

**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**Electrical Maintenance Division**

NO.EMD:PR. NO. 1000036861, RFX No. 6100001699

Date: 07.05.2024

**Sub: Minutes of Pre-bid Meeting**

**Name of work:** Supplying, installing, testing and commissioning of server-based Centralized CCTV System-PH- II at IIT Bombay.

**Ref:** E-Tender Notice NO PR. 1000036861, RFX No. 6100001699 dated. 15.04.2024.

Pre-bid meeting for the above-mentioned work was held on 02.05.2024 in the office of the undersigned (with subsequent site visit). Reference to the discussion in pre-bid, the following amendments to the tender specification are hereby informed:

1. Tender Page No.2, Prebid queries received on and before 29.04.2024: All the prebid queries are answered during prebid meeting held dated-02.05.2024.
2. Tender page no. 19, 20 & 21, Item No-10, 20, 30, 40, 50, 60: The item descriptions are updated as "Supply Installation Testing and Commissioning (SITC)."
3. Tender page no. 40, In Annexure-B1 Technical PQ, Item No.1: The requirement for the OEM of Camera has been revised as, 1500 cameras (with video analytics) combining up to a maximum of 10 projects".
4. Tender page no. 36, Annexure – A3 Commercial PQ: Regarding MOC, as attached: Annexure A3: Commercial PQ, Amendment.
5. Tender page no. 26,28 and 29 BOQ line no. 310,360 &430 i.e. "Main recording server" & "Client Work Station" & "FHD Monitor": During the pre-bid meeting the participant agencies requested to bifurcate the scope of Ph-1 (old) and Ph-2 (proposed) CCTV items for optimal working. As the work is subject to execution considering the bidder's request the same may be bifurcated while offering the work order.
6. Tender page no. 26, BOQ line no. 310 & 320: Main Recording server & Failover Recording server: It is to confirm that 16X18TB (288TB) storage is asked as gross storage and recording is required @1080p, 25 fps for 90 days at RAID 5 configuration.
7. Tender Page No.2, Proof of Concept: About this point, none of the manufacturer or SI from the open market came up with a successful POC as per technical annexure B1 to B5. Hence, the existing make and specifications will be considered for the tender.
8. List of MAF required is attached (Annexure: B6 List of essential MAF document).
9. The locations for the proposed camera's in PH-2 on Campus Map is attached.

This letter is a part of the tender document. This letter is required to be signed by the contractor & submitted along with the tender documents.

Thanking You,

Yours faithfully,



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Executive Engineer (Electrical)

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*[Handwritten signature]* 08/05/2024

CC to:

1. Dean (IPS)
2. Associate Dean (IPS-II)
3. Asstt. Registrar (Audit)

**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**Electrical Maintenance Division**

NO.EMD:PR. NO. 1000036861, RFX No. 6100001699

Date: 07.05.2024

**Sub: Minutes of Pre-bid Meeting: Line no. 3, Annexure A3: Commercial PQ, Amendment**

**Name of work:** Supplying, installing, testing and commissioning of server-based Centralized CCTV System-PH- II at IIT Bombay.

**Ref:** E-Tender Notice NO PR. 1000036861, RFX No. 6100001699 dated. 15.04.2024.

Page no & Line no	Annexure/ Section	Description	Tender's Approved make	Request during Pre-bid meeting	IITB Reply
36 & 26	Annexure – A3 Commercial PQ	26 - 42U junction Box / Rack	Approved Make – APC / Valrack / Rittal / Legrand	Please confirm MOC details.	Please refer technical specification Line Item No 250.1. The size is Height 2000mm, Width 800mm and depth 1200mm
36 & 27	Annexure – A3 Commercial PQ	27 - 6U junction Box / Rack	Approved Make – Rittal / Sumip / Valrack	Please confirm MOC details.	Please refer technical specification Line Item No 260.1. The dimension 600W X6UX500D (mm), 1U is equal to 1.75 inches
36 & 29	Annexure – A3 Commercial PQ	29 - 4U junction Box / Rack	Approved Make – Rittal / Sumip / Valrack	Please confirm MOC details.	Please refer technical specification Line Item No 280.1. The dimension 600W X4UX500D (mm), 1U is equal to 1.75 inches
39 & 50	Annexure – A3 Commercial PQ	50 – Customised AV Rack	Approved Make – APC/ Valrack/ Rittal / Legrand	Please confirm MOC details.	The tentative size will be: Height 2000mm, Width 800mm and depth 1200mm



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**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**Electrical Maintenance Division**

NO.EMD:PR. NO. 1000036861, RFX No. 6100001699

Name of work: Supplying, installing, testing and commissioning of server-based Centralized CCTV System- PH- II at IIT Bombay.

Ref: E-Tender Notice NO PR. 1000036861, RFX No. 6100001699 dated. 15.04.2024.

**Annexure: B6 List of essential MAF document**

SR. NO	Tender Specification	QTY	UOM	MAF	Participant/ potential bidder's MAF provided (YES/No)
10.0	Supply of 4MP Outdoor Bullet camera with 1/2.7-inch CMOS, Effective pixels 2688 (H) x 1944 (V), 30fps, Sensitivity, Color 0369 lx Mono 0.04lx With IR 0.0 lx, 120 dB Dynamic range, Electronic Day/Night, Automatic Electronic Shutter (AES), H.265, H.264 MP (Main Profile); M-JPEG Video compression, White balance, Backlight Compensation, Privacy Mask, Rule-based alarms and tracking, Line crossing, Enter /leave the field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation, Object classes (Upright persons, Vehicles) detect up to 64 objects simultaneously, Audio detection (if microphone used), 4.9mm- 8mm Automatic Varifocal (AVF) lens, MicroSD card slot for edge recording, Motion, tamper, and audio detection, FTP, IR range upto 45 mtrs, ONVIF Profile S, G, T& M, PoE, IP66 and NEMA 4X, IK10, CE, FCC, UL certified. SD card supports up to 2TB. <b>Approved Makes: Bosch/Axis/Mobotix/Avigilon</b>	250	Nos	MAF REQUIRED	
20.0	Supply of 4MP Outdoor Bullet camera with 1/1.8 inch CMOS, Effective pixels 2688(H) x 1520(V), 60fps, Sensitivity – (Measured according to IEC 62676 Part 5 Color 0.078 lx Mono 0.008lx With IR 0.002 lx, 141 dB Dynamic range, Electronic Day/Night, Automatic Electronic Shutter (AES), H.265, H.264 MP (Main Profile); M-JPEG Video compression, White balance, Backlight Compensation, Privacy Mask, Rule based alarms and tracking, Line crossing, Enter /leave field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation, Object classes (Upright persons, Vehicles) detect up to 64 objects simultaneously, Audio detection (if microphone used), 4.70 mm – 10 mm Automatic Varifocal (AVF) lens, MicroSD card slot for edge recording, Motion, tamper and audio detection, FTP, IR range upto 80mtrs, ONVIF Profile S , G,T& M, PoE, IP66,IP67, IP6K9K and NEMA 4X, IK10, CE, FCC , UL certified. SD card supports up to 2TB. <b>Approved Makes: Bosch/Axis/Mobotix/Avigilon</b>	4	Nos	MAF REQUIRED	
30.0	Supply of 4MP IR Bullet camera with 1/1.8-inch CMOS, Total sensor pixels 2688 x 1520, 4MP; 60fps, H.265; H.264; M- JPEG, Automatic Electronic Shutter (AES); Intelligent Dynamic Noise Reduction, Intelligent Defog, Edge based/server based analytics such as Rule based alarms and tracking, Line crossing, Enter /leave the field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation, 3D tracking based on Duration, Size, Aspect ratio v/h, Speed, Direction, Color, Object classes (Upright persons, Bikes, Cars, Trucks), Training camera for a specific object, Accurate classification of person, bike, car, truck in heavy traffic scenario, Audio detection (if microphone used), Privacy Masking, Pixel counter, Memory card slot, IR Rang 140 mtr, Automatic Varifocal 12 - 47 mm lens, Alarm Input 1/1, Audio Input/output, RJ45, Trusted platform module and PKI, G.711, Signal-to-Noise Ratio >55 dB, Audio Streaming Full2-duplex / half duplex, ONVIF Profile S & G & T, IP66, IK10. Dual micro SD card for mirror, failover, extended service, UL certified, FTP, Dropbox, and e-mail applications. <b>Approved Makes: Bosch/Axis/Mobotix/Avigilon</b>	5	Nos	MAF REQUIRED	
40.0	Supply of 4MP Indoor Dome camera with 1/2.7-inch CMOS, Effective pixels 2592 (H) x 1944 (V), 30fps, Sensitivity – (Measured according to IEC 62676 Part 5 Color 0.060 lx Mono 0.0120lx With IR 0.0 lx, 120 dB Dynamic range, Electronic Day/Night, Automatic Electronic Shutter (AES), H.265, H.264 MP (Main Profile); M-JPEG Video compression, White balance, Backlight Compensation, Privacy Mask, Rule based alarms and tracking, Line crossing, Enter /leave field, Follow route, Loitering, Idle / removed object, People counting, Crowd density estimation, , Object classes (Upright persons, Vehicles) detect up to 64 objects simultaneously, Audio detection (if microphone used), 4.5mm to 8.4 mm Automatic Varifocal (AVF) lens, MicroSD card slot for edge recording, Motion, tamper and audio detection, FTP, IR range upto 40mtrs, three axis adjustment, ONVIF Profile S, G, T& M, PoE, IP54 and NEMA 4X, IK10, CE, FCC, UL certified. SD card supports up to 2TB. <b>Approved Makes: Bosch/Axis/Mobotix/Avigilon</b>	14	Nos	MAF REQUIRED	
50.0	Supply of 1080p HD PTZ Camera with 1/2" progressive scan CMOS, Effective pixels 1937 x 1097 (2.12 MP), 30x Optical Zoom, 12X Digital Zoom, Minimum Illumination- Color: 0.0047 Lux , B/W: 0.0013 lux, 120dB WDR, H.265, H.264, MJPEG streams, Intelligent Dynamic Noise Reduction, BLC, White Balance, Pan Range 360° continuous, Tilt RangeUpright: -65° to +90°, Pan: 120°/s, Presets 250, Tours, Audio- 1/1 Channel In/Out, Micro SD card support up to 1TB, 32 individually configurable privacy masks, Dual Power options, , IP66/67/68 and NEMA NEMA TS-2, IK10, ONVIF Profiles S, G, T,M, FCC, CE, UL Certified, AES/FIPS encryption, signed firmware, up to 500m IR internal/external,Wiper inbuilt/external, electronic image stabilization, salt test report, wind load minimum 100 mph, MTBF>80000 hours, SD card support up to 2TB, Illuminator, white-IR light, black. including accessories to mount the camera either pole or wall <b>Approved Makes: Bosch/Axis/Mobotix/Avigilon</b>	3	Nos	MAF REQUIRED	
60.1	Supply of 15 W long throw SIP-based IP horn loudspeaker designed for excellent speech reproduction suitable for indoor and outdoor applications (IP66). The speaker shall support PoE IEEE 802.3af Class 3 and PoE+ IEEE 802.3at Class 4. The speaker shall have a built-in class D amplifier and Digital Signal Processing (DSP) to optimize the speech intelligibility in the environment. The speaker shall have an integrated Electret Condenser microphone for two-way SIP communication (talkback function), ambient noise level trigger, and automatic volume control. Shall be remotely configurable via WEB-GUI. Approved makes should be the same as the camera OEM. <b>Approved Makes: Bosch/Axis/Mobotix/Avigilon</b>	26	Nos	MAF REQUIRED	



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SR. NO	Tender Specification	QTY	UOM	MAF	Participant/ potential bidder's MAF provided (YES/No)
70.1	Supply and installation of a Glass-reinforced plastic (GRP) pole complete with mounting accessories, as required for the pole and the cameras, suitable to mount the Outdoor cameras. The GRP poles shall be ultraviolet-resistant, corrosion-proof, electrically insulated, and shall have no reaction to direct contact with water. GRP Poles shall be manufactured by Automatic CNC 4 Axis Filament Winding Process and should be designed to withstand wind speed of 50 M/sec. Depending upon the classification of the wind zone. The glass content in the GRP material shall be $\geq 70\%$ . GRP Poles shall be fire retardant with low flammability when tested in accordance with IS 6746 & ASTM D 635. The Arms should be such that they are easily fixable and interchangeable and should be able to rotate on its axis for a minimum of $90^\circ$ on either side so that it is easier to make adjustments if required at site. The Pole shall be tested for deflection as per ASTM D 4923: the deflection under load should not be more than 15% of the length of the pole. Permanent Deflection should not be more than 1% of the length of the pole after performing the deflection test. The manufacturer should possess a valid certificate of EN-40-7 for deflection at the time of submission of the offer. The manufacturer should possess an EN 12767 certificate for passive safety for any conical pole at the time of submission of the offer. The Pole shall be with a Box to house the power supply / Converter, etc., with the Following Specification: (The shade of the pole is metallic silver, hardware MS zinc passivated wherever required, the bar will be painted with U.V.Stabilized, specially developed poly urethane paint for external application, tolerance in length $\pm 50\text{mm}$ & thickness $\pm 0.5\text{mm}$ , average thickness of pole will be 6 mm, tolerance in diameter $\pm 5\text{ mm}$ , the bottom surface (below groundline) of light pole is rough), 7000 MM Height, 89MM Top Diameter 162 MM Bottom diameter, with anti-rotating Fins) with external junction box of size 165X165X105 mm (IP65) with 4 terminals of 6sq.mm & 10 AMP SP MCB with JB Clamp. <b>Approved Makes: SUMIP/ WIMCO/ PROFAB</b>	55	Nos	MAF REQUIRED	
100.0	SITC of Outdoor Access Switch: Supply, Installation, and Testing Commissioning of Industrial Grade Fully Managed Layer 2 switch, 8 x 10/100/1000 Mbps POE+ ports with 4 SFP slots. The switch should be loaded with a minimum of 2 x 1Gbps single-mode SFP modules. The switch should have a minimum of one AC DC adapter. Detailed specs are given in the Technical Specification. <b>Approved Makes: Allied Telesis/CISCO/ ARUBA</b>	75	Nos	MAF REQUIRED	
110.0	SITC of Core Switch: Supply, Installation, Testing Commissioning of Enterprise Grade Layer 3 stackable switch, 24 x SFP slots, 2 x 10G SFP+ slots, and 2 x 10 G stacking ports with required stacking cables. The switch should be loaded with a minimum of 12 x 1Gbps SFP copper modules and 12 x 1Gbps single-mode SFP modules. The switch should have two AC power supplies. Detailed specs are given in the Technical Specification. <b>Approved Makes: Allied Telesis/CISCO/ ARUBA</b>	5	Nos	MAF REQUIRED	
120.0	SITC of Indoor Access Switch: Supply, Installation, Testing Commissioning of Enterprise Grade Fully Managed Layer 2 switch, 24 x 10/100/1000 Mbps Non-PoE ports with 4 SFP slots. The switch should be loaded with a minimum of 2 x 1Gbps single-mode SFP modules. The switch should have a minimum of one AC power supply. Detailed specs are given in the Technical Specification. <b>Approved Makes: Allied Telesis/CISCO/ ARUBA</b>	1	Nos	MAF REQUIRED	
130.0	SITC of Indoor Access Switch: Supply, Installation, Testing Commissioning of Enterprise Grade Fully Managed Layer 2 switch, 24 x 10/100/1000 Mbps POE+ ports with 4 SFP slots. The switch should be loaded with a minimum of 2 x 1Gbps single-mode SFP modules. The switch should have a minimum of one AC power supply. Detailed specs are given in the Technical Specification. <b>Approved Makes: Allied Telesis/CISCO/ ARUBA</b>	1	Nos	MAF REQUIRED	
140.0	SITC of Indoor Access Switch: Supply, Installation, Testing Commissioning of Enterprise Grade Fully Managed Layer 2 switch, 16 x 10/100/1000 Mbps POE+ ports with 2 SFP slots. The switch should be loaded with a minimum of 2 x 1Gbps single-mode SFP modules. The switch should have a minimum of one AC power supply. Detailed specs given in Technical Specification. <b>Approved Makes: Allied Telesis/CISCO/ ARUBA</b>	1	Nos	MAF REQUIRED	
260.1	SITC of IP66 rated 6U Junction Box/Rack with wall/Pole mounting arrangements with support brackets, front door with compression lock, removable high-quality EPDM or PU gaskets for IP, complete welded structure with fixed rates and sides, rain canopy. Cable Manager horizontal, earthing kit with earth studs, provision for cable entry, earthing wire on front door, MCB double pole, din rail full width assembled in mounting plate top & bottom plate, Tamper switch, Din rail mounted 6 Port Patch verticle Panel & other required accessories need to be considered (For Industrial Switches). <b>Approved Makes: Rittal /Sumip/ Valrack</b>	75	Nos	MAF REQUIRED	
280.1	SITC of IP66 rated 4U Junction Box/Rack with wall/Pole mounting arrangements with support brackets, front door with compression lock, removable high-quality EPDM or PU gaskets for IP, complete welded structure with fixed rates and sides, rain canopy. The cable Manager horizontal, earthing kit with earth studs, provision for cable entry, earthing wire on the front door, MCB double pole, din rail full width assembled in mounting plate top & bottom plate, Tamper switch, Din rail mounted 6 Port Patch verticle Panel other required accessories need to be considered (For Industrial Switches). <b>Approved Makes: Rittal /Sumip/ Valrack</b>	80	Nos	MAF REQUIRED	
310.0	SITC of MAIN RECORDING SERVER Rack Type: 900 Mbps or 138 Cameras recording with 288 TB Usable Storage after RAID 5/6, 1 x Intel Xeon E-2226G Processor with 16 bays (16 x 18TB 7200 RPM Disk) for Storage, minimum 32GB RAM, as per detailed specs given in Technical Specification. Recording at 25 FPS @1080P @1800Kbps bitrate for 90 days Minimum quantity mentioned, Number of servers to be vetted by respective VMS and Camera OEM on letter head <b>Approved Makes: DELL/ HP/ Camera OEM</b>	6	Nos	MAF REQUIRED	
320.0	SITC of FAILOVER RECORDING SERVER Rack Type : 900 Mbps or 138 Cameras recording with 288 TB Usable Storage after RAID 5/6, 1 x Intel Xeon E-2226G Processor, with 16 bays (16 x 18TB 7200 RPM Disk) for Storage, minimum 32GB RAM, as per detailed specs given in Technical Specification. Recording at 25 FPS @1080P @1800Kbps bitrate for 90 days. Minimum quantity mentioned, Number of servers to be vetted by respective VMS and Camera OEM on letter head <b>Approved Makes: DELL/ HP/ Camera OEM</b>	1	Nos	MAF REQUIRED	




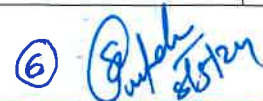
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SR. NO	Tender Specification	QTY	UOM	MAF	Participant/ potential bidder's MAF provided (YES/No)
330.0	<b>SITC of Main MANAGEMENT SERVER Rack Type</b> Trusted Platform Module 2.0 V3, 2.5" Chassis with up to 8 Hard Drives (SAS/SATA), 2 CPU, PERC 11 Intel® Xeon® Silver 4410T 2.7G, 10C/20T, 16GT/s, 27M Cache, Turbo, HT (150W) DDR5-4000 Intel® Xeon® Silver 4410T 2.7G, 10C/20T, 16GT/s, 27M Cache, Turbo, HT (150W) DDR5-4000 Heatsink for 2 CPU configurations (CPU less than or equal to 150W). Performance Optimized 4800MT/s RDIMMs 16GB X2 RDIMM, 4800MT/s Single Rank C7, Unconfigured RAID for HDDs or SSDs (Mixed Drive Types Allowed) Front PERC H755 Front Load 960GB X4 SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD 480GB X2 SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD. Power Saving Active Power Controller, UEFI BIOS Boot Mode with GPT Partition. No Energy Star Standard Fan X7. Dual, Hot-plug, Power Supply Fault Tolerant Redundant (1+1), 1400W, Mixed Mode, NAF. Jumper Cord - C13/C14, 4M, 250V, 10A (India BIS). Riser Config 3, Low Profile, 1x16 LP Slots (Gen4), Motherboard with Broadcom 5720 Dual Port 1Gb On-Board LOM. Broadcom 57416 Dual Port 10GbE BASE-T Adapter, OCP NIC 3.0. Standard Bezel for x8 and x10 chassis. No Media Required. iDRAC9 Datacenter 16G with OpenManage Enterprise Advanced Plus.No Quick Sync. iDRAC, Factory Generated Password, iDRAC Service Module (ISM), NOT Installed ReadyRails A11 drop-in/stab-in Combo Rails With Cable Management Arm. Short Drive Shipping Material. BIS Marking, No CE and No CCC Marking for 2.5" Chassis, APCC- For India Basic Next Business Day 36 Months, 36 Month(s). ProSupport and Next Business Day Onsite Service, 36 Month(s) according to the detailed specifications given in Technical Specification.Include MS SQL Server 2019 or above Database or better—number of servers to be vetted by respective VMS and Camera OEM on letterhead. <b>Approved Makes: DELL/ HP/ Camera OEM</b>	1	Nos	MAF REQUIRED	
340.0	<b>SITC of FAILOVER MANAGEMENT SERVER Rack Type</b> Trusted Platform Module 2.0 V3, 2.5" Chassis with up to 8 Hard Drives (SAS/SATA), 2 CPU, PERC 11 Intel® Xeon® Silver 4410T 2.7G, 10C/20T, 16GT/s, 27M Cache, Turbo, HT (150W) DDR5-4000 Intel® Xeon® Silver 4410T 2.7G, 10C/20T, 16GT/s, 27M Cache, Turbo, HT (150W) DDR5-4000 Heatsink for 2 CPU configurations (CPU less than or equal to 150W). Performance Optimized 4800MT/s RDIMMs 16GB X2 RDIMM, 4800MT/s Single Rank C7, Unconfigured RAID for HDDs or SSDs (Mixed Drive Types Allowed) Front PERC H755 Front Load 960GB X4 SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD 480GB X2 SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD. Power Saving Active Power Controller, UEFI BIOS Boot Mode with GPT Partition. No Energy Star Standard Fan X7. Dual, Hot-plug, Power Supply Fault Tolerant Redundant (1+1), 1400W, Mixed Mode, NAF. Jumper Cord - C13/C14, 4M, 250V, 10A (India BIS). Riser Config 3, Low Profile, 1x16 LP Slots (Gen4), Motherboard with Broadcom 5720 Dual Port 1Gb On-Board LOM. Broadcom 57416 Dual Port 10GbE BASE-T Adapter, OCP NIC 3.0. Standard Bezel for x8 and x10 chassis. No Media Required. iDRAC9 Datacenter 16G with OpenManage Enterprise Advanced Plus.No Quick Sync. iDRAC, Factory Generated Password, iDRAC Service Module (ISM), NOT Installed ReadyRails A11 drop-in/stab-in Combo Rails With Cable Management Arm. Short Drive Shipping Material. BIS Marking, No CE and No CCC Marking for 2.5" Chassis, APCC- For India Basic Next Business Day 36 Months, 36 Month(s). ProSupport and Next Business Day Onsite Service, 36 Month(s) according to the detailed specifications given in Technical Specification.Include MS SQL Server 2019 or above Database or better—number of servers to be vetted by respective VMS and Camera OEM on letterhead. <b>Approved Makes: DELL/ HP/ Camera OEM</b>	1	Nos	MAF REQUIRED	
350.0	SITC of ANPR Workstation : Rack/Tower Mount, Intel Core i7-11700 or better, minimum 32GB RAM or better, minimum 240 GB SSD for OS & VMS Application, 1TB SATA HDD, 1 GbE (RJ45), Windows 11 Pro 64 bit or above, DVD RW, Standard & Keyboard & Mouse; Number of servers to be vetted by by respective VMS and Camera OEM on letter head. <b>Approved Makes: DELL/ HP/ Camera OEM</b>	1	Nos	MAF REQUIRED	
360.0	SITC of Client Workstation : Workstation capable to display maximum 36 cameras @H.264 @ 1080P @25FPS Processor – Intel Core i7-10700K or latest CPU (Intel Quick Sync Supported),Memory – Minimum 32 GB,Hard disks – 500GB SSD Disk,OS- Windows 10 Pro, 64bit,Network Card – 1Gbit/s network card,GPU - NVIDIA GTX 1080p Series or Quadro P4000 Graphic card WHQL Certified or better; Number of workstation to be vetted by by respective VMS and Camera OEM on letter head. <b>Approved Makes: DELL/ HP/ Camera OEM</b>	25	Nos	MAF REQUIRED	
370.0	Client PC : SITC of Workstation capable to display maximum 36 cameras @H.264 @ 1080P @25FPS Processor – Intel Core i7-10700K or latest CPU (Intel Quick Sync Supported), Memory – Minimum 32 GB,Hard disks – 500GB SSD Disk,OS- Windows 10 Pro, 64bit,Network Card – 1Gbit/s network card,GPU - NVIDIA RTX 4000 or better Series WHQL Certified or better. Number of workstation to be vetted by by respective VMS and Camera OEM on letter head. <b>Approved Makes: DELL/ HP/ Camera OEM</b>	9	Nos	MAF REQUIRED	
390.0	<b>Video analytics</b> SITC of Server Rack Type Intel Xeon 2.2Ghz with Base Frequency (32 Cores) or Higher, 64GB RAM, 3 TB HDD. Including NVIDIA RTX A2000 (12GB) or Higher ( Graphics Card 2 Nos ) Number of Server to be vetted by by respective VMS and Camera OEM on letter head. <b>Approved Makes: DELL/ HP/ Camera OEM</b>	2	Lot	MAF REQUIRED	
400.0	SITC of Videowall display 55" 24 x 7 Operational , 500 Nits , 0.8-0.9 mm bezel width Professional FHD monitor. <b>Approved Makes: Samsung/ LG/ Barco</b>	10	Nos	MAF REQUIRED	
410.1	SITC of Video Analytics Processing Software TO Support a Minimum of one camera programmed with any one or all of the following Video Analytics features : Fire & Smoke Detection- for 10 camera Face Recognition system - for 8 Camera ANPR - for 10 Camera Slip & fall Detection - for 10 Camera Multi Camera Tracking - for 50 Camera Alarm Centre Application license -1 Nos One time Online Installation and Training Charges(The System shall allow implementation of Video Analytics on any user-defined cameras during commissioning). -The Software should be able to interface with the Video Management System either by an interface or shall be offered as a Unified Solution consisting of Access Control and Video management systems in a single software. Independent servers, if required, for video analytics shall be included in this item as needed. The Cost shall be considered for 50 cameras in the beginning and shall have expandability for up to 1000 cameras if required. <b>Approved Makes: Milestone/ Algovision/IRIS(Agent VII)/OOSTO</b>	1	Nos	MAF REQUIRED	
420.1	ANPR License with all required support package and 5 years License Support <b>Approved Makes: Milestone/ Genetec/ Axis</b>	4	Nos	MAF REQUIRED	

SR. NO	Tender Specification	QTY	UOM	MAF	Participant/ potential bidder's MAF provided (YES/No)
440.1	<p>SITC of Network Video Management Base Software expandable up to 2000 cameras in Single Database server, Multi-server, multi-site solution, Virtual Matrix capability &amp; unlimited user clients. The VMS should support ONVIF Profile S, G, T &amp; Q, network joystick controller, GPU rendering support for H.264 and H.265 decoding, video on demand, Adaptive video throttling, rule engine, operator role management, server-based Video Motion Detection (VMD), edge storage backfill support, a bookmark with a manual comment, bookmark based search, timeline search, Preview search, dual recording server instances without virtualization, synchronous playback from all recording servers, monitor wall support, Cyber secured with features such as Digital Signing, HTTPS &amp; SSL base, smart web client, camera firmware &amp; password management, support ANDROID &amp; iOS phones.</p> <ul style="list-style-type: none"> <li>•Camera Device License (600 Nos) (Including Old and New Cameras)</li> <li>•Camera License with 5 Years Support (600 Nos)</li> <li>•Failover License for Management &amp; Recording Server (2 Nos)</li> <li>•Operator Client Licences (100 Nos)</li> <li>•Mobile and web client licenses (100 Nos)</li> <li>•Dashboard &amp; Reporting Tool Plugin (1 Nos)</li> <li>•SDK / APK Cost for Integration with Access Control, BMS (1 Nos)</li> </ul> <p><b>Approved Makes: Milestone/ Genetec/ Axis</b></p>	1	Nos	MAF REQUIRED	
450.1	<p>SITC of Multi Screen FHD Video Wall Controller Pure hardware system structure, which processes images with the use of a fast internal bus and FPGA. It is integrated with the functions of distributed and centralized controllers, leading to a quick start, stable function, mass IP stream processing, and real-time display of images. It supports signal overlapping and roaming. Moreover, Controller can be widely applied to control centers of Traffic, Electric Power, Telecom, Data Centre, Monitoring, Conferences, Public Security, Military, etc. Including Wall Management Software feature, - Any Source on Any Display- Source Overlapping-PIP and POP,-Auto Source Detection,-Ticker Scrolling Text - Up to 4x4 Grids Option in Each Display, - Unlimited Layouts,-Crestron/AMX devices can control layouts, - Multi Videowall Supports- Scheduling of Layouts, - Supports Control by Web Browser- Hot Swappable Graphic Card, Fan, Power Supply, - Support 4K Resolution Background Images on the Whole Video Wall, - 4 Slot Chassis with capabilities to add Input and Output using any slot. - 1 Slot having 8 HDMI Inputs or Output Cards - Include 2 HDMI Input Cards (16 Nos HDMI Inputs) and 2 HDMI Output Cards (16 Nos HDMI Outputs)</p> <p><b>Approved Makes: Drita/ Jupiter/ Seada</b></p>	1	Nos	MAF REQUIRED	
470.1	<p>SITC of 4K60 4:4:4 HDMI Transmitter &amp; Receiver Extender Over Cat 6 upto 70 Meter. Compatible for HDR10+, and HDCP 2.3.</p> <p><b>Approved Makes: Crestron / Extron / Kramer</b></p>	20	Pair	MAF REQUIRED	



*Signature*  
08/15/2024

*Signature*  
08/15/2024

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**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**ELECTRICAL MAINTENANCE DIVISION**

NO.EMD:PR. NO. 1000036861, RFX No.6100001699

26.04.2024

Subject: MOM of Proof of Concept (POC) meeting

Name of work: Supplying, installing, testing and commissioning of server-based Centralized CCTV System- PH- II at IIT Bombay.

Ref: E-Tender Notice NO PR. 1000036861, RFX No. 6100001699 dated. 15.04.2024

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The Proof of Concept (POC) meeting for the above-mentioned project was held in the office of the Executive Engineer (EMD) in the presence of the IIT Bombay officials on 26.04.2024 at 11.00 AM. The following points are noted:

a) To encourage various OEMs, in addition to those not listed, an open Proof of Concept (POC) is scheduled on 26.04.2024.

Since none of the manufacturers attended the POC meeting, the meeting was concluded, and no additional manufacturer was added to the approved make list.

  
Executive Engineer (EMD)



  
26/04/24