

Government of Meghalaya

OFFICE OF THE DIRECTOR GENERAL OF POLICE
MEGHALAYA :: :: SHILLONG

SHORT TENDER NOTICE

Sealed tender affixing non-refundable Court Fee Stamp of Rs. 1000/- (Rupees One Thousand) only are invited from bonafide, established, reputed manufactures and registered intending firms and supplier(s) for entering into a rate contract for supply and installation of C.C.T.V in the Police Stations for the year 2020-21, as per terms and conditions laid down in the Tender Notice. The tenders should be in 2(Two) bids system i.e. (i) Technical Bid (ii) Price Bid.

1. Terms and conditions:

Items offered must be of reputed companies/manufactures and should meet with all the Technical Specifications as given in Annexure "A". Tender should be accompanied with catalogues/Brochures/Warranty/Guarantee and will be received up to **1200 hrs** on or before the **8th March 2021** by hand or by post. These will be opened on the same day at **1400 hrs**. Tenderers or their authorized representatives' are invited to present at the time of opening of the tender.

2. (i) Tender must be accompanied by the following documents in Technical Bid:

- (a) Affixed non-refundable court fee stamp as mentioned above.
- (b) Attested Passport size photograph of the bidder.
- (c) Authenticated copy of authorized Dealership/Distributorship certificate for each item quoted from the Principal manufacturer who has authorized dealers specifically certifying that the tenderer is authorized to deal with the equipments quoted in the tender notice. Separate dealership certificate will be required to be furnished by the tenderer if asked for in the list of items.
- (d) Attested copy of SC/ST Certificate issued by the concerned competent authority of Meghalaya only (for Tribal tenderer).
- (e) Earnest money at the rate of 10% (Ten percent) in case of Non-Tribal and at the rate of 5% (Five percent) in case of Tribal from the total value of the items tendered, in any one of the following forms only:
 - (i) Crossed bank draft; or,
 - (ii) Deposit at Call.

Payable to the Asstt. Inspector General of Police (A), Meghalaya, Shillong at any Nationalized Bank at Shillong.

- (f) Attested copy of GST Registration / Clearance to be enclosed.
 - (g) Financial stability Certificate from any Nationalized Bank or Deputy Commissioner concerned.
 - (h) Catalogues/Brochures (in original) from the manufacturers for the item quoted.
 - (i) Attested copy of valid professional Tax Clearance Certificate.
 - (j) Attested copies of valid Trading license in terms of KHADC, JHADC, GHADC for Non-Tribal (regulation Act. 1954) in case of Non-Tribal who are required to obtain such license should also be enclosed.
 - (k) Tenderer should also submit the undertaking at Annexure – C.
 - (l) Latest certificates with respect to work experience for supply and installation of CCTVs.
 - (m) Should not have been black listed.
- 2. (ii) Tender must be accompanied by the following document/detail in price Bid:**
- (a) Rate of the item quoted should be placed in separate sealed envelopes.
 - (b) The rate quoted should be as per format enclosed at Annexure- A.
3. The list of enclosed documents must be mentioned on the body of the envelope containing the tenders, failing which, the sealed envelope of quoting firm will not be opened.
4. **Warranty/Guarantee:** Minimum Warrantee of 2 (two) years should be offered, to be followed by an AMC from the third year.
- 5. Rates Quoted:**
- (a) Should be inclusive of all taxes, levies, charges, packing, insurance, taxes and other installation/incidental charges at Police Stations as per enclosed at **Annexure-B**.
 - (b) Should be inclusive of the cost of all accessories required to make CCTV functional.
 - (c) Should be valid for 1(One) year from the date of acceptance of tender.
 - (d) Should be quoted separately for each item in word and rates should be for 1 (one) item, 1(one) rate basis. Same items with optional rates and optional quality will not be entertained and out rightly rejected.
 - (e) Should be quoted F.O.R Destination i.e., up to the Office of the Director General of Police, Meghalaya, Shillong.
 - (f) Should be written clearly in figures and in words. Any altercations or over writing must be fully signed by the tenderer along with the date.
 - (g) Once the rates offered in the quotation are accepted, no enhancement will be entertained under any circumstances and tenderers will be liable to supply the items at the rate accepted by the Director General of Police, Meghalaya, Shillong. Failure to supply the items at the

accepted rates will entail the offer being cancelled and the Security Money will be forfeited to the Government of Meghalaya.

(h) For import items rate should be indicated separately i.e., rates with Custom duty and rates without Custom Duty.

6. Tenderer must sign all pages of the Bid (Both Technical and Price Bid) and also submit the signed Undertaking Certificate at Annexure – ‘C’, as a proof of the tenderer having fully understood the terms and conditions mentioned in the NIT.
7. Tender/quotation should be addressed to the undersigned by designation and not by name. Sealed envelopes containing the quotation must be super-scribed as Tender for supply and installation of CCTV and sent by hand delivery. The tenderer should affix his full address on the left bottom of the envelope containing the tender documents.
8. In no case tenders received after due date and time shall be accepted. All tenders received after the due date and time shall be returned to the respective tenderer without opening the same.
9. **Rates of Security Deposit:-** The successful tender will have to deposit Security Deposit @ 10% (for all categories) of the total amount of the contract.
10. Once the Model is approved, no change of brand name, shape, pattern, quality or specification will be entertained even on the plea on non-availability offer of the same quality or alternative offer of the same quality.
11. Delivery and installation must be completed within 20 (twenty) days from the date of receipt or firm orders. No extension of delivery period will be entertained.
12. Payment will be made to the suppliers directly, only on completion of supplies, installation and based on the recommendation of the Line Committee.
13. Risk of transportation will be borne by the Tenderer themselves.
14. One set of manual of (Instruction and Maintenance) should be supplied free of cost for the item wherever applicable.
15. The purchase Board reserves the right to reject the lowest rate or any of the tender without assigning any reason.
16. The Tendering Authority has the right to cancel the tender at any time without assigning any reason thereof.
17. The Tendering Authority reserves the right to alter the quantity/reduce any items/equipments before issue of supply order and the Tenderer shall not have any claim what so ever on this account.
18. The items for which the tenderers would be quoting must fulfill the given technical specifications and if it does not then it will not be accepted.

19. Eligible/qualified Tenderers should demonstrate the equipment before the Tendering Authority.

20. Specification of the CCTV is at Annexure- 'A'.
21. Successful Tenderer will have to sign a contract agreement.
22. The Earnest Money of the successful/unsuccessful Tenderer shall be released after the award of tender to the successful Tenderer.
23. The Successful tenderer shall be intimated and a letter of acceptance will be issued by the undersigned.

sd/-

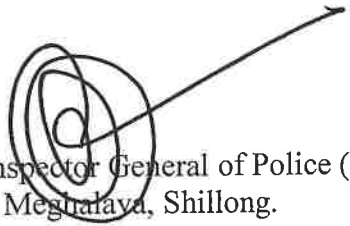
Asstt. Inspector General of Police (A)
Meghalaya, Shillong.

Dated Shillong the 15th February, 2021.

Memo No. MPF/13/2015-2016/Pt.I/160

Copy to:-

1. The Addl. Director General of Police (L&O/TAP) / (SB/CID), Meghalaya, Shillong for kind information.
2. The Inspector General of Police (Admin), Meghalaya, Shillong for kind information.
3. The Inspector General of Police (ER), Meghalaya, Shillong for kind information.
4. The Dy. Inspector General of Police (WR), Meghalaya, Tura, for kind information.
5. All Superintendents of Police for kind information with a request to display the tender notice in the Notice Board.
6. The Spl. Superintendent of Police (CID), Meghalaya, Shillong for kind information.
7. The Principal, Police Training School, Umran, for kind information with a request to display the tender notice in the notice board.
8. The Director Government Press, Meghalaya, Shillong with copies for publication in two consecutive issues of Meghalaya Gazette.
9. The Director Information & Public Relation, Meghalaya, Shillong for kind information, with a request to publish the Tender Notice and the list given at Annexure – A) in 3 (three) Newspapers, i.e. English, Khasi and Garo medium which are widely circulated throughout the State.
10. The Reserve Officer of Police Headquarters, Meghalaya, Shillong for information and necessary action.
11. The In-charge Computer Wing, Police Headquarters, Meghalaya, Shillong along with a soft copy containing the Tender Notice for uploading the same in the Website of the DGP, Meghalaya, Shillong.


Asstt. Inspector General of Police (A)
Meghalaya, Shillong.

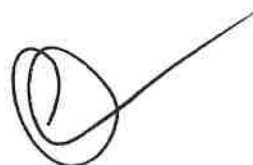
TENDER NOTICE

Sealed tenders along with Brouchers /Catalogues for supply of CCTV to the O/o the Director General of Police, Meghalaya, Shillong will be received by the undersigned up to **1200 hrs** on the **8th March 2021** will be opened on the same day at **1400 hrs** by the undersigned. Details may be collected from the office of the undersigned on any working days between 10Am to 4.30 Pm.

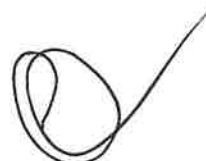

Asstt. Inspector General of Police (A)
Meghalaya, Shillong.

ANNEXURE-A
TECHNICAL SPECIFICATIONS (TS)

- 1.0 Introduction:** This section deals about the technical specification of various hardware, software and services included in the scope of work of this Bidding Document. The technical specifications mentioned are minimum requirement and the bidders can propose higher or better specifications meeting the functionality. In case a single tool does not meet all the specifications above, the Bidder may enlist more than one tool that meets the above requirements in totality.
- 2.0 General Requirements:** The Bidder shall provide IP based SIP enabled CCTV System which shall include but not limited to all material, equipment, devices, software including all applicable licenses and services, accessories, auxiliaries and associated equipment ensuring operability, maintainability, and reliability of the system. Each component offered by the Bidder shall be of established reliability. Bidder shall ensure that the equipment / components of same type and rating are interchangeable. This work shall be consistent with modern Security System practices and shall follow all applicable codes, standards, guides, statutory regulations and safety requirements in force.
- 2.1** CCTV OEM shall certify that the offered Hardware & Software shall be free of any known security vulnerability (excluding Zero Day vulnerabilities). The intent is that CCTV OEM shall certify that the Video Management Software & Firmware (excluding third party software e.g., Video Analytics) does not contain any malicious code or otherwise is not operating contrary to its stated purpose.
- 2.2** Any component / hardware / parts / assembly / software including firmware used in the offered solution (hardware / software) must not support any protocol which enables unauthorized access or unauthorized remote control.



- 2.3** CCTV OEM shall also be required to certify that no backdoor has been engineered in Video Management software and firmware. Such certificate shall be furnished for all hardware (including firmware) / software manufactured and supplied for the project by the OEM. Further, CCTV OEM shall certify that MAC ID (identity) of camera is registered with OEM and has not been altered.
- 2.4** Major Components of CCTV system shall Set of Cameras with Housing, Pan, Tilt and zoom Control as required, IR Illuminators, Network Switches, HDD, Outdoor Cabinets, Camera/Database Server, Pole for cameras/Mast, Junction box, UPS, Monitors, keyboard, joysticks etc., Wireless Equipment, Networking and power cables and other related infrastructure, Video Management Software (Including Face recognition) & Video analytics software etc.
- 2.5** The Bidder shall be responsible for selection, design, engineering, installation of all the equipment supplied as covered in this specification and commissioning of the system meeting the intent & functional requirements of the specification. To make the system complete and operational, the Contractor's scope includes all associated equipment/devices viz. cables, cable trays, power packs, erection hardware (viz. junction boxes, brackets, glands, nut-bolts, conduits, fixtures, fittings etc.). The camera and database servers shall offer both video stream management, video stream storage management. These servers shall also manage and store configuration information/database for the whole system. Recording frame rate & resolution in respect of individual camera shall be programmable. It shall be possible to view and record at different resolutions and frame rates and this shall be individually programmable on every camera. The system shall ensure that all configuration information, video recordings, and user database etc., is automatically replicated on the standby camera/database server(s) so that in the event of failure of one server, the performance of the system is not affected. It shall be possible to take back-up of



system configuration and database on portable media device and restoring the same if required.

2.6

The CCTV System should have following features/functions:

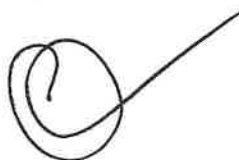
- a) Plug & Play installation and detection of Cameras and devices.
- b) It should be flexible, user friendly and easy to use.
- c) Digital Zoom in Live or Playback Video should be available.
- d) It should have in-built image enhancement feature.
- e) Facilitate Users with proper authority to perform administrative functions, such as configuring devices, setting up users, adjusting network settings and creating recording schedules. Access to these functions and all other system services shall be configurable.
- f) Multiple displays views for Live or Play back Cameras or Devices.
- g) On Screen PTZ and Device property control.
- h) Shall provide the ability to change frame rate parameter on a per camera basis for both live and recorded videos.
- i) The software shall provide the full functionality reporting tool which can provide reports for user logon/logoff, camera accessibility report, server health check report etc.
- j) System shall ensure that once recorded, video cannot be altered.

2.7

CCTV System shall be provided with minimum usable storage space to store recordings of all HD cameras at 25/30 FPS frame rates in FPS on motion-based recording at 1920X1080 for a period of not less than 365 days but up to 555 days using necessary compression techniques. Such Storage space can be inbuilt HDD to Server, NAS (Network Attached Storage), SAN (Storage Area Network). Recording has to be done in dual /parallel recording mode, Frame rate & resolution shall be user selectable. The camera feeds of the CCTV system shall have the capability to be viewed, operated, and configured based on the defined user rights through workstations and the video wall.

2.8

Power Supply Arrangement: The CCTV System along with all its components i.e., network switches, storage devices, Servers, LAN



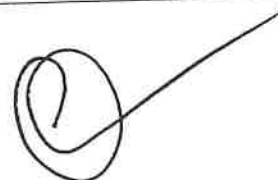
switches, media converters, cameras etc. may be powered from UPS system 230 V AC, Single Phase, 50 Hz. Bidder shall extend power from the available line in Police Station campus to UPS. Laying of power cable for extension of UPS power supply wherever is required, shall be in the scope of Bidder. For cameras mounted in field/perimeter, powering has to be done through mini-UPS of suitable rating kept in junction boxes being supplied by Bidder under scope of this contract. All cameras & network switches must support POE/POE+ powering. The Bidder shall provide UPS on as required basis.

2.9 In the event of conflict between requirements of any two clauses of specification documents, the more stringent requirements shall apply unless otherwise confirmed by the Employer in writing before the award of this contract, based on a written request from the Contractor for such clarification.

3.0 **Minimum Technical Specifications:** All the cameras shall be rugged, high performance color cameras suitable for day and night surveillance, network compatible, with Full HD resolutions and audio recording facility. PTZ cameras shall be high speed integrated dome type. All cameras must comply RoHS. Other specifications shall be as follows.

3.1 **Dome Type Camera:** The camera shall provide direct network connection and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality. The camera shall have a mechanical IR cut-off filter for true day/night switching and built in microphone. The camera shall accept power via Power over Ethernet (IEEE 802.3af compliant) or better.

Sensor type	1/2.8-1/3" Progressive scan CMOS or better
Total sensor pixels	Minimum 4MP
Colour	0.005 lx
Wide Dynamic range	Up to 120 DB
Video Compression	MJPEG/H.264/H.264+/H.265/H.265+
Audio Compression	G.711/AAC/G.722/G.726
Streaming	Configurable streams, configurable frame



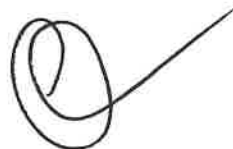
	rate and bandwidth, Parallel streaming
1080p HD	1920 X 1080
Frame Rate	25fps or better (Standard 30 fps is also acceptable)
Adjustable settings	picture Contrast, Saturation, Brightness
White Balance	Required
Day/Night	Auto (adjustable), Colour, Monochrome
IR intensity	Adjustable
Sharpness	Required
Backlight compensation	On/off
Contrast enhancement	On/off
Noise reduction	Dynamic Noise Reduction
Motion Detection	Required
Memory card slot	supports up to 128 GB over SD card or more
Recording	Continuous recording or ring recording. Alarm/events/schedule recording.
Distance	Minimum 15 m or more
LED	850 nm array
Lens type	2.8 mm @F2.0 or better
Alarm input	1no.
Alarm output	1 no.
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP.
Ethernet	10/100 Base-T, auto-sensing, half/full duplex
Interoperability	ONVIF Profile S & Profile G or latest ONVIF profile
Operating temperature	0 deg C to +50 deg C
Humidity	20% to 90% relative humidity (non-condensing)
Certification	UL, CE, FCC, RoHS
External Weatherproof	and Vandal resistance and IP 66 or IP67
Field of view	H111 ⁰ /D141 ⁰ /V82 ⁰
IR Distance	Up to 30m
Input voltage	Power-over-Ethernet (48 VDC nominal) or 24 VAC / +12 VDC or as per manufacturer Standard, to be provided by Bidder.

3.2

Bullet IP Camera: The camera shall provide direct network connection and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality. The camera shall have a mechanical IR cut-off filter for true day/night switching and built in microphone. The camera shall accept

power via Power over Ethernet (IEEE 802.3af compliant) or better.

Sensor type	1/2.8-1/3" Progressive scan CMOS or better
Total sensor pixels	Minimum 4MP
Colour	0.005 lx
Wide Dynamic range	Up to 120 DB
Video Compression	MJPEG/H.264/H.264+/H.265/H.265+
Audio Compression	G.711/AAC/G.722/G.726
Streaming	Configurable streams, configurable frame rate and bandwidth, Parallel streaming
1080p HD	1920 X 1080
Frame Rate	25fps or better (Standard 30 fps is also acceptable)
Adjustable picture settings	Contrast, Saturation, Brightness
White Balance	Required
Day/Night	Auto (adjustable), Colour, Monochrome
IR intensity	Adjustable
Sharpness	Required
Backlight compensation	On/off
Contrast enhancement	On/off
Noise reduction	Dynamic Noise Reduction
Motion Detection	Required
Memory card slot	supports up to 128 GB over SD card or more
Recording	Continuous recording or ring recording. Alarm/events/schedule recording.
Distance	Minimum 15 m or more
LED	850 nm array
Lens type	Motorised 3 mm-10mm @F1.4 or better
Alarm input	1no.
Alarm output	1 no.
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP.
Ethernet	10/100 Base-T, auto-sensing, half/full duplex
Interoperability	ONVIF Profile S & Profile G or latest ONVIF profile
Operating temperature	0 deg C to +50 deg C
Humidity	20% to 90% relative humidity (non-condensing)
Certification	UL, CE, FCC, RoHS
External Weatherproof and	Vandal resistance and IP 66 or IP67
Field of view	H90 ⁰ -H31 ⁰ / D114 ⁰ -D38 ⁰ /V67 ⁰ -V23 ⁰
IR Distance	Up to 60m
Input voltage	Power-over-Ethernet (48 VDC nominal) or 24 VAC / +12 VDC or as per manufacturer

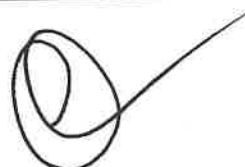


	Standard, to be provided by Bidder.
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3.3

High Definition PTZ Cameras:

Image Device	1/2.8-1/3" Progressive scan CMOS
Lens	Motorised 5.3-64 mm focal length minimum
Optical Zoom	12x or better
Digital Zoom	16x or better
Number of Pixels/Effective resolution	1920X1080
Video compression	MJPEG/H.264/H.264+/H.265/H.265+
Audio Compression	G.711/AAC/G.722/G.726
Focus	Auto with Manual Override
Iris Range	F1.6-F2.9
Iris Control	Auto with Manual Override
Back Light Compensation	Required
White Balance	Automatic with mode selection options
Electronic Shutter	1/50 to 1/10000 Auto
S/N Ratio	>50dB
Audio	Full Duplex or 2-way
Automatic Gain Compensation	Up to 18 dB
Power Supply	As per manufacturer's standard to be arranged by contractor
Gain Control	Auto/Off
Day/Night selection	Auto On-Off
IR cut-filter	Yes
Protocols	IPV4/IPV6,RTP, UDP, TCP, IP, HTTP, HTTPS, FTP,DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP or equivalent.
Security	Password protection
Auto Resume after Power Failure	Yes
Analytics	Motion detection & Tamper alarm
PoE supply IEEE 802.3af compliant or better	Yes. Bidder may also offer 802.3bt standard POE cameras to match PTZ camera & IR illuminator power requirements as well as for Heater & blower powering. If Power requirements is even more, bidder to supply & commission external power supply to power such cameras on as required basis, and this requirement is not covered in BOQ of this specification.
Pan	360 Deg Continuous
Tilt Range	-45 deg to 30 deg
Manual Tilt Speed	0.1 deg/sec to 30deg/sec
Manual Pan Speed	0.1 deg/sec to 60deg/sec
Preset Positions	Minimum 255



Preset Pan Speed	280 deg/sec min
IR Illuminator	built-in active infrared illuminator or separate hardware.
IR Distance	Up to 140 m

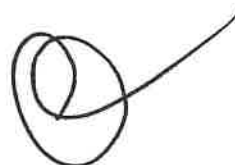
3.4 **Camera Housing & Mount:** All the outdoor cameras and accessories are to be housed in weatherproof IP-65 environmental housing made of aluminium and sun shroud. The housing, with heater and blower installed, shall provide protection for camera/lens assemblies in the ambient temperature range of - 0 deg. C to 50 deg. C. The camera mount should be of the same make as that of camera and suitable for the model no. offered as specified by the manufacturer and should be an integrated unit.

3.5 **Keyboard & Joystick:** Keyboard shall have full function used for system control and programming for selection of various Network switches, camera/database servers, camera functions including pan, tilt and zoom lens controls and shall be ergonomically designed. Joystick shall be provided for achieving all control functions.

3.6 **Video Management Software:** The Video Management Software (VMS) should be a handy and reliable application which should be designed to work with IP cameras in order to provide video surveillance, recording settings and event management functions. It should not require any additional equipment to function. The interface should be very easy to use, intuitive, with easy access to the most common activities, such as viewing live video, searching through recordings and exporting videos and snapshots. It should be capable to integrate with other devices through ONVIF and should be capable to connect up to 64 cameras.

It should be capable of the following:

- Should support ONVIF.
- Should support PTZ operation.
- Should support P2P connection way without ports forwarding.
- Should support pre-record for motion detection.



- Should support custom time length for schedule record.
- Should support live view, playback and E-Map functions.
- Should support motion detection, alarm recording and image capture function.
- Should support H.265/H.264/MJPEG/MPEG-4 video compression.
- Should support real-time video/event alarm display.
- Should support 1/2/4/6/8/9/13/16/20/24/30/36/49/64 Channel Camera Surveillance.
- Should be capable to adjust the original screen size to screen ratio of 16:9 and 4:3.
- Should have patrol mode for single or multiple views.

3.7 **PC Workstation:** It should be capable of handling CCTV Application Software for Video Monitoring, Recording & Management and other software/hardware required for providing all functionality as per the bidding documents without causing any delay whatsoever.

3.8 **LED Display:** It should be minimum 55" LED 4K SmartScreen capable of handling CCTV Application Software for Video Monitoring, Recording & Management and other software/hardware required for providing all functionality as per the bidding documents without causing any delay whatsoever.

3.9 **GI Pole with concrete support for Camera:**

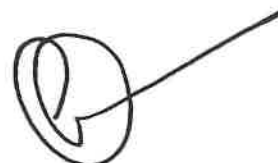
Height above ground level	7 M, 10 M (height at which wind velocity is measured)
Sizes	Bottom 150 mm x Top 80 mm x 7000 mm Bottom 200 mm x Top 100 mm x 10000mm
Metal Protection Treatment of Pole Sections	Hot Dip Galvanized as per BSEN ISO 1461
Thickness of Galvanization (mm)	Average 70 Microns as per IS 2629
Type of Door construction and locking arrangement	Close fitting door with suitable reinforcement to avoid buckling
Material of construction of shaft	As per BSEN 10025/For Shaft, IS 2062 For Base Plate
Max. design with speed	50m/sec as per IS 875 (Part-III)

Gust Speed time considered	3 Sec
GI pole with concrete support for camera	7, 10 mtrs
Factor of safety for wind load	1.25
Factor of safety for other loads	1.15
Applicable Standard for pole design	BSEN-40-3-3
Considered wind speed (km/hr)	50mm/sec as per IS875 (Part-III)
Depth of Foundation (mm)	1500 mm
Average Soil Bearing Capacity	10 T/Sqm.
Camera Fitting	Aluminum Deep Drawn or Die cast IP 65
Brackets	Single Arm – 1500 mm Lg.
Ladder for maintenance	Safety ladder to be provided along with the poles for camera maintenance (mounted at the top of the Pole).

3.10

Network video recorder: The Network video recorder should be 4K ready and must comply to the following specifications.

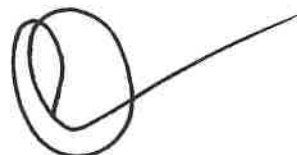
Network Video Input	32-ch
Bandwidth	256Mbps or better
HDMI Output	2-ch Resolution: 1920x1080/60Hz & 50 Hz or better with Audio Output support
VGA Output	2-Ch Resolution 1920x1080/60Hz & 50 Hz or better
Dual Stream	supported
Recording Resolution	12MP/8MP/6MP/5MP/4MP/3MP/1080P/UXGA/ 720P/ D1/ VGA/CIF/QCIF
Synchronous Preview/Play	4*(30fps @4MP) or better
Video Compression	H.265+/H.265(HEVC)/H.264+/H.264
Audio Compression	G.711 /ACC/G 722/G.722
Sample Rate	8KHz/16KHz
Synchronous Recording	32*4MP or better
Driver	8*SATA HDD (3.5")



External Storage	eSATA
Capacity Up to	10 TB Capacity for Each HDD
Array Type	RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
Recording Type	Continuous, Event (Motion Detection, Alarm, VCA, Smart Analysis)
Snapshot	Continuous, Event (Motion Detection, Alarm, VCA, Smart Analysis)
Playback	General Playback, Event Playback, Tag Playback, Split Playback, Picture Playback
Backup	Video Backup, Image Backup
Protocol	IPv4/IPv6, TCP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, DNS, DDNS, DHCP, NTP, SNTP, SMTP, SNMP, UPnP, NFS
Network Interface	Min 2 nos. 10/100/1000Mbps RJ-45 ports
Serial Interface	1*RS-232 Series Port for Console 1*RS-485 Series Port for Keyboard
USB Interface	1*USB 3.0; 2*USB 2.0
Audio Input/Output	1*RCA/2*RCA
Alarm Input/Output	16-ch/4-ch
Power Supply	AC 100V~240V 50Hz~60Hz
Power Consumption	≤35W(Without HDD)
Working Conditions	Temperature: -10°C ~+55°C
Humidity	10%~90%
Mounting	Rack mounted chassis

3.11

Surveillance Hard Disk Drive: The Hard Disk should be a surveillance-optimized drive designed for NVRs to deliver zero dropped frames while supporting heavier workloads. Should have high reliability with 2M hours MTBF and a 550 TB/year workload rate for more than 3 times that of standard surveillance hard drives. Should have built-in rotational vibration sensors providing reliable storage for NAS with little lag or downtime. It should comply to the following specifications.



Capacity	10 TB
Interface	SATA 6 Gb/s
Recording Technology	CMR
Drive Design	Helium
RV Sensors	Yes
Max. Sustained Transfer Rate	250MB/s
Cache	256 MB
Tarnish Resistant	Yes
Load/Unload Cycles	3,00,000
Non-recoverable Read Errors Rate	Max 1 per 10E15
Power-On Hours per year	8,760
Workload Rate Limit (WRL) ⁴	550
Mean Time Between Failures (MTBF) (hours)	2,000,000 hr
Operating (ambient, min °C)	5
Operating (drive case, max °C)	70
Non-operating (ambient, min °C)	-40
Minimum Storage capacity required	80 Tb

3.12

PoE Switch: The network switch should have the following specifications:

Port VLAN (Port isolation)	Yes
Smart PoE Watchdog function	Yes
Interface	10 10/100Mbps RJ45 Ports
Network Media	10/100BASE-TX: UTP category 5 or better (maximum 250m)
Fan Quantity	Fanless
Power Consumption	120W or lesser
Internal Power Supply	AC 110-240V 50/60Hz
PoE Ports (RJ45)	Standard: 802.3 af/at/bt compliant PoE Ports: Port1- Port8
Backplane Bandwidth	2Gbps

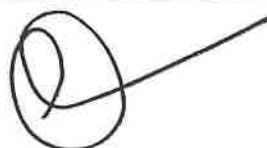
Mac Address Table	4K
Packet Forwarding Rate	1.5Mpps
Buffer	768Kb
Jumbo Frame	10240Bytes
Protection Level	Lightning protection 6KV ESD Contact discharge
Mounting	Wall-Mount installation

3.13 **6U/9U/12U/15U/22Uwaterproof Network Rack with Glass Door & Lock/Key Facility:**On as required basis.

3.14 **CAT6 Cable/Power Cable/HDMI Cable/Any other cable:**On as required basis along with connectors and other accessories required for ensuring full functionality.Cabling work shall be done with PVC pipes as far as possible. Outdoor cabling shall be done by digging trench and refilling. Cost should be included accordingly in the commercial bid.

3.15 **ONLINE UPS:**UPS system shall be provided for NVR etc. with following minimum specifications. Bidder shall ensure that each and every active component of CCTV System has redundancy as far as power supply is concerned.

<p>Configuration- 2KVA On-Line UPS System with Inbuilt Isolation Transformer at output.</p> <p>Technology - True On-Line Double Conversion UPS with PWM-IGBT technology.</p> <p>Capacity - 2KVA</p> <p>AC Input Voltage Range - 230V -20% + 15% AC 1 Phase</p> <p>Input Frequency - 50Hz ± 10% (Suitable for Generators)</p> <p>AC Output Voltage- 230 V AC, 1-phase ± 1% (Sine Wave Output)</p> <p>Output Frequency - 50 Hz ± 0.05 Hz</p> <p>Inverter Efficiency - Better than 90%</p>



Overload Capacity- 110% for 10 minutes, 200% for 5 cycles

Crest Factor- Better than 4:1

Harmonic Distortion- Less than 3%

DC Voltage - 72V DC

Isolation Transformer - UPS output should be fully isolated by double conversion and inbuilt isolation transformer within the UPS cabinet itself. External transformer shall not be considered.

Ambient Conditions - Operating Temp: 0–50 Deg C, Relative Humidity: 95% Max. non-condensing

Digital Metering Digital LCD display for measurement of AC Voltage, Battery voltage, Battery Current, Load Current, Output frequency.

Battery Back-up & Other Details The system must be capable of providing requisite battery back-up time of 120 minutes with minimum 4680VAH by using 6nos.X 65AH/12V Sealed Maintenance Free Batteries.

Certification - ISO 9001, ISO 14001, ISO 50001, ISO 27001 ,OHSAS 18001, & CE certified.

RoHS Compliance

Test Certificate from NTH/ETDC/ERTL/SAMEER for quoted model.

3.16

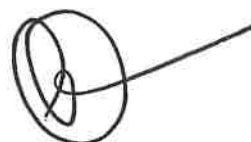
UPS: If the network component is far from online UPS, separate local UPS shall be provided as per power requirements of the components. Bidder shall ensure that each and every active component of CCTV System has redundancy as far as power supply is concerned.

CAPACITY - 1KVA

INPUT - Voltage Range 140V to 280V, Frequency Range 45Hz ~ 55Hz, Nominal Input Voltage 220/230/240 V AC, Input Connections Indian 3 Pin 5/6A

OUTPUT - Output voltage 220V AC +/- 9% (mains mode) and 220V +/-5%(battery mode), Output Frequency Same as input (Mains mode) & 50 Hz +/-10% (Battery mode), Waveform Stepped approximation to a Sine-wave

User Interface - Display Multifunction LED



BATTERY DETAILS - Battery Type Sealed Maintenance Free Type, Battery Configuration Inbuilt 2 nos. x 12V x 7AH, Recharge Time 6-8 hours recover to 90% capacity after discharge

Backup Time - 30 Minutes to one computer load.

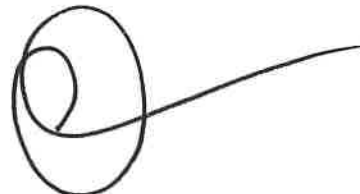
PROTECTION & ALARM - Low Battery, Overload, Short-circuit.

ENVIRONMENT - Operating Humidity & Temp 30% to 95% RH @ 0- 45°C, Storage temperature -15 to 45 deg. Centigrade, Noise Level <40dBA @ 1 Meter, ROHS

STANDARDS (Certificates to be furnished) - QUALITY ISO 9001, ISO 14001, ISO 50001 , ISO 27001 , OHSAS 18001 , CE and BIS EMI IEC 62040-2, SAFETY IEC 62040-1-1

3.17

Wireless connection Equipment: Access points for the cameras, if required shall be mounted on lighting mast. Wireless equipment and type of wireless connectivity shall be decided during installation, if required. Wireless communication for the above should be subscribing the latest Cyber security standards including encryption. The wireless modem should support dynamic encryption techniques.

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ANNEXURE- B

LIST OF POLICE STATIONS IN MEGHALAYA

DISTRICT	SL. NO.	POLICE STATION
East Khasi Hills District, Shillong	1	Shillong Sadar
	2	Laitumkhrah
	3	Lumdiengiri
	4	Laban
	5	Mawlai
	6	Rynjah
	7	Madanrting
	8	Mawsynram
	9	Pynursla
	10	Sohra
	11	Mawryngkneng
	12	Shella
	13	Mawngap
	14	Diengpasoh
	15	Women PS
West Khasi Hills District, Nongstoin	1	Nongstoin
	2	Mairang
	3	Shallang
	4	Mawshynrut
	5	Women PS
South West Khasi Hills District, Mawkyrwat	1	Mawkyrwat
	2	Ranikor
	3	Nonghyllam
	4	Women PS
South West Garo Hills District Ampati	1	Ampati
	2	Mahendraganj
	3	Salmanpara
	4	Damalgre
	5	Women PS
West Garo Hills District, Tura	1	Tura
	2	Dalu
	3	Tikrikilla
	4	Phulbari
	5	Dadenggre
	6	Jengjal
	7	Hallidyaganj
	8	Damal Asim
	9	Women PS

North Garo Hills District, Resubelpara	1	Mendipathar
	2	Bajengdoba
	3	Resubelpara
	4	Kharkutta
	5	Women PS
East Garo Hills District, Williamnagar	1	Williamnagar
	2	Rongjeng
	3	Songsak
	4	Chiading
	5	Women PS
East Jaintia Hills District, Khliehriat	1	Khliehriat
	2	Saipung
	3	Lumshnong
	4	Women PS
West Jaintia Hills District, Jowai	1	Jowai
	2	Dawki
	3	Amlarem
	4	Nartiang
	5	Women PS
Ri - Bhoi District, Nongpoh	1	Nongpoh
	2	Umiam
	3	Khanapara
	4	Umsohlait
	5	Women PS
South Garo Hills District, Baghmara	1	Baghmara
	2	Chokpot
	3	Rongara
	4	Nangalbibra
	5	Sangkhinigre
	6	Silkigre
	7	Gasuapara
	8	Siju
	9	Women PS
Police Headquarters, Shillong	1	CID
	2	CCW
	3	EOW
	4	Crime Branch
	Total	75

CERTIFICATE OF ACCEPTANCE OF TERMS AND CONDITIONS
(To be furnished along with the tender documents)

I/We have read and fully understood the terms and conditions as laid down in the Short Tender Notice. vide **Memo No. MPF/13/2015-2016/Pt.I/160 dt. 15th February 2021** in respect of supply of CCTV to the Office of the Director General of Police, Meghalaya, Shillong due to be opened on **8th March 2021**.

I/We agree to abide by the same.

I/ We have signed all the pages of the tender documents as laid down.

Signature and seal of the Tenderer or
his/her Authorized signatory.

Dated.....

Name

Address

.....

Phone No.