, Private VLAN, Authentication (MAC, Web and IEEE 802.3x), sflow, SSLv2 and SSLv3, TACACS+	Yes / No / Explain		
5	Management	CLI, GUI, USB / SD Card interface for taking backup of software release files configurations, Digital optical monitoring.	Yes / No / Explain		
6	Features	Should support Unidirectional Link Detection (UDLD) or equivalent to detect unidirectional links caused by incorrect fibre optic wiring or port faults and disable on fibre optics interfaces	Yes / No / Explain		

7	Certifications and Approvals	Should support UL, cUL Should Support and operating Temp of Minum 50 deg C	Yes / No / Explain		
8	Interoperability	For ease of integration all switches should be of same OEM	Yes / No / Explain		

8. CCTV System - 8-port 100/1000x SFP fixed power supply with Rack Mount Kit

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Ports	8 x 100/1000x SFP PORTS Uplink ports should backward compatible with 100 Mbps.	Yes / No / Explain		
2	Layer 2 Features	Should support STP, RSTP, MSTP, IGMP v1/v2/v3 snooping, STP root guard, Voice VLAN, loop protection, MLD snooping (MLDv1 and v2), IEEE 802.3ac, IEEE 802.1v, 16k MAC Table or more, PVST+ compatibility mode	Yes / No / Explain		
3	Resilience	Should support IEEE 802.17/equivalent for sub 50ms ring protection	Yes / No / Explain		
4	Security	Should support ACL, DHCP (relay and client), IP Source guard, DAI, Private VLAN, Authentication (MAC, Web and IEEE 802.3x), sflow, SSLv2 and SSLv3, TACACS+, LAG,	Yes / No / Explain		
5	Management	CLI, GUI, USB / SD Card interface for taking backup of software release files configurations, Digital optical monitoring,	Yes / No / Explain		

6	Features	Should support Unidirectional Link Detection (UDLD) or equivalent to detect unidirectional links caused by incorrect fibre optic wiring or port faults and disable on fibre optics interfaces	Yes / No / Explain		
7	Certifications and Approvals	Should support UL, cUL Should Support and operating Temp of Minum 50 deg C	Yes / No / Explain		
8	Interoperability	For ease of integration all switches should be of same OEM	Yes / No / Explain		

9. CCTV System - Single Mode 1G SFP Module

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Fiber Type	SMF	Yes / No / Explain		
2	connector type	LC	Yes / No / Explain		
3	maximum distance	10 km	Yes / No / Explain		
4	wavelength tx/rx (nm)	1310	Yes / No / Explain		
5	transmit (dbm) min / max	-9 to -3	Yes / No / Explain		
6	receive sensitivity (dbm)	-20	Yes / No / Explain		
7	power budget (db)	11	Yes / No / Explain		
8	overload (dbm)	-3	Yes / No / Explain		
9	operating temp	0°C to 50°C	Yes / No / Explain		
10	operating humidity	0 to 85% non-condensing	Yes / No / Explain		

11	compatibility	SFP Module should be from the same switch Manufacturer to ensure compatibility	Yes / No / Explain		
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10. CCTV System - Management Server

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Chassis	2U Rack Mountable	Yes / No / Explain		
2	Processor	1 x Xeon Sliver 4310 12C 2.10 Ghz or better	Yes / No / Explain		
3	L3 Cache Memory	18 MB cache or better	Yes / No / Explain		
4	Memory	64GB (4*16GB) Fully buffered DDR4 @3200 R ECC RAM or better	Yes / No / Explain		
5	Memory Scalability	32 DIMM Slots (16 DIMMS per CPU, 8 Channels with 2 DIMMS per Channel) Scalibility upto 3TB or better	Yes / No / Explain		
6	Drive Bays	8 Hot Plug 2.5" Hard Disk Bays or better	Yes / No / Explain		
7	Hard Disk Drives	6x600GB 12G SAS 15k RPM Hot Plug (2.5") Enterprise Hard Disk 2x960 GB Hot Plug SSD SATA/SAS for OS or better	Yes / No / Explain		
8	SAN Interface	Dual Port 16 Gbps or better SAN FC/iSCSI host bus adapter or better	Yes / No / Explain		
9	Drive Contoller	Integrated or add-on SAS Controller or better	Yes / No / Explain		
10	RAID Contoller	Integrated or add-on RAID Controller SAS/SATA 12GBit/s, 8 Ports RAID LEVEL 0,1,10,5,50,6,60 or better	Yes / No / Explain		
11	Optical Drive	DVD-RW Combo with dual layer write capability or better	Yes / No / Explain		

12	Graphics	Integrated Graphics Controller or better	Yes / No / Explain		
13	Network	4x1GB Ethernet Adapter in addition to integrated NIC changed to 2 X 1GB + 2 X 10GB	Yes / No / Explain		
14	Bus Slots	5 PCIExpress slots PCIe 4.0 x8 - 2 Nos. PCIe 3.0 x16- 3 Nos.	Yes / No / Explain		
15	I/O ports and connectors	4 USB Ports	Yes / No / Explain		
16	OS certification	windows server 2022 certificate from Microsoft Website to be provided	Yes / No / Explain		
17	Operating System	Windows Server 2022 64-bit Standard Version (with latest service pack) with license or latest version	Yes / No / Explain		
18	Antivirus software	Pre - installed with 3-year license, software	Yes / No / Explain		
19	Other Accessories	Redundant power supply with cooling fans, Indian Standard power cord system recovery, Drivers & Utilities DVDs, Networking Cables	Yes / No / Explain		
20	Defective Media Retention	Keep your hard drive policy	Yes / No / Explain		

11. CCTV System - Recording Server

Item specifications for CCTV System

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Chassis	2U Rack Mountable	Yes / No / Explain		
2	Processor	2 x Xeon Sliver 4310 12C 2.10 Ghz or better	Yes / No / Explain		
3	L3 Cache Memory	18 MB cache or better	Yes / No / Explain		

4	Memory	128GB (8*16GB) Fully buffered DDR4 @3200 R ECC RAM or better	Yes / No / Explain		
5	Memory Scalability	32 DIMM Slots (16 DIMMS per CPU, 8 Channels with 2 DIMMS per Channel) Scalability upto 3TB or better	Yes / No / Explain		
6	Drive Bays	8 Hot Plug 2.5" Hard Disk Bays or better	Yes / No / Explain		
7	Hard Disk Drives	6x600GB 12G SAS 15k RPM Hot Plug (2.5") Enterprise Hard Disk 2x960 GB Hot Plug SSD SATA/SAS for OS or better	Yes / No / Explain		
8	SAN Interface	Dual Port 16 Gbps or better SAN FC/iSCSI host bus adapter or better	Yes / No / Explain		
9	Drive Controller	Integrated or add-on SAS Controller or better	Yes / No / Explain		
10	RAID Controller	Integrated or add-on RAID Controller SAS/SATA 12Gbit/s, 8 Ports RAID LEVEL 0,1,10,5,50,6,60 or better	Yes / No / Explain		
11	Optical Drive	DVD-RW Combo with dual layer write capability or better	Yes / No / Explain		
12	Graphics	Integrated Graphics Controller or better	Yes / No / Explain		
13	Network	4x1GB Ethernet Adapter in addition to integrated NIC changed to 2 X 1GB + 2 X 10GB	Yes / No / Explain		
14	Bus Slots	5 PCIExpress slots PCIe 4.0 x8 - 2 Nos. PCIe 3.0 x16- 3 Nos.	Yes / No / Explain		
15	I/O ports and connectors	4 USB Ports	Yes / No / Explain		
16	OS certification	windows server 2022 certificate from Microsoft Website to be provided	Yes / No / Explain		

17	Operating System	Windows Server 2022 64-bit Standard Version (with latest service pack) with license or latest version	Yes / No / Explain		
18	Antivirus software	Pre - installed with 3-year license, software	Yes / No / Explain		
19	Other Accessories	Redundant power supply with cooling fans, Indian Standard power cord system recovery, Drivers & Utilities DVDs, Networking Cables	Yes / No / Explain		
20	Defective Media Retention	Keep your hard drive policy	Yes / No / Explain		

12. CCTV System - 100TB Usable Storage

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Controller	Dual active controller with automated I/O path failover or better	Yes / No / Explain		
2	Front end Ports	Should have minimum of 2 * 25 Gbps iSCSI and 2 * 16 Gbps FC Ports per Controllers.	Yes / No / Explain		
3	Back end Ports	The storage system should have minimum 2x12Gbps backend ports per controller.	Yes / No / Explain		
4	Management Software	Must include Storage Manager software, to centrally manage all Storage subsystems, Multi-path (Load Balancing & Failover), LUN masking and should Support RAID migration on to the vacant space available	Yes / No / Explain		

5	O/S Support	Apple Mac OS, CentOS Linux, IBM AIX, Microsoft Windows Server Novell SUSE Linux Enterprise Server, Oracle Enterprise Linux Oracle Solaris, Red Hat Enterprise Linux , Ubuntu Linux, VMware ESX	Yes / No / Explain		
6	Scalability	It Should be scalable upto 180 no of HDD in same storage or expendable upto 1 PB usable capacity.	Yes / No / Explain		
7	Capacity	Offered SAN Array shall be configured for 100TB usable on 7.2K RPM dual ported NL-SAS HDD on RAID 6 . Hot spare drive will be 1 spares extra per 30 drives if any	Yes / No / Explain		
8	Raid Controllers	Dual, both Active, minimum 64 GB cache across the two Controllers (32 GB per Controller). Cache should be controller based not drive based.	Yes / No / Explain		
9	Protocol Support	FC, iSCSI	Yes / No / Explain		
10	Cache Safety	Cache should be mirrored and battery-backed-up /disk-destaged, to provide protection of data for 72 hours or more.	Yes / No / Explain		
11	Drive Interface	The storage should have 12Gbps Drive interface or higher	Yes / No / Explain		
12	Supported Drives, Mixed Drives	Should support SSD, SAS, NL-SAS, 12 GBPs Drives in same enclosure.	Yes / No / Explain		
13	RAID levels	The storage should support 0, 1, 5, 6 and 10 RAID levels.	Yes / No / Explain		
14	Fans and power Supplies	Redundant, hot-swappable power supplies and fans	Yes / No / Explain		

15	Rack Support	Suitable for industry-standard Racks and PDUs	Yes / No / Explain		
16	Data Services	Should include data Snapshot, Thin provisioning, Volume cloning or equivalent features for the offered capacity of the storage array. The proposed system should also include storage based replication software	Yes / No / Explain		
17	Alerts	Automated alerts for Improving service response times.	Yes / No / Explain		
18	Others	All required cable and connectors to be supplied	Yes / No / Explain		
19	Certification	OEM should be in leader of Gartner Magic Quadrant from last 3 years.	Yes / No / Explain		
20	Defective Media Retention	Keep your hard drive policy	Yes / No / Explain		

13. CCTV System - Digital Video Management software for Supply of Video Management Software 1 Base License + 100 Device Licenses with 3 Years Support

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	General Specifications 1	The VMS shall be a fully distributed solution, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different vendors. The VMS shall offer centralized management of all devices, servers and users and must empower a flexible rule-based system driven by schedules and events.	Yes / No / Explain		

2	General Specifications 2	VMS shall already support IP cameras from at least fifty (50) major vendors and a minimum of 10000 Certified Devices Bidders shall clearly list in their proposal the brands and models already integrated into VMS.	Yes / No / Explain		
3	General Specifications 3	VMS shall support IP Network Horn Speakers, Management of Cameras Speakers should be possible from within the VMS without use of Web Browser	Yes / No / Explain		
4	General Specifications 4	To ensure openness, VMS and cameras may or may not be from the same manufacturer.	Yes / No / Explain		
5	General Specifications 5	VMS shall manage Password of cameras directly from software management tool.	Yes / No / Explain		
6	General Specifications 6	VMS shall support installation and ability to run on virtualized windows servers	Yes / No / Explain		
7	General Specifications 7	VMS shall have API based integration with the major camera vendors in order to support features such as, up to 3 Multi- streams, SD Card storage sync, Camera based supported Edge Analytics, Camera I/O support, Camera Audio support	Yes / No / Explain		
8	General Specifications 8	VMS manufacturer shall provide their SDK (or any other integration means) libraries and documentation) to ensure a seamless integration with any other system	Yes / No / Explain		

9	General Specifications 9	VMS shall be open to any standard storage technologies integration.	Yes / No / Explain		
10	General Specifications 10	VMS shall have the possibility to integrate external Video Analytics systems.	Yes / No / Explain		
11	General Specifications 11	The VMS system shall be a scalable client – server architecture built using well known operating systems	Yes / No / Explain		
12	General Specifications 12	The VMS system shall enable recording to be done at the aggregation sites and shall allow the local Control center to import selected video's on demand.	Yes / No / Explain		
13	General Specifications 13	Aggregation site types shall be categorized according to function and size as per the table below.	Yes / No / Explain		
14	General Specifications 14	To facilitate the VMS system architecture, the BIDDER shall ensure that sufficient capacity is designed into the data communications & telecommunications infrastructure to deliver the required functionality, along with the ability to allocate and reserve resources (including bandwidth).	Yes / No / Explain		
15	General Specifications 15	The VMS system shall be compatible to single and multiple processor servers. The server processor & hardware shall be optimized in all cases.	Yes / No / Explain		

16	General Specifications 16	The VMS system shall cluster the processing & memory load across several machines. The failure of any one server in the solution shall not cause a failure in the entire system.	Yes / No / Explain		
17	General Specifications 17	The VMS system device drivers shall be stored separately to the central core application to ensure any instability in 3rd party SDKs do not affect the core application.	Yes / No / Explain		
18	General Specifications 18	The VMS management server shall be able to intelligently scan an IP network for new devices (cameras or servers) along with automatic model detection.	Yes / No / Explain		
19	General Specifications 19	Network infrastructure and installation are the responsibility of the Bidder. Network components both active and required for the successful implementation of the video surveillance detailed in this tender shall be provided by the Bidder. The network infrastructure shall meet the streaming requirement of the project without any bottlenecks. The network infrastructure shall support UDP multicast, UDP unicast and TCP transmission	Yes / No / Explain		

20	General Specifications 20	The VMS system shall provide an integrated secure, scalable and easily accessible software-based solution for the management of the existing & future physical security infrastructure	Yes / No / Explain		
21	General Specifications 21	The VMS system shall provide a powerful and efficient management interface for all the security systems across all monitored sites.	Yes / No / Explain		
22	General Specifications 22	The VMS shall contain recording servers used for recording video feeds and for communicating with cameras and other devices. The recording servers shall process the recordings and playback the video streams	Yes / No / Explain		
23	General Specifications 23	The management server shall allow access to a system manager from where the administrator can configure and manage all servers, cameras and users.	Yes / No / Explain		
24	General Specifications 24	The system shall allow the management server to be installed on multiple servers within a cluster of servers ensuring that another server in the cluster automatically takes over in case the first server fails.	Yes / No / Explain		
25	General Specifications 25	The VMS shall support installation and ability to run on virtualized Windows® servers.	Yes / No / Explain		

26	General Specifications 26	The VMS shall allow an unlimited number of cameras to be connected to each recording server and an unlimited number of recording servers to be connected to each management server across multiple sites, if required	Yes / No / Explain		
27	General Specifications 27	The VMS shall support high availability of recording servers. A failover option shall provide standby support for recording servers with automatic synchronization to ensure maximum uptime and minimum risk of lost data.	Yes / No / Explain		
28	General Specifications 28	The VMS shall support a versatile rule system including scheduled or event-driven actions with numerous options including support to time profiles.	Yes / No / Explain		
29	General Specifications 29	The VMS shall support Microsoft Windows XP Professional, Microsoft Windows Server 2003, Microsoft Windows Server 2008, Microsoft Windows Vista (Business/Enterprise/Ultimate) and Microsoft Windows 7 (Business/Enterprise/Ultimate) with the latest patches and service packs installed. The system must use DirectX and	Yes / No / Explain		
30	General Specifications 30	The VMS software shall include multicast and multi-streaming support.	Yes / No / Explain		
31	General Specifications 31	The VMS shall include automatic camera discovery.	Yes / No / Explain		

32	General Specifications 32	The VMS shall support archiving for optimizing recorded data storage through unique data storage solutions by combining performance and scalability with cost efficient long-term video storage.	Yes / No / Explain		
33	General Specifications 33	The VMS shall incorporate fully integrated matrix functionality for distributed viewing of any camera in the system from any computer with the client viewer.	Yes / No / Explain		
34	General Specifications 34	The VMS shall incorporate intuitive map functions allowing for multilayered map environment. The map functionality shall allow for the interactive control of the complete surveillance system, at-a-glance overview of system integrity, and seamless drag-and-drop integration with video wall module option	Yes / No / Explain		
35	General Specifications 35	The VMS shall support 56-bit encryption of video for export purposes.	Yes / No / Explain		
36	General Specifications 36	The VMS shall support full two-way audio between clients and remote devices. Two-way audio integration shall support the following features and functions	Yes / No / Explain		
37	General Specifications 37	The VMS software shall provide fast evidence export by exporting in video to various formats, including video from multiple cameras in encrypted native database format with an included viewer.	Yes / No / Explain		

38	General Specifications 38	The VMS shall show full awareness of the system through audit logs and shows user activity through comprehensive logs.	Yes / No / Explain		
39	General Specifications 39	The VMS shall include support for a frame work data module designed to integrate multiple third party Video Content Analysis (VCA) solutions seamlessly into client viewer environments.	Yes / No / Explain		
40	General Specifications 40	The VMS shall include a Software Development Kit (SDK) that offers important capabilities for integrating the VMS with third party software and applications.	Yes / No / Explain		
41	General Specifications 41	The VMS shall include a stand-alone viewer application to be included with video exported from the client viewer application. The viewer application shall allow recipients of the video to browse and playback the exported video without installing separate software on their computers	Yes / No / Explain		
42	General Specifications 42	The VMS shall include support for Active Directory to allow users to be added to the system. Use of Active Directory requires that a server running Active Directory, acting as a domain controller, to be available on the network.	Yes / No / Explain		

43	General Specifications 43	The VMS shall be designed to support each component on the same computer for efficiency in smaller systems, or each component on separate systems for large system deployments.	Yes / No / Explain		
44	Edge Storage	Edge storage shall secure that when a lost or broken connection is back up, the data stored on the camera's internal storage shall be retrieved and stored in the media database. Edge storage shall secure that after recovery from a malfunction it shall be possible to play back and view the video, and audio recorded by the device, while the malfunction persisted	Yes / No / Explain		
45	Bookmarking	A bookmarking feature shall be included in the VMS, allowing the client viewer users to mark incidents on live and/or playback video streams.	Yes / No / Explain		
46	Privacy Masking	The VMS shall support privacy masking. The VMS should have an option for permanent or Lifiable Masking.	Yes / No / Explain		

47	Optimized Video Archiving	<p>Administrators shall be able to select a storage container for each device and move a device from one storage container to another, or move all recordings inclusive archives to the new storage container, or delete them all. Administrators shall be provided with an overview of the defined storage containers, their archives with path, and free and used space on the drives for each device, including the used storage space in the recording database, and in archives.</p>	Yes / No / Explain		
48	Failover Support 1	<p>The system shall support automatic failover for recording servers. This functionality must be accomplished by a failover server that shall work as a standby unit, which takes over in the event that one of a group of designated recording servers fails. Recordings shall be synchronized back to the original recording server once it is back online.</p>	Yes / No / Explain		

49	Failover Support 2	<p>The system shall support multiple failover servers for a group of recording servers. The system shall provide monitoring of all failover servers from the graphical alarm management module.</p> <p>The system shall provide seamless access to recordings on the failover Server for all clients through the same client views once the services are fully started.</p>	Yes / No / Explain		
50	Multicast Support 1	<p>The system shall support multicasting of video feeds to client workstations in order to conserve network resources. Multicasting should be enabled from the recording servers and not directly from the cameras. Thus the IGMP network would be necessary only for the switches where server and clients are connected.</p>	Yes / No / Explain		
51	Multicast Support 2	<p>Multicasting shall send a single stream of video to multiple clients, where the stream may be decoded and displayed on all clients simultaneously. This functionality shall support virtual matrix configurations.</p>	Yes / No / Explain		

52	Multicast Support 3	The infrastructure provided for the system shall support Internet Group Management Protocol (IGMP) for each remote network. The system shall automatically switch to unicast, if the client fails to connect to the multicast stream.	Yes / No / Explain		
53	Multi-streaming Support 1	The recording server must accept, display and record individual streams of video from each camera that supports it, for example, display a stream in H.264 format and record another stream in MPEG4 format. The intent of this functionality shall be providing independent streams of video from the camera to the server with different resolution, encoding and frame rate.	Yes / No / Explain		
54	Multi-streaming Support 2	Multi-streaming support shall allow the system to be configured with H.264 with a high frame rate for live viewing and shall allow the system to be configured with high resolution H.264 at low frame rates for recording and playback. The system shall allow recorded video to be recorded at 8fps.	Yes / No / Explain		

55	SNMP Support	The system shall act as an SNMP agent which can generate an SNMP trap as a result of rule activation in addition to other existing rule actions. The system shall be able to utilize Microsoft Windows SNMP Service for triggering of SNMP traps.	Yes / No / Explain		
56	NAT Firewall Support 1	The system shall support port forwarding, which must allow clients from outside of a Network Address Translation (NAT) firewall to connect to recording servers without using a VPN	Yes / No / Explain		
57	NAT Firewall Support 2	Each recording server shall be mapped to a specific port and this port must be forwarded through the firewall to the recording server's internal IP address.	Yes / No / Explain		
58	Management Server Redundancy	The management server shall provide a resilient system solution based on Windows Server Clustering, to secure maximum uptime.	Yes / No / Explain		
59	Alarms Support 1	The alarm support shall allow for continuous monitoring of the operational status and event-triggered alarms from servers, cameras and other devices.	Yes / No / Explain		
60	Alarms Support 2	The alarm support shall provide a real-time overview of alarm status, or technical problems, while allowing for immediate visual verification and troubleshooting.	Yes / No / Explain		

61	Matrix Functionality 1	The system shall include an integrated matrix solution for distributing video to any computer with the client viewer installed. A computer on which the matrix-triggered images can be shown must be known as a matrix recipient.	Yes / No / Explain		
62	Matrix Functionality 2	The client viewer shall provide remote users with a comprehensive suite of features It shall be possible to view live video from cameras on the surveillance system from 1 to 100 per view.	Yes / No / Explain		
63	Matrix Functionality 3	It shall be possible to playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser.	Yes / No / Explain		
64	Matrix Functionality 4	It shall be possible to create and switch between an unlimited number of views, each able to display video from up to 100 cameras from multiple servers at a time. The system shall allow views to be created which are only accessible to the user, or to groups of users based on 37 different layouts optimized for 4 3, 4 3 Portrait, 16 9 and 16 9 Portrait display ratios.	Yes / No / Explain		

65	Matrix Functionality 5	It shall be possible to access views of cameras on any PC with a client viewer application installed. It shall be possible to use multiple screens as well as floating windows for displaying different views simultaneously.	Yes / No / Explain		
66	Matrix Functionality 6	It shall be possible to quickly substituting one, or more of a view's cameras with other cameras. It shall be possible to view video from selected cameras in greater magnification and/or higher quality in a designated hotspot.	Yes / No / Explain		
67	Matrix Functionality 7	It shall be possible to receive and send video through the matrix functionality. It shall be possible to include HTML pages and static images (for example, maps, or photos) in views.	Yes / No / Explain		
68	Matrix Functionality 8	It shall be possible to control PTZ cameras. It shall be possible to use digital zoom on live as well as recorded video. It shall be possible to activate manually triggered events. It shall be possible to activate external outputs (e. g. lights and sirens).	Yes / No / Explain		

69	Matrix Functionality 9	<p>It shall be possible to use sound notifications for attracting attention to detected motion.</p> <p>It shall be possible to get quick overview of sequences with detected motion.</p> <p>It shall be possible to get quick overviews of alerts.</p> <p>It shall be possible to quickly search selected areas of video recording for motion.</p>	Yes / No / Explain		
70	Matrix Functionality 10	<p>It shall be possible to skip gaps during playback of recordings.</p> <p>It shall be possible to configure and use several different joysticks.</p> <p>It shall be possible to print images, with optional comments.</p> <p>It shall be possible to copy images for subsequent pasting into word processors, email, etc.</p>	Yes / No / Explain		
71	Matrix Functionality 11	<p>It shall be possible to export recording (for example, for use as evidence) in AVI, JPEG and database formats.</p> <p>It shall be possible to use pre-configured as well as customizable keyboard shortcuts to speed up common actions.</p>	Yes / No / Explain		

72	Matrix Functionality 12	It shall be possible to insert overlay buttons, for example, for activation of speakers, events, outputs, movement of cameras etc. It shall be possible to use a sequence function that lists thumbnail images representing recorded sequences from an individual camera or all cameras in a view	Yes / No / Explain		
73	Matrix Functionality 13	It shall be possible to use a forced playback mode allowing the user to playback recorded video from inside the 'live' mode while viewing 'live' video.	Yes / No / Explain		
74	Matrix Functionality 14	The client viewer shall support the use of 3-axis USB joysticks for control of pan, tilt, zoom and auxiliary camera functions. The client viewer shall support the use of multimedia control devices, which are capable of emulating keystrokes, for the efficient review of recorded video.	Yes / No / Explain		
75	Matrix Functionality 15	The client viewer shall support the use of keyboard shortcuts for control of standard features. It shall allow the user to program numerical keyboard shortcuts for camera views. The shortcut number shall be displayed with the view description in the live and playback displays. The shortcut shall allow the user to change views with 2 to 3 keyboard	Yes / No / Explain		

76	Matrix Functionality 16	The client viewer shall support Nvidia GPU or equivalent GPU based video decoding to improve video rendering performance and up to 75% reduction in CPU load of the workstation running Client software. The use of Nvidia GPU or equivalent GPU based video rendering shall also make client ready for 4K/UHD camera technology. Bidder to provide the list of Certified GPU's	Yes / No / Explain		
77	Matrix Functionality 17	The client viewer shall have the capability to receive multicast streams. The client viewer shall have the capability to detect if the network becomes unreliable and to automatically switch to unicast to ensure that the operator is able to	Yes / No / Explain		
78	Matrix Functionality 18	The operator shall have the ability to use digital zoom where the zooming is performed in the image only on any number of cameras simultaneously. This functionality shall be the default for fixed cameras. The use of digital zoom	Yes / No / Explain		
79	Map Functions 1	Built-in map function in the client viewer shall provide an intuitive overview of the system and shall offer integrated access to all system components. Map function shall be able to use standard graphical file formats including jpg, gif, png,tif, etc.	Yes / No / Explain		

80	Map Functions 2	It shall be possible to use any number of layered maps, and it shall be possible to easily drag-and-drop and point-and-click definition of cameras, servers, microphones, speakers, I/O devices, hot-zones, and PTZ camera presets	Yes / No / Explain		
81	Map Functions 3	Hot zones shall be allowed for intuitive navigation between different map levels. Map function shall support instant camera preview when moving the mouse pointer over a specific camera.	Yes / No / Explain		
82	Map Functions 4	Map function shall support central overview of the surveillance system via an alarm list containing alarm indicators of high, medium or low prioritized alarms. Furthermore, the alarms shall be categorized by the following states; new, in progress, on hold, or closed. Alarms must be possible to acknowledge by right-clicking elements on maps	Yes / No / Explain		
83	Remote Client Viewer	The web-based remote client viewer shall offer live view of up to 16 cameras, including PTZ control with joystick, fisheye (360 degrees) cameras and event/output activation. The playback function shall give the user concurrent	Yes / No / Explain		

84	Remote Mobile App	<p>Shall be available on internet as an application for compatible smartphone and Tablets. Shall support Android as well as Apple IOS software, with respective smart phones. Full screen video supported, cameras shuffle from left to right or right to left supported. Digital pinch to zoom supported. Control of PTZ from mobile app. Use of the mobile device's camera as a camera in the VMS.</p>	Yes / No / Explain		
85	Licensing 1	<p>VMS shall have simplified licensing module with single base license which may include Unlimited Management, Recording and Failover servers across multiple sites.</p>	Yes / No / Explain		
86	Licensing 2	<p>VMS shall support unlimited Thick clients, Web Clients and remote clients whenever and where ever required for free of cost without any activation needed.</p>	Yes / No / Explain		
87	Licensing 3	<p>VMS shall have licensing based on Camera MAC ID and not server-based licenses. Any replacement of faulty camera should not affect the total available licenses.</p>	Yes / No / Explain		

88	Licensing 4	VMS Shall allow to combine multiple sites with different management servers under one parent management server without any additional cost. This should allow customer to manage and monitor cameras centrally without need to log-	Yes / No / Explain		
89	Licensing 5	VMS shall allow parallel / DR site recording of single camera without any additional license cost.	Yes / No / Explain		
90	Licensing 6	VMS should support ONVIF Profile S, G, T & Q or higher. VMS shall be a full member of ONVIF or affiliated to a Full member. VMS Should support a minimum throughput of 3 Gbps or higher.	Yes / No / Explain		
91	Licensing 7	Vendor should provide detailed Storage calculation for a period of 90 days at 15FPS for Motion Based recording for Indoor Cameras and Continuous recording for Outdoor Cameras at Full HD Resolution (1920 x 1080) H.264 codec with	Yes / No / Explain		

14. CCTV System - Workstation with graphics card for Monitoring

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Chassis	Tower	Yes / No / Explain		

2	Processor	Intel i7 12th Gen 12 core Processor with Base Frequency of 2.1 Ghz or equivalent	Yes / No / Explain		
3	L3 Cache Memory	25 MB L3 cache or better	Yes / No / Explain		
4	Memory	32GB (2*16GB) Fully buffered DDR5 @4800 SDRAM or better	Yes / No / Explain		
5	Memory Scalability	DIMM slots 4, scalable upto 128 GB	Yes / No / Explain		
6	Drive Bays	1 slim ODD; One 5.25" ODD; One 2.5" HDD; Two 3.5" HDD or higher	Yes / No / Explain		
7	Hard Disk Drivers	2 x 1TB for M.2 Disks or better	Yes / No / Explain		
8	Optical Drive	DVD-RW Combo with dual layer write capability	Yes / No / Explain		
9	Graphics Card	16 GB graphics card or better	Yes / No / Explain		
10	Network	2 x 1 G Network Ports including the LOM Port	Yes / No / Explain		
11	Bus Slots	3 PCIExpress slots, atleast 2 with PCIe 3.0, expandable or better	Yes / No / Explain		
12	I/O ports and connectors	9 USB Ports or better	Yes / No / Explain		
13	Monitor	27' TFT wide screen display with Full HD support with integrated speakers should be from same Manufacturer as Workstation	Yes / No / Explain		
14	Keyboard	USB 2.0 Standard keyboard should be from same Manufacturer as Workstation	Yes / No / Explain		
15	Mouse	USB 2.0 optical scroll mouse should be from same Manufacturer as Workstation	Yes / No / Explain		
16	OS certification	windows 11 Pro certificate from Microsoft Website to be provided	Yes / No / Explain		

17	Operating System	Windows 11 Pro 64 bit or better	Yes / No / Explain		
18	Other Accessories	Indian Standard power cord system recovery, Drivers & Utilities DVDs	Yes / No / Explain		
19	Defective Media Retention	Hard drive will not be returned if it malfunctions even during warranty period because of security policy	Yes / No / Explain		

15. CCTV System - 55" Wall Mount Monitor

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Diagonal Size	55"	Yes / No / Explain		
2	Display Type	60Hz E-LED	Yes / No / Explain		
3	Panel Type	IPS / VA	Yes / No / Explain		
4	Resolution	3840 x 2160	Yes / No / Explain		
5	Brightness	500 Nits	Yes / No / Explain		
6	Operation	24 x 7 Continuous Operation	Yes / No / Explain		
7	Contrast Ratio	4000:1 or better	Yes / No / Explain		
8	Operating System	Tizen / WebOS	Yes / No / Explain		
9	Inputs	Display Port 1.2 (1), HDMI 2.0 (3) HDCP2.2 USB 2.0 x 2	Yes / No / Explain		
10	Output	Stereo mini Jack, RS232C(in/out), RJ45, BT.Wifi	Yes / No / Explain		
11	Power	230 V 50 Hz Input	Yes / No / Explain		
12	Speaker	10W x 2	Yes / No / Explain		

13	Viewing Angle	178:178	Yes / No / Explain		
14	Operating Temperature	0 to 40 deg C or better	Yes / No / Explain		
15	Certification	IS or equivalent	Yes / No / Explain		

16. CCTV System - 42 U Rack with 4 Nos Power Strips

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Load rating	500kg or better	Yes / No / Explain		
2	Width	800mm	Yes / No / Explain		
3	Depth	1200mm	Yes / No / Explain		
4	Color	Dark	Yes / No / Explain		
5	Accessories	Cooling fans (4 X 90 CFM), cable management and mounting accessories, AC mains channel, Caster wheels with brake Surge protected power strip rack mountable with 12x 5A/ 16A Dual sockets: 4nos	Yes / No / Explain		
6	Features	Conforms to DIN41494- and current industry practices	Yes / No / Explain		
7	Steel doors - plain vented at bottom	Yes	Yes / No / Explain		
8	Fully perforated and dual perforated glass doors with optional vented side trims	Yes	Yes / No / Explain		
9	Compatible for the mounting of all types of 19" equipments	Yes	Yes / No / Explain		

17. CCTV System - Pole (6 meters) for Mounting Outdoor Camera

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Material	Aluminum / MS	Yes / No / Explain		
2	Height	6 Mtrs	Yes / No / Explain		
3	Wind loads for design	As per IS875	Yes / No / Explain		
4	Metal protection treatment for Monopole	HOT DIP Galvanized confirming BSEN ISO 1461 and two or more layers of epoxy coating	Yes / No / Explain		
5	Accessibility option for installation and maintenance of cameras	Yes	Yes / No / Explain		

18. CCTV System - Pole/Pipe Earthing Kit

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Material	Maintenance free rod earth pit	Yes / No / Explain		
2	Rod Construction	Low carbon copper coated earth rod of 2000 MM electrode having diameter of 17.2 mm with copper coating thickness of 250micron tested as per IEC 62561-2	Yes / No / Explain		
3	Clamp	universal clamp made of SS to connect rod with flat conductor	Yes / No / Explain		

4	Earthing Compound	Earth conductivity enhancing compound shall be of 25 kg/pit tested as per IEC 62561-7, TCLP tested The compound should be highly conductive non-corrosive compound around rod electrode to get the desired earth resistance value as low as possible and as per soil condition but not less than 3 meters .	Yes / No / Explain		
5	Earth Inspection Chamber	The above arrangements shall be provided with Earth Housing Pit is made of high-grade polypropylene for high strength and stress levels, allowing it to withstand a maximum load of 2000 kg to ensure the safety of earthing system	Yes / No / Explain		
6	Certification	UL Listed & CPRI Certification	Yes / No / Explain		

19. CCTV System - Labour works for Pole erection and grounding fixing and installation of earthing kit

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Work Involved - Pit Digging in rocky soil (earth work) for Outdoor poles	To be provided (Rate per pole erection and installation to be quoted)	Yes / No / Explain		
2	Size 600mm (width) by 600mm (length) by 1000mm (depth)	To be complied	Yes / No / Explain		

3	Purpose - For erection of the outdoor poles and filling with cement concrete and properly bed finish above ground level. And also cable ducts (pipes) should be done in the concrete bed for routing the cables, and proper installation of the Earthing Kit for the pole.	To be complied	Yes / No / Explain		
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20. CCTV System - IP66 stainless steel outdoor junction box with MCB & RCCB

Item specifications for CCTV System

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	MCB	1 No 2 Pole Miniature circuit breakers 9 KA / 10 KA breaking capacity with universal screw conforming to IS 8828 with latest amendments	Yes / No / Explain		
2	RCCB	1 No 2 Pole 25 A 240V IP 20 protected terminals with 35 sq mm terminals confirming to IS Standards	Yes / No / Explain		
3	Junction Box	Outdoor, rated IP 66 or better	Yes / No / Explain		
4	Material	Enclosure: Stainless steel Door: Stainless steel, all-round foamed-in PU seal Mounting plate: Sheet steel Stainless steel 22.05 Surface finish Brushed 1.4301 (AISI 304)	Yes / No / Explain		
5	Surface finish	Brushed	Yes / No / Explain		
6	Impact Protection	IK10	Yes / No / Explain		

7	Size	500mm x 210 mm x 500mm (W x D x H)	Yes / No / Explain		
8	Mount	Pole Mount accessory from Manufacturer of Junction box to be provided	Yes / No / Explain		
9	Rail	DIN Rail Kit to be provided to mount MCB in the Junction Box	Yes / No / Explain		
10	Additional Parameters 1	Provision for placing Surge arrester, MCB, DB, midspan, Splice Tray and other accessories	Yes / No / Explain		
11	Additional Parameters 2	All cables should be run internally through the pole.	Yes / No / Explain		
12	Additional Parameters 3	Network and Electrical cables should be laid independently through 2 different PVC pipes.	Yes / No / Explain		
13	Additional Parameters 4	There should be provision to lay power and STP cables from bottom to top of the pole through high quality PVC pipe with appropriate pipe holders.	Yes / No / Explain		

21. CCTV System - Labour works for IP66 stainless steel outdoor junction box

Item specifications for CCTV System

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Type - Pole Mount Junction box installation	To be complied (Rate per junction box installation be provided)	Yes / No / Explain		
2	Work Involved	Termination and Fixing of Pole Mount Box with CAT6 LAN Terminations and other required connections	Yes / No / Explain		

22. CCTV System - Network Surge Protector - Outdoor

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Casing	Metallic box with connectors input/output or better	Yes / No / Explain		
2	Connectors	RJ45 shielded connectors Female input/output RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE	Yes / No / Explain		
3	Protection type	IP66 or better	Yes / No / Explain		
4	Nominal voltage	48Vdc	Yes / No / Explain		
5	Max. continuous operating voltage	60Vdc or better	Yes / No / Explain		
6	Max. discharge current	2kA or better	Yes / No / Explain		
7	Temperature range:	0°C to +50°C or better	Yes / No / Explain		
8	Test standards	UL certified or better	Yes / No / Explain		

23. CCTV System - Network Surge Protector - Indoor

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Casing	Metallic box with connectors input/output or better	Yes / No / Explain		
2	Connectors	RJ45 shielded connectors Female input/output RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE	Yes / No / Explain		
3	Protection type	IP20 or better	Yes / No / Explain		
4	Nominal voltage	48Vdc	Yes / No / Explain		
5	Max. continuous operating voltage	60Vdc or better	Yes / No / Explain		

6	Max. discharge current	2kA or better	Yes / No / Explain		
7	Temperature range:	0°C to +50°C or better	Yes / No / Explain		
8	Test standards	UL certified or better	Yes / No / Explain		

24. CCTV System - Powerline Surge Protector - Outdoor

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Nominal voltage	230V AC +/- 10%	Yes / No / Explain		
2	Max. continuous operating voltage	270V AC or better	Yes / No / Explain		
3	Nominal discharge surge current I_n (8/20 μ s)	20 kA or better	Yes / No / Explain		
4	Max. discharge surge current I_{max} (8/20 μ s)	40kA or better	Yes / No / Explain		
5	Total Maximum discharge current I_{max} (8/20 μ s)	80kA or better	Yes / No / Explain		
6	Temperature range:	0°C to +50°C or better	Yes / No / Explain		
7	Test standards	UL1449 certified or better	Yes / No / Explain		

25. CCTV System - Cat-6 4 pair UTP cable (Boxed rolls of 305 Meters)

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Jacket Material	Low Smoke Zero Halogen (LSZH)	Yes / No / Explain		
2	Conductor Material	Bare copper	Yes / No / Explain		
3	Insulation Material	Polyolefin	Yes / No / Explain		

4	Cable Length	305 m	Yes / No / Explain		
5	Diameter Over Jacket, nominal	5.842 mm	Yes / No / Explain		
6	Jacket Thickness	0.559 mm	Yes / No / Explain		
7	ANSI/TIA Category	6	Yes / No / Explain		
8	Characteristic Impedance	100 ohm	Yes / No / Explain		
9	dc Resistance Unbalance, maximum	5%	Yes / No / Explain		
10	dc Resistance, maximum	7.61 ohms/100 m	Yes / No / Explain		
11	Delay Skew, maximum	45 ns	Yes / No / Explain		
12	Mutual Capacitance	5.6 nF/100 m @ 1 kHz	Yes / No / Explain		
13	Nominal Velocity of Propagation (NVP)	68%	Yes / No / Explain		
14	Operating Frequency, maximum	400 MHz	Yes / No / Explain		
15	Operating Voltage, maximum	80 V	Yes / No / Explain		
16	Transmission Standards	ANSI/TIA-568-C.2 CENELEC EN 50288-6-1 ISO/IEC 11801 Class E	Yes / No / Explain		
17	Safety Voltage Rating	300 V	Yes / No / Explain		
18	Dielectric Strength, minimum	1500 Vac 2500 Vdc	Yes / No / Explain		
19	Smoke Test Method	IEC 61034-2	Yes / No / Explain		
20	Acid Gas Test Method	IEC 60754-2	Yes / No / Explain		
21	Flame Test Method	IEC 60332-3-22	Yes / No / Explain		
22	Operating Temperature	0 °C to +50 °C	Yes / No / Explain		
23	Cable Type	U/UTP (unshielded)	Yes / No / Explain		

24	Pairs, quantity	4	Yes / No / Explain		
25	Conductor Gauge, singles	23 AWG	Yes / No / Explain		
26	Pulling Tension, maximum	11 kg	Yes / No / Explain		
27	Regulatory Compliance/Certifications	RoHS 2011/65/EU ISO 9001:2015	Yes / No / Explain		

26. CCTV System - Labour works for CAT6 UTP Cable Laying

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of cable - UTP Cable (Box consisting on 305 meters to be laid)(Rate for UTP cable box consisting 305 meters to be laid is to be quoted)	To be complied	Yes / No / Explain		
2	Work Involved - LAN cables are to be routed in PVC channels / cable trays wherever cables are required as per user guidance	To be complied	Yes / No / Explain		

27. CCTV System - LC-LC Singlemode Duplex Patch Cord, 3 Meter

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Fiber Type	OS2	Yes / No / Explain		
2	Total Fibers, quantity	2	Yes / No / Explain		
3	Jacket Color	Yellow	Yes / No / Explain		
4	Fiber Mode	Singlemode	Yes / No / Explain		

5	Cord Length	3.00 m	Yes / No / Explain		
6	Diameter Over Jacket	1.80 mm	Yes / No / Explain		
7	Environmental Space	Low Smoke Zero Halogen (LSZH)	Yes / No / Explain		
8	Interface, connector A	LC/UPC	Yes / No / Explain		
9	Interface, connector B	LC/UPC	Yes / No / Explain		
10	Polarity	Pairs, flipped	Yes / No / Explain		
11	Insertion Loss, maximum	0.30 dB	Yes / No / Explain		
12	Return Loss, minimum	45.0 dB	Yes / No / Explain		
13	Regulatory Compliance/Certifications	RoHS 2011/65/EU	Yes / No / Explain		

28. CCTV System - 6 Port LIU loaded with SM Pigtail

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Fiber Mode	Singlemode	Yes / No / Explain		
2	Fiber Type	OS2	Yes / No / Explain		
3	Finish	Powder coated	Yes / No / Explain		
4	Material Type	Aluminum	Yes / No / Explain		
5	Shelf Movement	swivel tray	Yes / No / Explain		
6	Body Style	Symmetrical	Yes / No / Explain		
7	Functionality	Patching Splicing	Yes / No / Explain		
8	Interface, front	LC	Yes / No / Explain		

9	Splice Trays Included, quantity	1	Yes / No / Explain		
10	Splicing Type	Heat shrink, single fiber fusion	Yes / No / Explain		
11	Form Factor	6 Port should be DIN Rail Mountable	Yes / No / Explain		
12	Total Ports, quantity	6	Yes / No / Explain		
13	Insertion Loss, maximum	0.30 dB	Yes / No / Explain		
14	Return Loss, minimum	45.0 dB	Yes / No / Explain		
15	Regulatory Compliance/Certifications	RoHS 2011/65/EU	Yes / No / Explain		

29. CCTV System - 24 Port LIU loaded with SM Pigtail

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Fiber Mode	Singlemode	Yes / No / Explain		
2	Fiber Type	OS2	Yes / No / Explain		
3	Finish	Powder coated	Yes / No / Explain		
4	Material Type	Steel	Yes / No / Explain		
5	Shelf Movement	Sliding	Yes / No / Explain		
6	Body Style	Symmetrical	Yes / No / Explain		
7	Functionality	Patching Splicing	Yes / No / Explain		
8	Interface, front	LC	Yes / No / Explain		
9	Splice Trays Included, quantity	1	Yes / No / Explain		
10	Splicing Type	Heat shrink, single fiber fusion	Yes / No / Explain		

11	Form Factor	24 Port should be Rack Mountable within 1 U	Yes / No / Explain		
12	Total Ports, quantity	24	Yes / No / Explain		
13	Insertion Loss, maximum	0.30 dB	Yes / No / Explain		
14	Return Loss, minimum	45.0 dB	Yes / No / Explain		
15	Regulatory Compliance/Certifications	RoHS 2011/65/EU	Yes / No / Explain		

30. CCTV System - Cat 6 SL Series Patch cord-yellow color

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Cord Length	1.5 meters	Yes / No / Explain		
2	ANSI/TIA Category	6	Yes / No / Explain		
3	Environmental Space	Low Smoke Zero Halogen (LSZH)	Yes / No / Explain		
4	Operating Temperature	0 °C to +50 °C	Yes / No / Explain		
5	Relative Humidity	Up to 93%, non-condensing	Yes / No / Explain		
6	Safety Standard	UL 1863	Yes / No / Explain		
7	Cable Type	U/UTP (unshielded)	Yes / No / Explain		
8	Interface, connector A	RJ45 plug	Yes / No / Explain		
9	Interface, connector B	RJ45 plug	Yes / No / Explain		
10	Jacket Color	Yellow	Yes / No / Explain		
11	Conductor Type	Stranded	Yes / No / Explain		
12	Conductor Gauge, stranded	24 AWG	Yes / No / Explain		

13	Plug Insertion Life, minimum	750 times	Yes / No / Explain		
14	Wiring	T568B	Yes / No / Explain		
15	Regulatory Compliance/Certifications	RoHS 2011/65/EU	Yes / No / Explain		

31. CCTV System - Cat 6 STP Patch cord for Outdoor Camera

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Cord Length	5 Meters	Yes / No / Explain		
2	ANSI/TIA Category	6 / 6A	Yes / No / Explain		
3	Environmental Space	Low Smoke Zero Halogen (LSZH)	Yes / No / Explain		
4	Operating Temperature	0 °C to +50 °C	Yes / No / Explain		
5	Relative Humidity	Up to 93%, non-condensing	Yes / No / Explain		
6	Cable Type	STP	Yes / No / Explain		
7	Interface, connector A	RJ45 plug	Yes / No / Explain		
8	Interface, connector B	RJ45 plug	Yes / No / Explain		
9	Jacket Color	Yellow	Yes / No / Explain		
10	Conductor Type	Stranded	Yes / No / Explain		
11	Conductor Gauge, stranded	26AWG	Yes / No / Explain		
12	Plug Insertion Life, minimum	750 times	Yes / No / Explain		
13	Wiring	T568B	Yes / No / Explain		
14	Regulatory Compliance/Certifications	RoHS 2011/65/EU	Yes / No / Explain		

32. CCTV System - Cat 6 24-port loaded, Modular Jack Panel, 1U

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	ANSI/TIA Category	6	Yes / No / Explain		
2	Flammability Rating	UL 94 V-0	Yes / No / Explain		
3	Operating Temperature	-10 °C to +60 °C	Yes / No / Explain		
4	Safety Standard	cUL RCM UL	Yes / No / Explain		
5	Total Ports, quantity	24 Port Fully Loaded	Yes / No / Explain		
6	Cable Type	Unshielded	Yes / No / Explain		
7	Panel Style	Straight	Yes / No / Explain		
8	Material Type	High-impact, flame retardant, thermoplastic Powder-coated steel	Yes / No / Explain		
9	Regulatory Compliance/Certifications	RoHS 2011/65/EU ISO 9001:2015	Yes / No / Explain		

33. CCTV System - Labour works for CAT6 Patch Panel Fixing & Termination per piece

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of patch panel - CAT6 Patch panel	To be complied	Yes / No / Explain		
2	Work Involved - Fixing and termination of 24 Ports in CAT6 Patch Panel	To be complied	Yes / No / Explain		

34. CCTV System - CAT 6 with Dual I/O faceplate and back box

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Total Ports	2	Yes / No / Explain		
2	Regulatory Compliance/Certifications	RoHS 2011/65/EU	Yes / No / Explain		

35. CCTV System - Labour works for CAT 6 with Dual I/O faceplate and back box

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of Box - CAT 6 with Dual I/O faceplate and back box	To be complied (Rate per Faceplate and back box mounting to be quoted)	Yes / No / Explain		
2	Work Involved - Termination and Fixing of Surface Mount Box with CAT6 LAN Terminations and other required connections	To be complied	Yes / No / Explain		

36. CCTV System - 12U Wall Mount Rack

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Accessories	Cooling fans (4 X 90 CFM), cable management and mounting accessories, AC mains channel, Surge protected power strip rack mountable with 6x 5A/ 15A Dual sockets: 2nos	Yes / No / Explain		
2	Rack Standard	Conforms to DIN 41494	Yes / No / Explain		
3	Construction	Welded	Yes / No / Explain		

4	Front Door	Lockable Toughended Glass Door	Yes / No / Explain		
5	Basic Frame	Steel	Yes / No / Explain		
6	Equipment Mounting	DIN Standard Slots	Yes / No / Explain		
7	Mounting Angle	19" Mounting angle made of formed steel	Yes / No / Explain		
8	Standard Finish	Powder Coated	Yes / No / Explain		
9	Top and Bottom Cover	Welded to Frame, Vented and Cable entry exit cut outs	Yes / No / Explain		
10	Static Load	40 Kgs or better	Yes / No / Explain		

37. CCTV System - Labour works for 12U Wall mount Rack

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of Rack - 12U Wall mount Rack	To be complied (Rate per Rack Mounting to be provided)	Yes / No / Explain		
2	Work Involved - Fixing of Rack on the wall and installing Switches and Routing of all Cables UTP, Power, Fibre Cables in the rack	To be complied	Yes / No / Explain		

38. CCTV System - Labour works for Laying the Cable Manager - 200 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Size - 100mm x 50 mm Rectangle Cable Manager	To be complied (Rate to be quoted in Mtrs)	Yes / No / Explain		
2	Purpose / Application - To be installaed in the server room along with the racks	To be complied	Yes / No / Explain		

39. CCTV System - Labour works for 1.5" PVC Conduit Laying per Meter - 300 Mtrs *****Item specifications for CCTV System**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of cable - UTP & Power cables (1.5 inch PVC Conduit)	To be provided (Rate per Mtrs to be quoted)	Yes / No / Explain		
2	Work Involved - LAN cables are to be routed in PVC channels wherever cables required as per user guidance	To be complied	Yes / No / Explain		

40. CCTV System - 12 Core OFC (12 core SM outdoor / Indoor armoured direct burial) - 1500 Mtrs *****Item specifications for CCTV System**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	type of cable	12f unitube armoured optical fiber cable	Yes / No / Explain		
2	standards	en 50173; iso/iec 11801, ansi/tia-568-c.3, telcordia gr-409	Yes / No / Explain		
3	fiber	single mode fiber	Yes / No / Explain		
4	fiber size	9/125/250 (os2)	Yes / No / Explain		
5	no. of fibers / loose tube	12f	Yes / No / Explain		
6	fiber identification	blue, orange, green, brown, grey & white	Yes / No / Explain		
7	optical parameters	Single Mode	Yes / No / Explain		
8	attenuation @ 1310nm db/km	< 0.34 (max)	Yes / No / Explain		
9	attenuation @ 1550nm db/km	< 0.22 (max)	Yes / No / Explain		
10	attenuation @ 1380 - 1386nm	< 0.31 (max)	Yes / No / Explain		

11	point discontinuity db	< 0.1	Yes / No / Explain		
12	cut-off wavelength	< 1260	Yes / No / Explain		
13	chromatic dispersion @ 1310 nm (ps/nm x km)	< 3.5	Yes / No / Explain		
14	core/mode-field (um)	9	Yes / No / Explain		
15	cladding (um)	125	Yes / No / Explain		
16	coating (um)	250	Yes / No / Explain		
17	material	pbtp	Yes / No / Explain		
18	diameter	3 +/- 0.2	Yes / No / Explain		
19	loose tube gel	water blocking gel	Yes / No / Explain		
20	jacketing material	hdpe	Yes / No / Explain		
21	armouring	corrugated steel tape	Yes / No / Explain		
22	ms tape thickness	> 0.15	Yes / No / Explain		
23	minimum installation bend radius (mm)	200	Yes / No / Explain		
24	minimum service bend radius (mm)	160	Yes / No / Explain		
25	tensile strength (n)	1250	Yes / No / Explain		
26	maximum crush resistance (n)	3000	Yes / No / Explain		
27	operating temp	0 to 50 deg c	Yes / No / Explain		

41. CCTV System - Labour works for Laying cables in the existing cable trench per Meter - 1500 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of cable - UTP, OFC and Power cables	To be complied (Rate to be quoted per Mtrs)	Yes / No / Explain		
2	Work Involved - 12 Core OFC cables/Power cables are to be routed in HDPE pipes wherever trenches made for all outdoor applications	To be complied	Yes / No / Explain		

42. CCTV System - HDPE Pipe - 1000 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	HDPE	Yes / No / Explain		
2	Size	32mm diameter or higher	Yes / No / Explain		
3	Material Grade	PE80 or better	Yes / No / Explain		
4	Purpose / Application	Routing the Outdoor Fiber cables, power cables, CAT6	Yes / No / Explain		
5	Standard	ISI mark standard	Yes / No / Explain		

43. CCTV System - Labour works for Laying HDPE Pipe per Meter - 1000 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type - HDPE Pipe	To be complied (Rate to be quoted per Mtrs)	Yes / No / Explain		
2	Work Involved - HDPE PIPE to be routed through the existing/ newly dug trenches for routing of UTP, OFC and Power cables	To be complied	Yes / No / Explain		

44. CCTV System - Labour works for Laying cables inside the HDPE Pipe per Meter - 1000 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type cable - UTP, OFC and Power cables	To be complied (Rate to be quoted per Mtrs)	Yes / No / Explain		
2	Work Involved - UTP, OFC and Power cables are to be routed in HDPE pipes wherever trenches made for all outdoor applications	To be complied	Yes / No / Explain		

45. CCTV System - Cable Router Markers

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	: Circular / Rectangle / Triangle shape with Mounting rod	Yes / No / Explain		
2	Size	: Suitable for Writing the cables details	Yes / No / Explain		
3	Purpose / Application	: Installing along the outdoor cable routes above the cable trenches	Yes / No / Explain		

46. CCTV System - Labour works for fixing of cable route markers 75 Nos ***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Work Involved - Fixing of the cable route markers with cement concrete along the cable trenches as per user guidance	To be complied (Rate to be quoted per router marker fixing)	Yes / No / Explain		

47. CCTV System - 40 mm Casing and Capping - 100 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	: Thermoplastic	Yes / No / Explain		
2	Application	: Laying CAT 6 Cable	Yes / No / Explain		
3	Size	: 40mm (minimum)	Yes / No / Explain		
4	Standards	: ISI mark standard	Yes / No / Explain		

48. CCTV System - Labour works for 40mm PVC Casing Caping - 100 Mtrs*****Item specifications for CCTV System**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Work Involved - Labour work for Cables are to be routed in PVC Casing wherever cables required as per user guidance	To be complied (Rate to be quoted per Mtrs)	Yes / No / Explain		

49. CCTV System - 3 Core Armoured 1.5 Sqmm power cable (Mtrs) - 1000 Mtrs*****Item specifications for CCTV System**

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	1.1KV grade, 3Core/1.5 mm ² , XLPE/PVC insulated and PVC overall sheathed, standard copper conductor, flat steel strip/wire armored cables conforming to IS Standards	To be supplied	Yes / No / Explain		
2	The cable shall bear ISI certification mark	To be conformed with	Yes / No / Explain		

50. CCTV System - Labour works for routing 1.5 Sq mm Armored Power cable in the HDPE pipe per Meter - 1000 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of cable - Armored 3 core shielded 1.5sqmm power cable	To be complied	Yes / No / Explain		
2	Purpose - Armoured power cables are to be routed in HDPE pipes wherever treches made for all outdoor applications	To be complied (Rate to be quoted per mtrs)	Yes / No / Explain		

51. CCTV System - Supply of RJ45 MALE JACK with Boot - 300 Nos***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	ANSI/TIA Category	6 or better	Yes / No / Explain		
2	Current Rating, maximum	250V AC max at 2A or better	Yes / No / Explain		
3	Insulation Resistance, minimum	500 MOhm or better	Yes / No / Explain		
4	Operating Temperature	0 °C to +50 °C or better	Yes / No / Explain		
5	Cable Type	Round, unshielded or better	Yes / No / Explain		
6	Interface	RJ45 or better	Yes / No / Explain		
7	Conductor Type	Solid Stranded or better	Yes / No / Explain		
8	Contact Plating Material	Gold	Yes / No / Explain		
9	Plug Insertion Life, minimum	750 times or higher	Yes / No / Explain		
10	Termination Type	IDC or better	Yes / No / Explain		

11	Regulatory Compliance/Certifications	IS/RoHS 2011/65/EU or better	Yes / No / Explain		
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52. CCTV System - Labour works for RJ45 Crimping/termination - 300 Nos***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of cable - UTP/STP cable laying	To be complied	Yes / No / Explain		
2	Work Involved - Crimping/termination of RJ45 Connectors for UTP/STP Cables	To be complied (Rate to be quoted per crimping)	Yes / No / Explain		

53. CCTV System - Labour works for Splicing of OFC cable cores - 50 Nos***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Work Involved - Splicing of the all cores of the OC cables including sizing the cores, inserting in trays, routing cores in splicing tray, tagging, Labeling, testing etc.	To be complied (Rate to be quoted per splicing)	Yes / No / Explain		

54. CCTV System - Labour works for Pit/trench Digging in rocky soil (earth work) per Meter - 1000 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Work Involved - Digging for Pit/Trench in rocky soil	To be complied (Rate per Meter to be provided)	Yes / No / Explain		

2	Purpose	For routing the data & power cables. The mud/sand has to be filled above the brick blocks / concrete sheets for the protection of the cables/HDPE pipes which are at the bottom of the trench	Yes / No / Explain		
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55. CCTV System - Labour works for Road cutting (in rocky soil) - 100 Mtrs***

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Work Involved - Road cutting in rocky soil	To be complied (Rate per Meter to be provided)	Yes / No / Explain		
2	Cable Protection	Placing of Brick blocks/concrete sheets above the Cables/HDPE pipe for protection of cables	Yes / No / Explain		
3	Purpose	For routing the HDPE pipe / data & power cables and re-filling putting cement concrete across the road in digged area smoothly at the road level after laying the cables above the brick block / concrete sheet	Yes / No / Explain		

56. CCTV System - Resident Engineer (Optional for 3 years)

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Scope of Work 1	Daily status checks, including Cameras working status, its coverage and Monitor display status verification, and up keeping should be carried out for CCTV Cameras, Servers & Storage systems and logs/ reports should be maintained	Yes / No / Explain		
2	Scope of Work 2	Frequent status reports and up keeping of other system components as mentioned below should be carried out: a.Switches.b.Workstations.c.Monitors.d.Cables.e. PoE injectors. Etc	Yes / No / Explain		
3	Scope of Work 3	Frequent dusting of servers, consoles, monitors and checking of network ports should be carried out.	Yes / No / Explain		
4	Scope of Work 4	Frequent status reports should be generated monthly and submitted to concerned engineer in- charge	Yes / No / Explain		
5	Payment for Resident Engineer	Payments will be released quarterly subjected to certification from concerned engineer in-charge.	Yes / No / Explain		
6	The detailed terms and conditions for providing Resident engineer enclosed in the tender shall be fully complied	To be complied	Yes / No / Explain		

57. CCTV System - Installation and commissioning charges

Item specifications for CCTV System

Sl No	Specification	Value	Compliance	Offered Specification	Remark
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1	Complete installation, Testing and commissioning of the CCTV System	To be complied	Yes / No / Explain		
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58. CCTV System - CAMC 4 Years

Item specifications for CCTV System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	The CAMC clauses seperately enclosed shall be complied to	To be complied	Yes / No / Explain		

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	The CCTV Surveillance systems are required to be installed & deployed at ECLSS, HSFC. The number of cameras and their locations are chosen to cover the full periphery compound wall, all the operational / equipment areas, entry/ exit areas and important & vital areas. The system is intended to work on 24x7 basis on all the 365 days of the year.	To be complied	Yes / No / Explain		

2	<p>The scope of this tender is for supply, installation and commissioning of cameras, and related network, electrical, Server, software and other installations. The supply, installation and integration shall be implemented as a total turn-key solution as per the requirements specified in tender document.</p>	To be complied	Yes / No / Explain		
3	<p>Vendor has to consider the all the items in BOM (Annexure-B) required for realization of fully functional IP-based integrated security system at ECLSS, Devanahalli campus of HSFC/ISRO. For the items marks " *** ", the quantity is indicative and payment will be made on actual quantity used.</p>	To be complied	Yes / No / Explain		

4	For all the licensed Software products, required licenses shall be submitted with appropriate authorization. Vendor shall be responsible for the updates /renewal of such licenses during warranty period.	To be complied	Yes / No / Explain		
5	For each item, relevant industrial standards need to be followed at the time of Installation.	To be complied	Yes / No / Explain		
6	Vendor may plan for a site visit to estimate the quantum of work during bidding process for the better understanding of the scope of implementation. With two days advance notice to the Purchase department, the Vendor could visit the site from Monday to Friday except Holidays. No visit shall be entertained after the last date for bid submission.	To be complied	Yes / No / Explain		

7	Vendors have to provide complete configuration / architecture design diagrams with required items in quote for the total solution. The offer which fails to provide the configuration diagram is liable for rejection in the Technical evaluation process.	To be complied	Yes / No / Explain		
8	The final configuration drawings shall be duly signed by HSFC Officials before starting the supply & installation along with Purchase order.	To be complied	Yes / No / Explain		
9	All Active and Passive elements to be demonstrated before acceptance of the system.	To be complied	Yes / No / Explain		
10	All equipment should have Indian standard 3 pin plug tops for main power connection	To be complied	Yes / No / Explain		

11	Installation of cameras, network, recording and commissioning shall be done as per the guidance of concerned Engineer of HSFC at Bangalore. The building layout and other details will be shared only with the successful bidder, to maintain the confidentiality of the project.	To be complied	Yes / No / Explain		
12	As the complete project is on Turnkey basis, vendor has to understand the scope of work prior to submitting the offer. It may also be noted that the whole BOM (Annexure-B) (Products/Services) has to be offered from the vendor, partial offers will be liable for rejection.	To be complied	Yes / No / Explain		

13	<p>Previous experience with proof: Details about IP based CCTV Systems installation of similar nature (with indoor & outdoor cameras, VMS, Storage, etc) along with AMC order for the same system after Post Warranty Completion carried out by the vendor within past Five years (of value above Rs. 1.5 crore or higher in a single order; limited to Supply & Installation of CCTV System)</p>	To be complied	Yes / No / Explain		
14	<p>Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority of Govt of India. The proof of registration to be attached with the tender.</p>	To be complied	Yes / No / Explain		

15	The Vendor shall have a local office in Bangalore to offer onsite support during the Warranty and post warranty period. Details of Local Office with registration details to be furnished.	To be complied	Yes / No / Explain		
16	Vendor should be an ISO certified company (Certificate to be provided)	To be complied	Yes / No / Explain		
17	The Bidder must have certified Engineers skilled in VMS and CCTV Product Implementation (Valid Authentic Certificate from Respective OEM being quoted is to be provided)	To be complied	Yes / No / Explain		
18	The bidder must be a Registered Corporate/Firm in India Registered under the Companies Act 1956/2013 or Indian Partnership 1932 Act or a Government Organization. (Certificate to be provided)	To be complied	Yes / No / Explain		

19	<p>OEM's should have Local Service centres in India preferably in Bangalore and dedicated 24x7 Helpline Numbers in India, vendor to provide details of the support centres for hardware & software items including IP Based CCTV System, Network Switches, Cameras, Servers, Software and Workstations etc.</p>	To be complied	Yes / No / Explain		
20	<p>Vendor shall provide authorization (OEM) letters/ certificates for supply and service from manufacturer for hardware & software items including IP Based Audio System, Network Switches, Cameras, Servers, Software and Workstations etc, OEM to clearly mention the credentials of the account manager i.e. Name, Designation, Email Address details for validation of Authorization</p>	To be complied	Yes / No / Explain		

21	Vendor shall provide OEM certificate/letter for service support during standard warranty period	To be complied	Yes / No / Explain		
22	The terms of the contract is for 'Supply, Installation and Commissioning by vendor' and 'Acceptance by user' at ECLSS Facility of HSFC/ISRO at Devanahalli, Bangalore.	To be complied	Yes / No / Explain		
23	Vendors to provide data sheets along with website link for validation of technical compliance for all items related to supply components, Offers which are submitted without the relevant data sheets and manufacturer website links for the individual products are liable to be considered as a non compliance and will be rejected.	To be complied	Yes / No / Explain		

24	In case the documentation file size with regard to data sheets / supporting documents exceed 10MB the same can be sent via speed post to our Purchase Section @Human Space Flight Centre, ISRO HQ Campus, New BEL Road, Bangalore, 560094 as a soft copy in a CD / Pen Drive well before the last date of submission.	To be complied	Yes / No / Explain		
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25	<p>Vendor should carefully consider all the clauses in the specifications and should ensure that their offer is complete in all respects at the time of submission. The compliance to the specification must be provided as per the template attached in PDF format. Complete technical documentation justifying the compliance should be enclosed along with their offer. Offer which is incomplete are liable to be considered as a non compliance and will be rejected.</p>	To be complied	Yes / No / Explain		
26	<p>During the Technical evaluation process, the vendor should be ready to demonstrate the capabilities of their offered products to the HSFC/ISRO authorized officials, if required.</p>	To be complied	Yes / No / Explain		

27	Vendor shall provide the timeline for supply, installation and commissioning of the complete CCTV systems. Diagram of the cable routing to be provided prior to starting the installation.	To be complied	Yes / No / Explain		
28	Pro forma for Technical Compliance Statement: For each item, apart from the Make and Model, the supplier shall provide a Technical Compliance Statement mentioning HSFC specified technical features on the left side and features available to the offered product on the right side, as per the format enclosed as Annexure-A. In case of any deviation (may be superior or inferior), the	To be complied	Yes / No / Explain		

29	The required quantities are mentioned in the BOM Annexure-B. Bill of materials is indicative only. Any other accessories / components items required for commissioning the CCTV system should be included and quoted by the vendor as separate list with BOM. The vendor should indicate the Make, Model, Technical specifications, price and use of the item in detail for the additional items offered.	To be complied	Yes / No / Explain		
30	Vendor shall provide item wise price breakup	To be complied	Yes / No / Explain		
31	Vendors should provide the list of deliverables required for total integrated system solution (should include all items as per technical & commercial bid)	To be complied	Yes / No / Explain		
32	Payment terms: Vendor should clearly mention their payment terms for supply and services.	To be complied	Yes / No / Explain		

33	Payment for labour charges: The supplier shall submit their offer for labour works per unit basis. Payment towards labour charges will be made as per actual's based on the quantity of work completed.	To be complied	Yes / No / Explain		
34	Delivery: The vendor shall deliver all the items at ECLSS Facility, HSFC/ISRO at Devanahally, Bangalore,	To be complied	Yes / No / Explain		
35	After installation, the supplier shall submit a report with full details of the setup with facility layout, camera locations, system architecture, network cable routing diagram and operational and maintenance document of the overall system.	To be complied	Yes / No / Explain		
36	Vendor shall provide the Operation & Configuration manuals in English Only - Three sets.	To be complied	Yes / No / Explain		

37	The overall system shall perform [24x7] trouble free operation as per the tender specification after successful installation. In the event of any failure notice the test shall be repeated.	To be complied	Yes / No / Explain		
38	The Vendor shall pay for and arrange, without any extra cost to HSFC/ISRO, all necessary testing equipment, instruments, materials, accessories, and the requisite labour. Any defects in materials and / or in workmanship detected in the course of testing shall be rectified by the Vendor, entirely at his own cost, to the satisfaction of HSFC/ISRO officilas. HSFC/ISRO will not provide any test instruments/tools during acceptance testing.	To be complied	Yes / No / Explain		

39	<p>Standard Warranty: Minimum comprehensive warranty support for a period of three years shall be provided for all items and for the setup. Vendor shall provide OEM certificate/letter for service support during standard warranty period in case, any of the manufacturers provides comprehensive support for more than three years, for any item, the same shall be provided to HSFC/ISRO.</p>	To be complied	Yes / No / Explain		
40	<p>Training has to be provided for user about the system configuration & operations at no extra cost.</p>	To be complied	Yes / No / Explain		

41	<p>Labour components generally required for laying, fixing and termination activities related with cables and racks are included. The quantity mentioned in the tender is indicative. During the actual work, in case of additional requirements, supplier shall supply passive components required and complete the labour activities. Payment will be made as per actual's on production of supporting documents</p>	To be complied	Yes / No / Explain		
42	<p>HSFC Engineer in-charge of the site will guide the supplier in cable laying activities within the ECLSS Facility.</p>	To be complied	Yes / No / Explain		

43	Fixing of Cable Router marker : MS Cable route markers will be supplied by vendor and the supplier will be responsible for its fixing with concrete through the network cable path and should be labelled with colour markings which are clearly visible, distinguishable and long durable irrespective of climate conditions.	To be complied	Yes / No / Explain		
44	Trenching:	To be complied	Yes / No / Explain		
45	Trenching of soft soil:	To be complied	Yes / No / Explain		
46	750mm depth and 400mm width	To be complied	Yes / No / Explain		
47	Cable to be protected by continuous brick laying/ concrete sheet and sand	To be complied	Yes / No / Explain		
48	Refilled and strengthened up to ground level	To be complied	Yes / No / Explain		
49	Trenching of TAR Road:	To be complied	Yes / No / Explain		
50	Cable to be protected by continuous brick laying / concrete sheet and sand	To be complied	Yes / No / Explain		
51	Concrete layer on ground level	To be complied	Yes / No / Explain		

52	Wherever trenching of soft soil and TAR surface is not possible beyond 750 mm, cables have to be routed through GI pipes.	To be complied	Yes / No / Explain		
53	The vendor shall take utmost care in laying, fixing and termination activities, to avoid any losses to ISRO assets and damages to already laid cables or building. In case of any damage, the vendor shall be responsible for re-establishing the facility and has to borne the incurring expenditure towards the damages.	To be complied	Yes / No / Explain		
54	Vendor to Ensure to use Stainless Steel Screws while fixing components in outdoor Locations to avoid rusting	To be complied	Yes / No / Explain		

55	Evaluation of L1 criteria : L1 will be arrived at the total landing cost including taxes, duties etc and also the AMC charges. (i.e. for the total solution). Item wise L1 will not be considered. The Optional item Resident Engineer shall not be considered for L1 evaluation.	To be complied	Yes / No / Explain		
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Supporting Documents required from Vendor

- 1. Bill of material without price breakup**
- 2. Bill of Material with price breakup (Price Bid Related)**
- 3. Datasheet and catalogues of the products being offered**
- 4. Purchase Order already executed**
- 5. General and Technical compliance document**

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Vendor should supply the items and carry out the installation including cable laying, testing, training and documentsation.	Yes / No / Explain	
2	Items to delivered and installation to be completed as a turnkey mode	Yes / No / Explain	
3	Delivery Terms - The Quotation should be FOR Destination/Door Delivery Basis	Yes / No / Explain	
4	Packing and Forwarding Charges Inclusive/Exclusive [in case of Exclusive please indicate the applicable Percentage]	Yes / No / Explain	
5	Delivery Period [in Weeks/Months]	Yes / No / Explain	
6	Freight Charges, if any	Yes / No / Explain	
7	No Insurance Coverage is required at Purchasers Cost	Yes / No / Explain	
8	Mode of Despatch	Yes / No / Explain	
9	<p>Taxes and Duties:</p> <p>Government of India has implemented Goods and Services Tax [GST] w.e.f 01.07.2017. The Tenderer[s] should mandatorily possess a valid GSTIN along with the GST Registration Certificate. Please send duly self-attested certificate of GST Registration along with offer[s], in the absence of which your offer[s] will be invalid and shall not be considered.</p> <p>In the event, if the tenderers specifically not mentioned the GST Percentage or GST Amount while submitting their offer it will be deemed and considered as the prices quoted by the tenderers are inclusive of GST</p>	Yes / No / Explain	

10	<p>Goods and Service Tax [Intra State]:</p> <p>Government of India, Ministry of Finance, Department of Revenue, under S. No. 243A [now 243B] vide Notification No. 6/2018-Integrated Tax [Rate] dated 25.01.2018 and as amended vide Notification No. 24/2018-Integrated Tax [Rate] dated 31.12.2018</p> <p>(b) Government of Karnataka Finance Secretariat, under S. No. 243A [now 243B] vide Notification No. [6/2018] No. FD 48 CSL 2017, Bengaluru Dated 25.01.2018 and as amended as Notification No. [24/2018] No. FD 48 CSL 2017, Bengaluru Dated 31.12.2018.</p>	Yes / No / Explain	
11	<p>Goods and Service Tax [Inter State]:</p> <p>Government of India, Ministry of Finance, Department of Revenue, under S. No. 243A [now 243B] vide Notification No. 7/2018-Integrated Tax [Rate] dated 25.01.2018 and as amended vide Notification No. 25/2018-Integrated Tax [Rate] dated 31.12.2018</p>	Yes / No / Explain	
12	<p>Income Tax - Wherever Installation and Works Contracts are involved Applicable Income Tax will be deducted from the Contractors Bill and necessary Certificate will be issued by Accounts Officer, HSFC</p>	Yes / No / Explain	

13	<p>Customs Duty - Human Space Flight Centre [HSFC], Bengaluru/ISRO Centres/Units across India are partially exempted from payment of Customs Duty vide Notification No.12/12-Cus dated 17.03.2012 superseded by Notification No.50/17-Customs dated 30.06.2017 and as amended by Notification No. 5/2018-Customs dated 25.01.2018, Sl. No. 539A. The necessary Customs Duty Concessional Certificate [CDCC] shall be provided by HSFC/Respective identified ISRO Centres/Units. In case of Imported bought out Items if any, HSFC/Respective identified ISRO Centres/Units shall provide necessary Customs Duty Concessional Certificate [CDCC] only. All charges towards Import of items shall be borne by the tenderers. While requesting for issue of CDCC for the bought out Imported Items if any, the Tenderer[s] should mention the Item Description, Quantity and Value for which CDCC is to be provided for the bought out Imported Items. The necessary proof should be produced while requesting for issue of CDCC from HSFC/Respective identified ISRO Centres/Units.</p>	Yes / No / Explain	
14	<p>Payment Terms: Our Standard Payment Terms is 100% payment within 30 days after Receipt and Acceptance of Stores at our Site.</p>	Yes / No / Explain	
15	<p>Any Bank Charges payable to our Bank shall be payable by Purchaser. Similarly, any Bank charges payable to your bank shall be payable by the Contractor.</p>	Yes / No / Explain	
16	<p>Advance Payment Bank Guarantee: Normally Advance Payment will not be considered. In case of any Advance Payment, it shall be supported by an Equivalent Bank Guarantee from a Nationalised Bank valid till receipt of the Final Product/Stores plus 60 days.</p>	Yes / No / Explain	

17	<p>Bank Guarantee towards Free Issue of Materials: The successful Tenderer[s] shall furnish Bank Guarantee [BG] towards the cost of Free Issue Materials issued by Purchaser towards adequate Security for the FIM for the execution of the Contract and the said Tenderer will be duly authorized by Purchaser to collect the free issue materials from respective Identified ISRO Centres/Units site subject to the furnishing of the aforesaid Bank Guarantee. The BG is to be kept valid till supply and acceptance of the final product.</p> <p>The Bill of Material for the material used for the Fabrication Work and available balance to be prepared by you and countersigned by the User Department is to be sent along with the final bill for arranging the balance payment.</p>	Yes / No / Explain	
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18	<p>Performance Security [PS] -The Successful Tenderer[s] shall execute Performance Security for 3% [Three] of the value of the PO towards satisfactory execution of the PO including fulfilment of Warranty obligations. The Performance Security shall be executed through Account Payee Demand Draft/Bankers Cheque/Fixed Deposit Receipts or Bank Guarantee issued by a Nationalized Bank/Scheduled Bank. The Bank Guarantee must be valid for the entire Contract Period and an additional period of 60 days beyond the contractual obligations. The BG shall be executed on a Non-judicial stamp paper of appropriate value as per our specimen.</p> <p>In case the successful Tenderer[s] fails to furnish the Performance Security within 15 days after the receipt of PO or on signing of the Contract or any extension thereof, the Purchase Order shall be cancelled or terminated. The EMD if any, executed shall be forfeited and appropriate penal action shall be initiated. The performance Security will not carry any interest and shall be returned after completion of all the contractual obligations. Central Public Sector Undertakings [PSUs]/ Public Sector Enterprises [PSEs]/Autonomous Bodies are exempted from payment of Performance Security [PS], and instead, an Indemnity Bond shall be executed in lieu of PS.</p>	Yes / No / Explain	
19	<p>Warranty/Guarantee - Tenderer[s] are requested the Indicate Applicable Standard Warranty/Guarantee Period from the date of receipt and acceptance of items at our site. All the replacements during the Warranty period shall be carried out by the successful Tenderer[s] Free of all Cost including To and Fro Freight Charges.</p>	Yes / No / Explain	

20	<p>Force Majeure/Extension of Time:</p> <p>Neither party shall bear responsibility complete or partial non-performance of any of his obligations [except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the Purchase Order], if the non-performance results from such force majeure circumstances such as, but not restricted to, flood, fire, earthquake, civil commotion, sabotage, explosion, epidemic, quarantine restriction, strike, lock out, freight embargo, acts of the Government either in its sovereign or its contractual capacity, hostility, acts of public enemy and other acts of God as well as war or revolution, military operation, blockade, acts or actions of state authorities or any other circumstances beyond the control of the parties that have arisen after the conclusion of Purchase Order. In such circumstances, the time stipulated for the performance of an obligation under the Purchase Order may be proportionately extended.</p> <p>The party for whom it has become impossible to meet the obligation under this contract due to force majeure condition, shall notify the other party in writing not later than 21 days from the date of the occurrence of the force majeure conditions. In the event of delay lasting over 60 days, arising from force majeure causes, the Purchaser reserves the right to cancel the contract without any obligation to compensate the Contractor in any manner. Unless agreed by both the parties, in writing, the Contractor shall continue to perform his obligations under the Purchase Order as far as is practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.</p>	Yes / No / Explain	
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21	<p>Force Majeure/Extension of Time: (Continuation to the above para)</p> <p>Any Certificate issued by the Chamber of Commerce or any other competent authority or organization shall be sufficient proof of commencement and cessation of the above circumstances. In case of failure to carryout complete or partial performance of an obligation for more than 60 days, either party shall reserve the right to terminate the Contract totally or partially. A prior written notice of 30 days to the other party will be given informing of the intention to terminate without any liability.</p>	Yes / No / Explain	
22	<p>Liquidated Damage:</p> <p>The time and date stipulated in the contract for completion of the work shall be deemed to be the essence of the contract. If the Contractor fails to deliver the Stores within the time specified in the Contract or any extension thereof or if the Contractor fails to maintain the required progress or comply with the relevant provisions of the general conditions of contract or special conditions of contract, if any and clear the site on or before the contract or extended date of completion, the Purchaser shall, without prejudice to any other right or remedy available under the law to Purchaser on account of such breach, recover from the Contractor as Liquidated Damages a sum one-half of one percent [0.5 percent] of the Contract price of the undelivered Stores for each calendar week of delay or part thereof. The total Liquidated Damages shall not exceed Ten percent [10 percent] of the Contract price of the unit or units so delayed.</p> <p>In case of delay in delivery of the Stores beyond the delivery date stipulated in the Purchase Order or any extension thereof, such Stores shall be received without prejudice to the right of the Purchaser to claim Liquidated Damages and without prejudice to the terms and conditions of the Purchase Order.</p>	Yes / No / Explain	

<p>23</p>	<p>Termination and Short Closing of the Contract:</p> <p>Under the normal circumstances, Termination/Short Closing of the Contract are not foreseen. However, HSFC reserves the right to terminate the Contract by giving 30 Days prior notice in the following circumstances: -</p> <p>Due to repeated non-performance in the execution of Contract.</p> <p>If the Contractor fails to deliver the Stores/Services within the stipulated time or any extension thereof, granted by the Purchaser.</p> <p>If the Contractor fails to perform any other obligations under this Contract.</p> <p>If the Contractor becomes bankrupt or otherwise insolvent.</p> <p>Owing to deficiency of Stores/Service, breach of Contract.</p> <p>For inefficiency, indiscipline, irregularity, insincerity, indifference in work, disobedience, doubtful credentials/integrity, etc., at any point of time during the Contract period.</p> <p>If the Contractor fails to Honour the whole or any part of Contract including failure to deliver the Stores/Services within the time stipulated in the Contract.</p> <p>If the Contractor is found to have made any false or fraudulent declaration or statement to obtain the Contract or he is found to be indulging in unethical or unfair trade practices.</p> <p>When both the parties agree mutually.</p> <p>Any special circumstances, which must be recorded to justify the cancellation or termination of Contract.</p> <p>To Terminate the Contract wholly or partly without assigning any reason.</p>	<p>Yes / No / Explain</p>	
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24	Pre-Delivery Inspection [PDI: if Required] - The successful Tenderer[s] has to arrange for the necessary PDI of the Stores at the Contractor Factory Premises to enable HSFC Engineers to carry out PDI. The PDI is applicable wherever the RFP document/Scope of Work calls for such an inspection.	Yes / No / Explain	
25	Factory Acceptance Testing [FAT - if Required] - The successful Tenderer[s] has to arrange for the necessary FAT of the Stores at the Contractor Factory Premises to enable HSFC Engineers to carry out FAT. The FAT is applicable wherever the RFP document/Scope of Work calls for such a FAT.	Yes / No / Explain	
26	Tenderer[s] are requested to mention whether Installation, Testing, Commissioning, Demonstration, Acceptance and imparting Training is necessary for the Tendered Stores.	Yes / No / Explain	
27	Training Free of Cost at Purchasers Site, if applicable	Yes / No / Explain	
28	Supply and Installation is subject to Purchasers Acceptance.	Yes / No / Explain	
29	Instruction/Operation Manual to be supplied Free of Cost.	Yes / No / Explain	
30	Cost of Spares included in the Price Bid/Not included.	Yes / No / Explain	
31	Will you be able to provide Consumables/Spares for 10 Years?	Yes / No / Explain	
32	Items from Latest Production batch only are to be supplied.	Yes / No / Explain	
33	Confirm whether you will be able to provide Samples Free of Cost, if called for	Yes / No / Explain	
34	Whether Prequalification of your facility procedure completed [if applicable]	Yes / No / Explain	
35	Whether approximate Weight [Net and Gross] of the Consignment is mentioned	Yes / No / Explain	
36	Metric Measurement Systems to be followed.	Yes / No / Explain	
37	Defective/Rejected Items if any are to be replaced Free of Cost.	Yes / No / Explain	

38	<p>Arbitration [For Indigenous]:</p> <p>In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 together with amendments thereto or any modification thereof. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre Bengaluru [Domestic and International] as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The Seat for Arbitration shall be Bengaluru and the Arbitration proceedings shall be conducted in English Language only. Work under the contract shall be continued by the Contractor during the pendency of Arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the Purchaser or unless the matter is such that the work cannot be possibly continued until the decision [whether final or interim] of the Arbitrator is obtained.</p>	Yes / No / Explain	
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39	<p>Arbitration [For Public Sector Undertakings]:</p> <p>In case of any dispute or difference of opinion arises between the parties connected to this Contract, such disputes or difference of opinion shall be resolved amicably by mutual consultation. Failing which, either party may take recourse of any alternative dispute settlement mechanism.</p> <p>Notwithstanding anything contained in above para, in case of any dispute or difference of opinion falling under the exception to the ambit of Administrative Mechanism for Resolution of CPSEs Disputes [AMRCD] the party to this Contract with mutual consent may take recourse of any alternative dispute settlement mechanism including arbitration for settlement of such disputes as per applicable law and procedure. Further, also that all the differences or disputes including publication related disputes concerning intellectual property rights arising out of any activities performed under this agreement shall be in first attempt settled through mutual deliberations, failing which shall be further settled in terms of applicable laws and procedure.</p>	Yes / No / Explain	
40	<p>Jurisdiction:</p> <p>The Courts within Bengaluru will have the Jurisdiction to deal with and deciding any matter arising out of this contract.</p>	Yes / No / Explain	
41	<p>Applicable Law - The contract shall be interpreted and construed and governed by the Laws of India.</p>	Yes / No / Explain	
42	<p>Language and Measures - All documents pertaining to this Tender including technical specification or any other writings shall be written in English Language. The metric system of measurement shall be used exclusively in this Tender.</p>	Yes / No / Explain	
43	<p>Validity of the Offer - Minimum of 120 days from the date of opening the Tender</p>	Yes / No / Explain	
44	<p>Local Content: Whether Class I or Class II Supplier. If so, please provide the percentage of local content</p>	Yes / No / Explain	

45	<p>SELF CERTIFICATION BY VENDOR [To be submitted along with Technical Offer]</p> <p>This is to certify that the item offered by _____ meets the minimum local content [i.e. Class-I or Class-II Local Supplier] as called for in the tender, having _____ percentage of local content along with the details of the location[s] _____</p> <p>_____ at which the local value addition is made.</p> <p>The above declared percentage of local content does not include the cost of Transportation, Insurance, Installation, Commissioning, Training and After Sales Service Support like AMC/CMC. etc.</p> <p>Authorized Signatory with seal</p>	Yes / No / Explain	
46	<p>AMC Terms & Conditions:</p> <p>Payment: The payment shall be released on pro-rata basis after successful completion of each Preventive Maintenance Services against submission of the following documents: a] Original Signed Proforma Invoice b] Original Field Service Report for having carried out each Preventive Maintenance Service. c] A Certificate issued by Focal Point for having successfully carried out each Preventive Maintenance Service duly approved by Division Head. All bills should be directly addressed to Accounts Officer, HSFC. The Service Provider shall submit their bills directly to Focal Point for Certification. After Certification, Focal Point shall directly forward the bill to Accounts Officer to release the payment.</p>	-	

47	Material Bank Guarantee: In case of major repair of the equipment, the Service Provider shall submit Material Bank Guarantee for equivalent value of the equipment as a collateral security towards the Cost of Equipment taken from HSFC for repair purpose at Service Provider premises. The Material Bank Guarantee shall be kept valid till the completion of all Contractual obligations.		
48	Down Time Compensation: In case, if any Break-Down Calls are not attended within 24 [Twenty Four] Hours of lodging the complaint, Down-Time Compensation at the rate of 0.5% [One-Half of One Percent] of the Service Charges applicable to the specific equipment per day shall be recovered from the Service Provider. The Service Provider shall depute their Service Engineer to the Service Receiver premises immediately but not later than 24 [Twenty Four] Hours on receipt of the call from the Focal Point. However, No Boarding, Lodging and Transportation Charges will be paid extra during the currency of the contract.		
49	Taxes: The present rate of GST applicable to this Service Contract is 18% Extra. However, any revision of Statutory Levy during the currency of the contract shall be reimbursed against production of documentary evidence.		
50	Income Tax: The Income Tax at Source [TDS] shall be deducted as per the provisions of Income Tax Act as amended from time to time. Accounts Officer, HSFC will issue necessary IT Certificate.		
51	Spare Parts: The Service Receiver shall arrange to provide genuine spare parts required for the repair/maintenance of the equipment. The old/worn out parts replaced by new parts shall be the property of the Service Receiver and hence to be surrendered to the Service Receiver and due acknowledgement to be obtained from the Focal Point.		

52	<p>Services: The Service Provider shall normally carry out Preventive Maintenance Services only on working days between 09.30 Hours and 17.00 Hours. However, the Service Provider shall attend all emergent calls outside office hours and/or even on holidays and/or as and when required. It shall be the complete responsibility of the Service Provider to keep the Equipments covered under this contract at sound working condition during the currency of the contract. Apart from Routine Preventive Maintenance visits, the Breakdown Calls should be attended within 24 [Twenty Four] Hours to repair/rectify the equipment. However, No Boarding, Lodging and Transportation Charges will be paid extra during the currency of the contract.</p>	-	
53	<p>Damages to Service Receivers Property/And or Injury to Service provider Workers: In the event of any damage to the Service Receivers Property or personal injury to Service Receiver/Providers personnel due to negligence of the Service Providers Employees, the responsibilities shall be solely rest upon with the Service Provider.</p>	-	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	CCTV System - Indoor Fixed Bullet Camera	32.00 Nos.		-		
2	CCTV System - Indoor Exp Proof PTZ Camera	4.00 Nos.		-		
3	CCTV System - Indoor Fixed Explosion Proof Camera	4.00 Nos.		-		
4	CCTV System - Outdoor Fixed Bullet Camera	55.00 Nos.		-		

5	CCTV System - Midspan for Outdoor Fixed Camera populated with Single Mode SFP Module	16.00 Nos.					
6	CCTV System - L3 Core Switch 24-port 10/100/1000T and 100/1000 SFP stackable switch with 4 SFP+ ports and dual hotswap PSU bays with Rack mount kit	2.00 Nos.					
7	CCTV System - Distribution Switch 24-port 10/100/1000T PoE+ Edge Switch with 4 SFP ports and fixed power supply with Rack Mount Kit	4.00 Nos.					
8	CCTV System - 8-port 100/1000x SFP fixed power supply with Rack Mount Kit	3.00 Nos.					
9	CCTV System - Single Mode 1G SFP Module	40.00 Nos.					
10	CCTV System - Management Server	1.00 Nos.					
11	CCTV System - Recording Server	2.00 Nos.					

12	CCTV System - 100TB Usable Storage	1.00 Nos.		-		
13	CCTV System - Digital Video Management software for Supply of Video Management Software 1 Base License + 100 Device Licenses with 3 Years Support	1.00 Nos.		-		
14	CCTV System - Workstation with graphics card for Monitoring	4.00 Nos.		-		
15	CCTV System - 55" Wall Mount Monitor	6.00 Nos.		-		
16	CCTV System - 42 U Rack with 4 Nos Power Strips	1.00 Nos.		-		
17	CCTV System - Pole (6 meters) for Mounting Outdoor Camera	16.00 Nos.		-		
18	CCTV System - Pole/Pipe Earthing Kit	16.00 Kit		-		
19	CCTV System - Labour works for Pole erection and grounding fixing and installtion of earthing kit	16.00 Nos.		-		

20	CCTV System - IP66 stainless steel outdoor junction box with MCB & RCCB	16.00 Nos.					
21	CCTV System - Labour works for IP66 stainless steel outdoor junction box	16.00 Nos.					
22	CCTV System - Network Surge Protector - Outdoor	55.00 Nos.					
23	CCTV System - Network Surge Protector - Indoor	40.00 Nos.					
24	CCTV System - Powerline Surge Protector - Outdoor	16.00 Nos.					
25	CCTV System - Cat-6 4 pair UTP cable (Boxed rolls of 305 Meters)	7.00 Box					
26	CCTV System - Labour works for CAT6 UTP Cable Laying	7.00 Box					
27	CCTV System - LC-LC Singlemode Duplex Patch Cord, 3 Meter	70.00 Nos.					
28	CCTV System - 6 Port LIU loaded with SM Pigtail	25.00 Nos.					

29	CCTV System - 24 Port LIU loaded with SM Pigtail	3.00 Nos.		-		
30	CCTV System - Cat 6 SL Series Patch cord-yellow color	110.00 Nos.		-		
31	CCTV System - Cat 6 STP Patch cord for Outdoor Camera	16.00 Nos.		-		
32	CCTV System - Cat 6 24-port loaded, Modular Jack Panel, 1U	4.00 Nos.		-		
33	CCTV System - Labour works for CAT6 Patch Panel Fixing & Termination per piece	4.00 Nos.		-		
34	CCTV System - CAT 6 with Dual I/O faceplate and back box	10.00 Nos.		-		
35	CCTV System - Labour works for CAT 6 with Dual I/O faceplate and back box	10.00 Nos.		-		
36	CCTV System - 12U Wall Mount Rack	7.00 Nos.		-		
37	CCTV System - Labour works for 12U Wall mount Rack	7.00 Nos.		-		
38	CCTV System - Labour works for Laying the Cable Manager - 200 Mtrs***	200.00 m		-		

39	CCTV System - Labour works for 1.5" PVC Conduit Laying per Meter - 300 Mtrs ***	300.00 m						
40	CCTV System - 12 Core OFC (12 core SM outdoor / Indoor armoured direct burial) - 1500 Mtrs ***	1500.00 m						
41	CCTV System - Labour works for Laying cables in the existing cable trench per Meter - 1500 Mtrs***	1500.00 m						
42	CCTV System - HDPE Pipe - 1000 Mtrs***	1000.00 m						
43	CCTV System - Labour works for Laying HDPE Pipe per Meter - 1000 Mtrs***	1000.00 m						
44	CCTV System - Labour works for Laying cables inside the HDPE Pipe per Meter - 1000 Mtrs***	1000.00 m						
45	CCTV System - Cable Router Markers	75.00 Nos.						
46	CCTV System - Labour works for fixing of cable route markers 75 Nos ***	75.00 Nos.						

47	CCTV System - 40 mm Casing and Capping - 100 Mtrs***	100.00 m		-		
48	CCTV System - Labour works for 40mm PVC Casing Capping - 100 Mtrs***	100.00 m		-		
49	CCTV System - 3 Core Armoured 1.5 Sqmm power cable (Mtrs) - 1000 Mtrs***	1000.00 m		-		
50	CCTV System - Labour works for routing 1.5 Sq mm Armored Power cable in the HDPE pipe per Meter - 1000 Mtrs***	1000.00 m		-		
51	CCTV System - Supply of RJ45 MALE JACK with Boot - 300 Nos***	300.00 Nos.		-		
52	CCTV System - Labour works for RJ45 Crimping/termination - 300 Nos***	300.00 Nos.		-		
53	CCTV System - Labour works for Splicing of OFC cable cores - 50 Nos***	50.00 Nos.		-		
54	CCTV System - Labour works for Pit/trench Digging in rocky soil (earth work) per Meter - 1000 Mtrs***	1000.00 m		-		

55	CCTV System - Labour works for Road cutting (in rocky soil) - 100 Mtrs***	100.00 m		-		
56	CCTV System - Resident Engineer (Optional for 3 years)	3.00 Years		-		
57	CCTV System - Installation and commissioning charges	1.00 Nos.		-		
58	CCTV System - CAMC 4 Years	4.00 Years		-		