



**NORTH ORISSA UNIVERSITY**  
**SRIRAM CHANDRA VIHAR, TAKATPUR, BARIPADA, MAYURBHANJ- 757 003**

No: 16 /NOU/Store /135-2016

Date: 04/01/17

**TENDER NOTICE**

Sealed tenders are invited from reputed/ Registered /Established firms having valid VAT, Income Tax clearance certificate, PAN Card and authorized dealership certificate for supply of CCTV Camera /Computer equipment etc for North Orissa University, Baripada, Mayurbhanj.

The details of the Tender Papers shall be obtained on payment of ₹ 200/- (non-refundable in shape of DD in favour of “**Comptroller of Finance, North Orissa University**”, payable at **Baripada**) from the office of the Store Section, North Orissa University during the office hours from **Dt.5.1.2017 to 19.1.2017** or details of the Tender Paper may be downloaded from our website **www.nou.nic.in**. The last date of submission of tender paper to the undersigned is **Dt.19.1.2017** at 5 P.M. and will be opened on **Dt.25.1.2017** at 11.00 AM. The tenderer should deposit Earnest Money (EMD) of an amount of ₹ 5,000/- or 1% of the total cost of the quoted items whichever is higher in the shape of DD in favour of “**Comptroller of Finance, North Orissa University**” payable at **Baripada**.

The University authority reserves all the right to accept/ reject any or all quotations at any stage without assigning any reason thereof.

By order of Vice-Chancellor

Memo No. 17 <sup>(6)</sup> // Dt. 04/01/17

Copy to Notice Board/Prof. in charge of University web site/ Comptroller of Finance/ PS to Vice-Chancellor/ PA to Registrar /Account-I, for information and necessary action.

Registrar  
North Orissa University  
04/01/2017

Registrar  
North Orissa University  
04/01/2017

## **TENDER PAPER**

### **SUPPLY OF CCTV CAMERA /COMPUTER EQUIPMENT ETC. FOR NORTH ORISSA UNIVERSITY**

Registered/ Established /manufacturer/ Authorized dealers are eligible to participate in the Tender. They are required to deposit minimum ₹ 5,000/- or 1% of the total cost of the quoted items whichever is higher in shape of DD drawn in favour of Comptroller of Finance, North Orissa University, Payable at Baripada towards Earnest Money Deposit (EMD) along with VAT clearance certificate/ PAN card at the time of submission of Tender . The University authority reserves the right to reject part or all quotations without assigning any reason thereof.

### **SPECIFICATION**

Enclosed in a separate sheet.

### **TERMS AND CONDITIONS**

- Due regard shall be given to the following factors in addition to the evaluated price of the material under consideration.
  - Efficiency and running cost
  - Durability of material
  - Reliability and guarantee of quality
  - Necessity of repairs and alterations
  - Technical qualifications, financial standing and general reputations of the manufacturer/ supplier
- Orders will be placed by us when required.
- Delivery should be made within 4 weeks from the date of receiving the order failing which penalty @1% of the order will be imposed for each week of delay or part thereof.
- The rate finalized by this tender shall remain valid ordinarily during the financial year. However North Orissa University reserves the right to go for fresh tenders on the basis of the market condition.
- Payment will be made after installation of the item.
- Financial bids will be considered only after fulfilling the technical bids for Computer Centre.

Registrar,  
North Orissa University

## 1. Specification of Items

### SI No 1. Purchase of Computer

SI	Items	Specification	Qty	Unit Price in INR	Remark
1	<b>Desktops</b>	<p>Intel core i3 Configuration</p> <p>a. Form Factor : All-in-one, Non-touch, Dimensions in cm (32.8 x 48.9 x 6.7)</p> <p>b. Processor : Intel Core i3-4130, 3.4 GHz, 3 MB Cache or its higher version.</p> <p>c. Chipset : Intel H8 series chipset.</p> <p>d. Memory : 4 GB 1600 MHz upgradable upto 16 GB.</p> <p>e. Hard Disk Drive : 500 GB 7200 rpm SATA or higher with Minimum 2 SATA connectors on Motherboard.</p> <p>f. Display : 50.8 cm (20 inches) Wide LED 16:9 (1600x900) or better Digital Colour Monitor</p> <p>g. Graphics : Intel HD Graphics</p> <p>h. Keyboard : 104 keys or higher OEM USB Keyboard</p> <p>i. Mouse : Optical Scroll with USB interface.</p> <p>j. Ports : 3 USB Ports, 1 Mic., 1 headphone inside, 1 RJ-45, 1 Display Port/ HDMI/VGA port</p> <p>k. Wireless : Bluetooth 3.0, IEE 802.11 b/g/n Communication</p> <p>l. Optical Drive : 8X or better DVD RW Drive.</p> <p>m. Audio : Integrated Stereo Sound with two internal speakers and Mic.</p> <p>n. Webcam : 1.3 Megapixel HD</p> <p>o. LAN : Integrated Gigabit Ethernet LAN 10/100/1000.</p> <p>p. Operating System : Windows 8 Professional preloaded, as specified, with Media and Documentation and Certificate of Authenticity.</p> <p>q. Certifications: i) Windows 8.</p> <p>r. Power Supply : Internal/external Model: Dell Optiplex 3030 AIO</p>	10		
2	<b>Antivirus for PC</b>	Quick Heal total Security 2016 - 1 PC, 3 Years	70 users		
3	<b>Online</b>	Technical Specifications Uninterrupted Power Supply With Adequate	2		

**UPS 10  
KVA**

**Lightning Protection & Surge Protection**  
**TECHNICAL SPECIFICATIONS--- UNINTERRUPTED POWER SUPPLY WITH**  
**ADEQUATE LIGHTNING PROTECTION**  
**& SURGE PROTECTION**

UPS system must be high frequency microprocessor based with one hour battery backup. The online UPS should be a composite product with suitable rectifier cum charger and inverter along with suitable circuitry for input power stability, filtering PFC (Power factor correction), etc. to meet the detailed technical specs given below.

Description	Specification
1. O/P Power Capacity	10000VA
2.Nominal Output Voltage	230VAC
3.Output Frequency	50 Hz $\pm$ 3 Hz
4.Output Wave form	Sine wave
5.Output Voltage Distortion	Lessthan3%
6 Crest Factor	3 :1
7 Efficiency at full load	More than or equal to 92%
8 Nominal output should be configurable	220, 230or 240V
9 Nominal Input Voltage	230VACperphase
10 Input voltage range	160Vto260Vperphase
11 Input Frequency	50 Hz $\pm$ 5 Hz
12 Battery	External Battery for 1Hr battery backup
13 Audible alarm should be provided for following conditions	
	a) Alarm when on battery

			b) Low Battery c) Overload		
	14 LED indication		a) Working on Battery b) Over load c) Bypass mode d) Battery faulty		
	15.Communication	System should have the facility to interface the network through Ethernet RJ45			
	16.Operating Environment		0 to 50°C		
	17.Operating Relative Humidity		0 to 95°C		
	18.Should confirm to following	CE,EN50091-1,EN50091-2, EN55022ClassA, relevant TECGR Guidelines 0020			
	<b>Battery backup for UPS:</b>				
	a)	The Batteries should be of SMF type designed for one hour backups. Battery must be installed for the above-specified power back for the equipments at 100 % load.			
	b)	UPS should offer protection for battery from deep discharge and			

		<p>over charging of the batteries. The battery bank should have the Fuse /Circuit Breaker for the protection.</p> <p><b>High/Low Voltage Disconnecter &amp; Surge protection for power line:</b></p> <p>The UPS system shall be adequately protected against lightning and surge protection, provided at the distribution panel for the UPS system.</p> <p>High / Low voltage disconnecter or must provided at the input of UPS to protect from continous high / low voltages to protect the UPS system . High / Low voltage disconnecter will have voltage monitoring to sense the single phase of the incoming AC mains and will disconnect the mains supply to UPS as there will be abnormality as per below parameter using 2 pole AC contactor .</p> <p>a) High Voltage Disconnection at :260V  b) Re-connection as voltage will resume(at higher side) : 250 V  c) Low Voltage Disconnection at :160V  d) Re-connection as voltage will resume(at lower side) :170V  e) Disconnection time of AC contactor :100ms  f) Reconnection time delay : 20– 30sec  g) Input MCB must be provided at the input.</p>			
4	<b>Windows Server</b>	<p>Server Specification:</p> <p>Model: Dell PowerEdge T420  Memory: 32 GB DDR3  HD Storage : 6 TB  Processor: Intel® Xeon® processor E5-2400 and E5-2400 v2 product families  Processor Sockets: 2  Internal Interconnect: Intel QuickPath Interconnect (QPI) link: 6.4GT/s</p>	1		Note: OS: Microsoft® Windows Server® 2012

		<p>Chipset: Intel C602</p> <p>GPU options: One NVIDIA® Quadro® 6000 graphics card</p> <p>Cache: 2.5MB per core; 6 cores</p> <p>Drive bays: four 3.5" cabled</p> <p>Cabled hard drive option: 3.5" SATA, nearline SAS, SAS (15K)</p> <p><b>Operating System: Microsoft® Windows Server® 2012 (Fulltime license. Cost must be included)</b></p> <p>Slots: 6 PCIe slots</p> <p>External HBAs (RAID): PERC H810</p> <p>Embedded NIC: Broadcom® 5720 GbE Dual Port 1Gb LOM</p> <p>I/O Adapter: Broadcom 5719 Quad Port 1Gb NIC</p> <p>Power Supply: Titanium efficiency, hot-plug, redundant 750W power supply</p> <p>Others: Other default specification as specified in</p> <p><a href="http://www.dell.com/in/business/p/poweredge-t420/pd">http://www.dell.com/in/business/p/poweredge-t420/pd</a> or</p> <p><a href="https://www.emc.com.br/PDF_Specs/DELL_Poweredge_T420.pdf">https://www.emc.com.br/PDF_Specs/DELL_Poweredge_T420.pdf</a></p> <p>Keyboard: 104 key keyboard</p> <p>Mouse: Optical USB Mouse</p> <p>Monitor: 22" LCD Monitor</p>			
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5	Linux Server	<p>Server Specification:</p> <p>Model: Dell PowerEdge T420</p> <p>Memory: 32 GB DDR3</p> <p>HD Storage : 6 TB</p> <p>Processor: Intel® Xeon® processor E5-2400 and E5-2400 v2 product families</p> <p>Processor Sockets: 2</p> <p>Internal Interconnect: Intel QuickPath Interconnect (QPI) link: 6.4GT/s</p> <p>Chipset: Intel C602</p> <p>GPU options: One NVIDIA® Quadro® 6000 graphics card</p> <p>Cache: 2.5MB per core; 6 cores</p> <p>Drive bays: four 3.5" cabled</p> <p>Cabled hard drive option: 3.5" SATA, nearline SAS, SAS (15K)</p> <p><b>Operating System: Cent OS ( free version)</b></p> <p>Slots: 6 PCIe slots</p> <p>External HBAs (RAID): PERC H810</p> <p>Embedded NIC: Broadcom® 5720 GbE Dual Port 1Gb LOM</p> <p>I/O Adapter: Broadcom 5719 Quad Port 1Gb NIC</p> <p>Power Supply: Titanium efficiency, hot-plug, redundant 750W power supply</p> <p>Others: Other default specification as specified in</p> <p><a href="http://www.dell.com/in/business/p/poweredge-t420/pd">http://www.dell.com/in/business/p/poweredge-t420/pd</a> or</p> <p><a href="https://www.emc.com.br/PDF_Specs/DELL_Powerededge_T420.pdf">https://www.emc.com.br/PDF_Specs/DELL_Powerededge_T420.pdf</a></p> <p>Keyboard: 104 key keyboard</p> <p>Mouse: Optical USB Mouse</p> <p>Monitor: 22" LCD Monitor</p>	1		Note: OS:Cent OS
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**Sl.No- 2. Purchase of [CCTV](#): Requirements & Technical Specification for CCTV Surveillance System installation at North Orissa University, Baripada Campus**

**Locations**

North Orissa University's aerial map can be obtained from google map at the url

<https://www.google.co.in/maps/@21.9292228,86.7682008,184m/data=!3m1!1e3>

A screenshot is below:



Figure 1.1. NOU Campus aerial view along with Roads marked in yellow

Legends in the picture:

A: Academic Block 2

B: Academic Block 1  
C: CTS Building  
D: Admin Building  
E: Library  
F: Canteen  
G: Main Gate  
H: Academic Block 4  
I: Academic Block 6  
J: Academic Block 3  
K: Academic Block 5  
L: Dept. of Computer Application  
M: Proposed PG Council building & Sports Complex  
N: Parking lot  
O: Open Stage  
P: Secondary Gate  
Q: Auditorium (under construction)  
R: Place between two gates (PTZ Camera installation place)

### **Measuring distance between locations**

Step 1: Right click on the source point of google map of North Orissa University (location given above)



Figure 1.2. Measure Distance Step 1

You will get a screen like below:

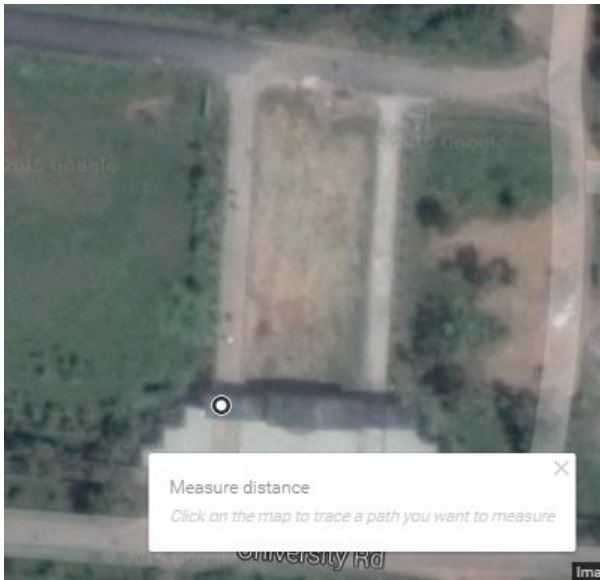


Figure 1.3 Measure Distance Step 1 Result

Step 2: Click on the destination point, you will get screen like below:



Figure 1.4 Measure Distance Step 2

That will give you the distance between source and destination point in meter.

Step 3(optional): You can further click on to continue in the path as shown like below:



Figure 1.5 Measure Distance Step 3

**Current Installation requirements (locations & type)**

Sl.	Location	Place	Camera Type	Qty	Rotatable
1	G	Main Gate (both Entry Gates)	Bullet	2	No
2	R	Main University junction, Garden Area between two gates	PTZ	1	Yes
3	E	Central Library	Bullet	2	No
4	E	Central Library	Dome	6	No

5	N	Parking	Bullet	1	No
6	D	Admin Building	Bullet	10	No
7	F	Canteen	Bullet	1	No
8	H	Academic Block 4	Bullet	5	No
9	J	Academic Block 3	Bullet	3	No
10	I	Academic Block 6	Bullet	5	No
11	K	Academic Block 5	Bullet	5	No
12	B	Academy Block 1	Bullet	1	No
13	B	Academy Block 1	Dome	3	No
14	A	Academy Block 2	Bullet	1	No
15	A	Academy Block 2	Dome	3	No
16	L	New Academic Block (Computer Application)	Bullet	2	No
17	L	New Academic Block (Computer Application)	Dome	2	No
18	M	New PG Council Office & Sports Complex	Bullet	2	No
19	C	CTS	Bullet	2	No
20	C	CTS	Dome	2	No

21	Q	Auditorium	Bullet	5	No
			Total	64	

**Plan for IP Based CCTVs (1 NVR, one control room)**

This is a plan for IP Cameras and NVR. In this plan (Figure 1.6), One NVR will be placed at location D. The Control Room (to monitor CCTV Footages) also will be setup at Location D. The NVR will cater to the IP Cameras installed as per the plan. One PTZ Camera will be installed at location 'R'. Appropriate LAN equipments to be installed for the purpose. In Fig. 1.6, LAN Connection is shown in Yellow. Note that the connections in the figure 1.6 are for demonstration purpose and DO NOT exhibit the actual connections that will be laid out.



Figure 1.6 IP based Plan for NOU Campus



## Technical specifications

Technical specification mentioned below are the minimum. any better specification will also be accepted

MegaPixel IP Dome Network Camera	
Image sensor	1/2.8-3" CMOS
Image Resolution	1.3 megapixel (1280 x 960) HD resolution or higher
Lens	2.8 ~ 12 mm ; F1.2 ~ F1.4; angle of view: 80° ~ 28.7° or Better
Min Illumination	0.1 LUX, BW:0.01 LUX or better
Shutter speed	Auto
IR Range	15~20 m
Digital noise reduction	3D DNR
Wide dynamic range	>= 70.0 dB
Day & Night	ICR [IR Cut Filter Removal]
Backlight compensation	Yes
Exposure	Scene/Manual/Shutter Priority Mode
Video compression	H.264 High Profile/ M-JPEG
Dual stream	Yes

Frame rate	30 fps
Image settings	Saturation; brightness; contrast adjustable through client software
ONVIF	Yes
Network Port	One RJ45 10/100M self-adaptive Ethernet port
Protocols	IPv4/IPV6, TCP, DHCP, HTTP, HTTPS, TSL, SSL, 802.1X, QoS, PPPoE, DNS, ARP
Security	Password Protection, HTTPS(SSL, TLS)
Local PC Recording	Yes
POE	Yes
Onboard storage	Built-in Micro SD / SDHC / SDXC card slot; up to 64 GB
IP66,Weatherproof	Yes
Power supply	12 VDC/24VAC/PoE (802.3af)
Power consumption	< 7w or better
Operating Temperature	-10° to +50° or better
Operating Humidity	0% - 90%
Certification	UL; FCC; CE

MegaPixel IP Bullet Network Camera	
Image sensor	1/2.8-3" CMOS
Image Resolution	1.3 megapixel (1280 x 960) HD resolution or higher
Lens	2.8 ~ 12 mm ; F1.2 ~ F1.4; angle of view: 80° ~ 28.7°
Min Illumination	0.1 LUX, BW:0.01 LUX or better
Shutter speed	Auto
IR Range	25 ~ 30 m
Digital noise reduction	3D DNR
Wide dynamic range	>= 70.0 dB
Day & Night	ICR [IR Cut Filter Removal]
Backlight compensation	Yes
Exposure	Scene/Manual/Shutter Priority Mode
Video compression	H.264 High Profile/ M-JPEG
Dual stream	Yes
Frame rate	30 fps
Image settings	Saturation; brightness; contrast adjustable through client software

ONVIF	Yes
Network Port	One RJ45 10/100M self-adaptive Ethernet port
Protocols	IPv4/IPV6, TCP, DHCP, HTTP, HTTPS, TSL, SSL, 802.1X, QoS, PPPoE, DNS, ARP
Security	Password Protection, HTTPS(SSL, TLS)
Alarm	Motion detection, Audio Exception Detection, Dynamic analysis, Tampering alarm, Network disconnect, IP address conflict, Storage exception
Motion Detection	Up to 4 areas with alarm facility
Privacy Mask	Up to 4 masks
Local PC Recording	Yes
POE	Yes
Onboard storage	Built-in Micro SD / SDHC / SDXC card slot; up to 64 GB
IP66,Weatherproof	Yes
Power supply	12 VDC/24VAC/PoE (802.3af)
Power consumption	< 7w or better
Operating Temperature	-10° to +50° or better
Operating Humidity	0% - 90%
Certification	UL; FCC; CE

Outdoor High Speed DOME IP PTZ Network Camera	
Image sensor	1.3'' CMOS or better
Image Resolution	1280×720 or better
Lens	3.5 ~ 98 mm ; F1.2 ~ F1.4; motorized
Min Illumination	Color: 0.05Lux; B/W: 0.01Lux; 0 Lux with IR or better
Shutter speed	Auto / Manual 1/50 - 1/10000
Pan / Tilt range Pan	360° endless; Tilt: - 15° ~ 90° (Auto Flip ) or Better
Focus control	Auto
IR Range	> 50 m
Digital noise reduction	3D DNR
Wide dynamic range	>= 70.0 dB
Day & Night	ICR(Auto/Day/Night)
Optical Zoom	20x or better
Digital Zoom	16x or better
White Balance	Auto
Gain Control	Auto
S/N Ratio	>= 40 dB

Backlight compensation	Yes
Image Settings	Privacy Masking/ Auto Digital Zoom/AGC/White Balance/Auto Digital Zoom/Defog/Expose Control
Video compression	H.264 High Profile/ M-JPEG
Dual stream	Yes
ROI Stream	Yes
Frame rate	30 fps or better
ONVIF	Yes
Protocols	IPv4/IPV6, TCP, DHCP, HTTP, HTTPS, TSL, SSL, 802.1X, QoS, PPPoE, DNS, ARP
Security	Password Protection, HTTPS(SSL, TLS)
Alarm	Motion detection, Audio Exception Detection, Dynamic analysis, Tampering alarm, Network disconnect, IP address conflict, Storage exception
POE	Yes
Onboard storage	Built-in Micro SD / SDHC / SDXC card slot; up to 64 GB
IP66, Weatherproof	Yes
Power supply	12 VDC/24VAC/PoE (802.3af)
Power consumption	< 7w or better

Operating Temperature	-10° to +55° or better
Operating Humidity	0% - 90%
Certification	UL; FCC; CE

64 Channel Network Video Recorder (NVR)	
Maximum IP Cameras supported	64 IP Camera
Recording Performance	Up to 300Mbps, 64ch@Full HD recording support or Better
Operating System	Linux/Windows
Compression	H.264/ MJPEG
Dual Stream	Each channel can set main stream and sub stream
Remote Client	Remote Live Viewer (Software), Remote Live Viewer (Web),(Mobile App)
Remote Client OS	Windows XP (32-bit), Windows 7 (32/64-bit), Windows 8 (32/64-bit)
Drive Bays	4 hard drive chassis: 3.5" SAS and SATA or 2.5" SAS and SSD drives or Better
HDD Bays	3.5" SATA or NLSAS HDD (8TB x 4 ea) or Better
RAID Level	0,1,5,10

External Storage	DAS
HDD Capacity	32 TB
Ethernet Port	Gigabit Port, RJ-45
External Ports	2 x USB 2.0, 2 x eSATA
Audio	Two - way
Power Consumption	90W
Temperature	Operating: 0° C ~ 40°C (32°F ~ 104°F)
Humidity	Operating: 5% ~ 95%

<b>Video Management Software</b>
Should be compatible with the NVR
Record, display and playback multiple cameras. The system shall support up to 64 channels.
Able to connect analog cameras and IP camera on one system simultaneously. The combination of analog and IP cameras shall be very flexible.
Allow 3rd Party Hardware/Software Integration
Support dual password protected. The system is able to be run on the selected monitor per user preference.
Support triple monitors to display live video and playback.



Allow user to preview the live video and review recorded video on both local machine and remote site.
Support LAN and WAN network. For WAN network, the system shall support DDNS for user who has dynamic IP address only. The system shall support DDNS service.
Support scheduling auto reboot function daily or weekly
Retrieve live video and recorded video
Retrieve and set I/O status
Take snapshots of live view and recorded video
Perform PTZ controls in live view
Change screen layouts and resolutions in live view

<b>Desktop PC for running Video Management Software</b>	
Brand	Dell/Lenovo/HP or any other brand of repute
CPU	Intel Core i5-4570; 3,2 GHz; 6 MB Cache or its higher version
Chipset	Intel Q8 series
Bus Architecture	3 PCI (PCI/ PCI Express) or more
Memory	8 GB 1600 MHz DDR3 RAM with 32 GB Expandability
HDD	1 TB 7200 rpm or higher
Graphics Card	2 GB NVIDIA

Monitor	18.5 inch or Larger LED
Keyboard	104 keys,
Mouse	Optical with USB interface,
Bays	4 Nos, or above,
Ports	6 USB Ports or more (at least 2 USB with 3,0);1 Display port/VGA port; audio ports for microphone and headphone in front
Cabinet	Mini Tower/Tower
DVD Drive	16X Max DVD + /- RW with Dual Layer Write Capabilities or Better
OS	Windows 8.1 or Higher with installation CD and Key (lifetime license)
Multiple Monitor Attach	Yes ( 3 or More )

<b>LED Monitor High Resolution</b>	
Make: Sony/Samsung/LG	
Screen size 42"	
Maximum Resolution 1920 x 1080 or 1920 x 1200	
Brightness 500 cd/m2	

Contrast Ration 50000:1
Response time not less than 5 ms
One VGA output and one BNC
Viewing angle 178 degree/ 178 degree
Aspect Ratio 16:9 or 16:10
Minimum one speaker Built.

UPS
2 KVA online UPS (APC/Numeric/Luminous or any brand of repute) with 8 hour backup for all the Cameras, NVR, PC, Monitor and other components complete with tubular battery & rack.

### Note for Bidders

#### Other Requirements

- All cameras must be equipped with mounted brackets, weather proof housing. Pole 6 Mtr(from ground) for PTZ Camera including surge & Lightning protection.
- All hardware components must be compatible to one another.
- Must setup High speed LAN for the IP CCTV Surveillance system.
- Must setup required switch/routers in every location for future installation of cameras. The system is presently designed for limited number of cameras (See Current Installation Requirements) whereas not limited to the same and scalable upto unlimited cameras if required in the future.
- Roadside(see map) underground cabling (Optical Fibre LAN cabling) with three feet digging.

- external cabling inside the building with hard casing.
- Shortest path for LAN Cabling assumed
- Establishment of control rooms for configuration, operation, monitoring & maintenance with supply of one high resolution 42" LED Display for monitoring purpose has to be setup. Support for attaching multiple monitors should be there. Alternate monitoring at other Locations with desktop PC for individual camera.
- Installation, configuration & customization of video software from the Main Control Room.
- Wherever required, local power supply to the cameras is to be provided with necessary arrangement.
- The supplied Video management software shall offer both video stream management and video stream storage management. Recording frame rate and resolution in respect of individual channel shall be programmable.

#### **Expectations from Bidders**

- a) Bidders must supply compliance-to-spec document.
- b) Bidders must provide a layout map of the installations, electrical drawings, Cabling plans depicting the functioning of the system.
- c) Bidders must provide supervisory specialists and technicians at the job to assist in all phases of system installation, start up and commissioning.
- d) Bidders must provide cost that must include all cable laying and wiring charges, fittings, wiring requirements, labour charges
- e) Cost must include all network equipments to setup the exclusive LAN for the CCTV surveillance system.
- f) Cost must include all electrical equipments (ex. switch board for PC, NVR etc.), genuine software (Window OS, software for surveillance etc.) required to run the control room system, NVR, Cameras, motors, cables and any other hardware components required.
- g) Type, brand of each of the items must be specified
- h) Compatibility requirement must be specified. For ex. whether in future can the surveillance software can work with NVRs of other brand, whether NVR will work with camera of other brand and vice versa etc.
- i) Must specify the supported maximum distance from NVR and the supported camera without video distortion
- j) Must specify the Warranty details. What all it includes e.g. breakage of camera ( repair or replacement ), breakage of cabling, Hard disk failure, mother board failure, SMPS failure, RAM failure, UPS failure, Switch failure, Motor failure ( in case of rotatable ) etc.
- k) All the software and the firmware are upgrades shall be free of charges for at least 10 years.
- l) AMC for every product including accessories for 2 years from the date of installation. During this period the firm has to make quarterly visit besides breakdown call booking and service report for each quarter is to be submitted. Breakdown complaint shall be attended and rectified within 24 hours.
- m) All the software and the firmware are upgrades shall be free of charges for at least 10 years.
- n) Future AMC Cost ( Period and what all it includes)
- o) On demand Free of Cost Training (Administrative and maintenance) for 2 years from the date of installation

- p)** Installation charges ( whole/individual )
- q)** Charges for installing (including cable laying) NVRs, Cameras, LAN Cabling in Future (in one year, two year, five year etc.)
- r)** Cost of Future Training (Administration and Maintenance)
- s)** Cost must include all the taxes
- t)** All the above must be specified in Bill of Material (BOM)

### **Final Costing**

*Bidders may calculate the distances using the steps mentioned in section 1.2. Bidders may conduct survey at the site if they wish to.*

- a) Bidders must provide the price/charges of individual items/services.
- b) Also along with the individual prices, Bidders must provide Total Charge (Final Cost) for supply, installation, Training and Maintenance along with all the calculations ( distances, items used, labour cost etc.) along with Bill of Material (BOM).