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SECTION - 1

1.1 SCOPE:

This technical specification covers the requirements of **design, packing at works, supply, unloading at site, storage at site including safety & security of supplied materials, erection/installation, testing and commissioning the complete CCTV system including cameras, digital video recorder system, mounting arrangement for cameras, cables, LAN switches and any other items/accessories required for office premise complete in all respect.** It shall also be bidder's responsibility to provide all necessary licenses to Owner to run the system successfully.

The Contract shall be on Bill of Quantity basis for the package. In case of change in scope after award of the contract, the additions/ deletions to the scope shall be as per the breakup unit rates for all the equipment and services furnished by the bidder in his offer.

The Bidder shall be responsible for the design and verification of the CCTV system.

After placement of order, the bidder has to design the system as per relevant standards /practice to the satisfaction of BHEL.

It is the responsibility of the successful Bidder to obtain necessary approval/clearance from statutory organizations wherever applicable for the equipment/system under the scope specified.

The CCTV system is required for the following Projects

Customer : BHEL

Project : BHEL TBG Office at Advant Navis IT Park, Sector 142 Noida.

The scope also covers.

Bidder shall submit the detailed BOQ and drawings indicating qty. of each items required for Visual monitoring system in the detailed engineering stage for approval.

CCTV system is required for effective surveillance of all corridors of office premise as per attached drawing.

System with colour IP cameras for CCTV surveillance would be located at various indoor areas as per the direction of engineer in charge. The CCTV data shall be recorded (minimum for 30 days) and stored on network video recorder.

It will be bidder's responsibility to assess number of cameras, their locations shall be decided in such a way that any location covered in the area can be scanned.

The cameras shall be mounted on wall / ceiling / false ceiling or any other suitable mounting arrangement provided by the contractor. Bidder is advised to visit office premise before bidding.

The scope of supplies shall be as per commercial terms and conditions enclosed separately with the enquiry.

1.2 SPECIFIC TECHNICAL REQUIREMENTS:

The system should facilitate viewing of live and recorded images and controlling of all cameras by the authorized users.

Color cameras installed at different locations, process them for viewing on workstations/ monitors and simultaneously record all the cameras after compression using **H 264/MPEG 4** or better standard.

Mouse/Joystick -keyboard controllers shall be provided for full functional use of CCTV system. The system shall provide sufficient storage of all the cameras recordings for a period of 30 days or more with good quality using necessary compression techniques for all cameras. It shall be ensured that data once recorded shall not be altered by any means. The recording resolution and frame rate for each camera shall be user programmable.

The surveillance CCTV system shall operate on 230V, 50Hz single phase Power supply.

System Requirements:

1. System must provide built in facility of watermarking to ensure tamperproof recording.
2. All cameras may be connected through a suitable LAN.
3. All cameras recording shall have camera ID, location/area of recording as well as date /time stamp, camera ID , location /area of recording & date /time shall be programmable by the system administrator with user ID & Password.
4. System shall have triplex i.e. it should provide facility of viewing, recording & replay simultaneously.
5. The offered system shall have facility to export the desired portion of clipping (from a specific date/time to another specific date/time) on PEN drive / CD or DVD. Viewing of this recording shall be possible on standard PC using standard software like windows media player etc.

1.3 Video Surveillance Application software:

- a) Digital video surveillance control software should be capable to display and manage the entire surveillance system. It should be capable of supporting variety of devices such as cameras, video encoder, servers etc.
- b) The software should support flexible 1/2/4/8/16 windows split screen display mode and scroll mode on the PC monitor.

1.8 Documents to be provided by bidder with technical bid.

- Make and model of each item.
- Technical datasheet/Catalogues/brochures of the item.

1.9 BILL OF QUANTITY FOR SUPPLIES & SERVICES: As per Annexure-1

Note -1 -Tentative quantities are mentioned in **BOQ under Annexure-1**. The above quantities (BOQ) are as per preliminary design only. The detail design will be submitted by Vendor and subject to approval by BHEL. The BOQ quantities which are finalized after approval has to be supplied. BHEL reserves the right for quantity variation due to any reason upto $\pm 30\%$ of total value at same unit rate and terms during execution of contract .

1.10 QUALITY PLAN:

The contractor shall carry out contract works in accordance with sound quality management principles which shall include such as controls which are necessary to ensure full compliance to all requirements of the specification & applicable standards.

1.11 WARRANTY:

- The Camera, NVR & HDD should have minimum 2-years of manufacturer warranty
- LED TV should have minimum 1-year manufacturer warranty.
- Vendor to submit valid warranty document at the time of payment.

1.12 AMC CLAUSE:**First 2 years comprehensive AMC & 3rd year non-comprehensive AMC**

Vendor has to quote a price in the price bid for Annual Maintenance cost (AMC) , which requires to keep the cctv system working to its full efficiency and uptime of 99% for next 1 years after warranty period of 2 years (first 2 years under warranty period and 3rd years non-comprehensive AMC , a total of 3 years) . The price to be quoted in lump sum amount per year (1st year, 2nd year, 3rd year) plus taxes in the price bid provided as separate row. This AMC price will be considered to decide L1 price in present award of work. However two separate orders , i.e, one for purchase order for supply and installation of CCTV system and another for AMC will be given to the successful bidder. All the material required during AMC will be included in the scope of bidder **except Cables / LED TV**. cost of Cables will be paid as per actual requirement. Penalty will be levied during AMC period if down time is more than 1 week @ 0.5% per week maximum upto max 5% per annum for the items/system effected. Payment of AMC shall be paid on yearly basis on successful completion of respective AMC year.

1.13 DISMENTALING AND RE-ERECTION (Optional item):

Optional items, the same be applicable in case shifting of office from existing premise at "Advant Navis IT Business Park, Sector 142 Noida" to a new location within Delhi / Noida. The price quoted under this head shall be firm upto 2 years from the date of commissioning of CCTV system at Advant Office.

REMARK - The prices quoted for AMC & Future (Optional) items shall also be considered for evaluation purpose.

ANNEXURE - 1

SL	TITLE	UNIT	Qty	REMARK
	SUPPLY			
1	A1: Supply of IP based dome camera with minimum specification - 4MP, 1/3" progressive Scan CMOS image sensor, 1080P Resolution, 4mm Lens, IR day/night vision, H.264 and MJPEG dual-stream encoding with necessary mounting hardware on wall / false ceiling / Ceiling .	Nos.	15	CP-Plus/ Axis/ Dahua/ Verint/ Honeywell/ Panasonic/ HIKVISION/ Sony/ Samsung/ PELCO
2	A2: Supply of 16 channel NVR including joystick / keyboard complete in all respect. Minimum specification - Recording upto 8MP resolution, HDMI video output upto 1080P resolution, H.264 and MJPEG decoding format, 2 SATA port supports up to 8 TB. Suitable for offered camera.	Nos.	1	CP-Plus/ Axis/ Dahua/ Verint/ Honeywell/ Panasonic/ HIKVISION/ Sony/ Samsung/ PELCO
3	A3: Supply of 4TB SATA HARD DISK DRIVE	Nos.	1	SEAGATE / WD
4	A4: Supply of 8TB SATA HARD DISK DRIVE	Nos.	1	SEAGATE / WD
5	A5: Supply of 5 Port Network Switch with 4 PORT POE	Nos.	3	D Link/NETGEAR/CP Plus equivalent
6	A6: Supply of 8 Port Network Switch with 8 PORT POE	Nos.	1	D Link/NETGEAR/CP Plus equivalent
7	A7: Supply of Cat 6 UTP Cable (UTP) including terminal connectors	Meter	400	D-Link
8	A8: Supply of Flexible / PVC Conduit Pipe minimum ID 3/4 inch (including bend / tee and necessary mounting hardware on wall / ceiling)	Meter	200	Repute make

ANNEXURE - 1

SL	TITLE	UNIT	Qty	REMARK
9	A9: Supply of Power Cable (3cX1.5 sq.mm) unarmored with terminal connectors and necessary mounting hardware on wall / ceiling	Meter	150	FINOLEX/ POLYCAB/ HAVELLS / KEI / Equivalent
10	A10: Supply of 4 U Rack Mounting the NVRs into it with required accessories and mounting	Nos.	1	COMRACK or equivalent / ISI Certified
11	A11: Supply of 32 inch Full HD 1080P LED SMART TV. With wall mounting bracket.	Nos.	1	Sony / Samsung / VU / Panasonic / SHARP / TOSHIBA / Equivalent
12	A12: Supply of any other items required for successful completion of job. Bidder to quote here lump sum value and attached a detailed list of individual items with unit price & qty along with the bid.	Lot	1	
SERVICES				
13	B1: Design, Erection, Testing & Commissioning of CCTV system in indoor office area complete in all respect excluding the Camera & Cables which are covered in following separate line items.	Lot	2	1 Lot in present scope & 1 lot for future scope
14	B2: ETC of IP based dome camera.	Nos.	30	15 Numbers are in present scope & 15 numbers for future scope
15	B3: ETC of CAT6 UTP Cable.	Meter	800	400 meters are in present scope & 400 meters for future scope
16	B4: ETC of 3CX1.5 Sq.mm power cable.	Meter	300	150 meters are in present scope & 150 meters for future scope

ANNEXURE - 1

SL	TITLE	UNIT	Qty	REMARK
17	C0: (Optional item) Dismantaling of VMS System	Lot	1	Future scope only - Applicable in case of shifting of office premises to a new location.
	AMC			
22	D1: AMC for 1st year (Under warranty)	Lot	1	
23	D2: AMC for 2st year (Under warranty)	Lot	1	
24	D3: AMC for 3rd year (Non-Comprehensive)	Lot	1	
	REMARK FOR "FUTURE SCOPE"			
	1. Future scope shall be applicable in case of shifting of office premises to a new location within Noida / Delhi / NCR) 2. Prices shall be firm upto 2 years from the date of commissioning of CCTV system under present scope. 3. Freight charges for relocation of material from present to future scope shall be paid extra as actual.			



CCTV

SPECIFICATION NO. TB-XXX-316-CCTV

REVISION 0

SHEET 1 OF 1

ANNEXURE-A

SCHEDULE OF TECHNICAL DEVIATION

Bidder shall list out all technical potential deviation (s)/ concession(s)/change request(s) along with clause with respect to technical specifications.

Sl. no.	Page no.	Contract requirement with clause no.	Potential deviation (s)/concession(s)/change request(s)	Reason(s) / Justification(s)

Any deviation not specifically brought out in this section shall not be admissible for any commercial implication at later stage. Except to the technical deviations listed in this schedule, bidder's offer shall be considered in full compliance to the tender specifications irrespective of any such deviation indicated /taken elsewhere in the submitted offer.

Date:

Bidder's Stamp & Signature

