

EXHIBIT A

SPECIFICATIONS FOR ENTERPRISE CLASS VIDEO SURVEILLANCE SYSTEM

OUTDOOR CAMERA REQUIREMENTS

- Must be outdoor ready
- Fixed cameras (no PTZ cameras – digital PTZ ok)
- Image Sensor - Minimum Requirements: 1/4" Progressive Scan CMOS
- Lens - Minimum Requirements: Varifocal, DC-iris, remote focus and zoom, 6mm: 2.5–6 mm/F1.4, 12mm: 3.3-12 mm/F1.6
- Horizontal Angel of View – Minimum Requirements: 6 mm: 87° - 40°
12 mm: 70° - 20°
- Must have automatic Day/Night capability
- Minimum Illumination/Light Sensitivity (LUX) – Minimum Requirements: 6 mm: 0.3 (color), 0.05 (B/W), 12 mm: 0.4 (color), 0.06(B/W)
- Video Resolution – Minimum Requirements: 1280 x 800 resolution at 25fps
- Must have two-way audio capability
- Must have audio detection and tampering alarm
- Security features – minimum requirements: IP filtering, HTTPS encryption, multi-level passwords, IEEE 802.1x
- Network Requirements: IPv4/v6, QoS
- Must utilize PoE IEEE 802.3af Class 3 for power
- Video Compression – Minimum Requirements: H.264, Motion JPEG
- Must have a vandal resistant housing, NEMA rated
- Should be capable of 1080p video streams
- Operating temperatures should be -40F – 131F
- Must have a heater/fan along with dehumidifying mechanism
- Must be able to execute motion detection at camera prior to sending data to archive server (used to optimize Verizon backhaul as needed)
- Must have ability to store directly to the camera via SD card slot or to external storage device
- Must include cost for mounting brackets, programming and installation
- Cameras must include a 3 year warranty

INDOOR CAMERA REQUIREMENTS

- Fixed cameras (no PTZ cameras – digital PTZ ok)
- Image Sensor - Minimum Requirements: 1/4" Progressive Scan CMOS
- Lens - Minimum Requirements: 2.9 mm/F2.0
- Horizontal Angel of View – Minimum Requirements: 80°
- Minimum Illumination/Light Sensitivity (LUX) – Minimum Requirements: 1.2 - 100,000
- Video Resolution – Minimum Requirements: 1280 x 800 resolution at 25fps
- Video Compression – Minimum Requirements: H.264, Motion JPEG

- Must have two-way audio capability
- Must have audio detection and tampering alarm
- Security features – minimum requirements: IP filtering, HTTPS encryption, multi-level passwords,
- Network Requirements: IPv4/v6, QoS
- Must utilize PoE IEEE 802.3af Class 2 or DC for power
- Video Compression: H.264, Motion JPEG
- Should be capable of 1080p video streams
- Must be able to execute motion detection at camera prior to sending data to archive server (used to optimize Verizon backhaul as needed)
- Optional: Wireless capability
- Must include cost for cabling, mounting brackets, programming and installation
- Cameras must include 3 year warranty

SERVER REQUIREMENTS

- Servers cannot be “white box” servers and must carry a manufacturer warranty of no less than 3 years for all components. DVR style systems will not be accepted due to the anticipated growth of the system.
- Server minimum of dual 2.66GHz 6-Core, 48Gb RAM, 1333MHz bus speed and must be virtualized for future ease of growth.
- Each virtual machine (VM) must have a minimum of two 1Gb Ethernet interfaces dedicated to that VM.
- Servers must be scalable to provide processing for up to 200 cameras. Additional servers may be required but must be seamlessly integrated into the original solution without major upgrades or forklifts to original system.
- Must include all necessary implementation and professional services costs
- Must include at least 3 years maintenance and support

VIDEO MANAGEMENT SOFTWARE REQUIREMENTS

- Software must be able to aggregate multiple archival servers into one seamless user interface.
- User interface must be available via a web interface, tablets, and smartphones.
- Software should employ simple “drag & drop” layout of user views.
- Software must have option to archive audio along with the video feed if requested.
- Software must have notification system in place for offline camera events.
- Software should have carousel option for live monitoring.
- Software should have easy export option of both still images and video for evidence gathering.
- Software should have map based navigation with simple click to view options.
- Software must support local and network based storage.

- Software should have smart search options for quick discovery of required video archives.
- Software must have ability to set up user profiles so that security/access levels can be set based upon user privileges.
- Must include all necessary implementation and professional services costs
- Software must have maintenance and support for no less than 3 years and be renewable for subsequent years.

STORAGE REQUIREMENTS

- External shared storage is preferred using either iSCSI (block)/NFS (file) protocols
- Storage must have dual controllers in either active/active or active/passive configuration.
- Storage should have minimum of 4 GB of front end connectivity bandwidth to the network.
- Storage should consist of 7200RPM SATA/NL-SAS drives of 2Tb in size or more.
- Storage should utilize RAID-6 or equivalent for data resiliency on large drives.
- Please offer options for storage to accommodate approximately 2 weeks / 6 months / and 2 years of archive for all cameras included in this bid. Assumptions can be made based on the following:
 - H.264
 - 1280X960 resolution
 - 8 fps
 - 24 hours of activity with 20% motion or 4.8 hours of archiving per day per camera.
 - Please offer options for 2 weeks / 6 months / and 2 years of archive per camera with a minimum of 30 days stored online in the 6 month and 2 year options.
- Storage array must be capable of growing to accommodate up to 2 years of archive for approximately 200 cameras using the assumptions above.

HOSTED ARCHIVE (MONITORING):

The City is interested in reviewing options for a hosted archive system. This would be used in lieu of onsite storage. The system should be sized similar to the onsite equipment requirements listed above. Vendor would be responsible for all implementation, programming, and ongoing maintenance of hosted solution. The City would require remote access to the system on role based access with different levels of security. The City would require the same kind of functionality as required in the software requirements listed above. Provide all costs associated with the hosted service and provide detail as to how the system is billed, i.e. monthly subscription, based on amount of storage used, etc. The total reflected on the pricing worksheet should be an annual cost.