OBION COUNTY BOARD of EDUCATION VIDEO SYSTEM UPGRADE OBION COUNTY CENTRAL HIGH SCHOOL SOUTH FULTON MIDDLE &HIGH SCHOOL

SPECIFICATION PACKAGE

The Obion County Board of Education is now accepting bids to upgrade the existing video systems at Obion County Central High School and South Fulton Middle & High School. Complete specifications are as follows:

BIDDER REPRESENTATION

Each bidder by submitting their bid represents that:

1. They have read and understand the project documents and their bid is based in accordance thereof.

2. A representative of the bidder has visited the site and familiarized themselves with the local conditions under which the work is to be performed.

3. Their bid is based upon the materials, systems and equipment described in the project documents without exception.

DEFINITIONS

- 1. A bid is a complete and properly signed proposal to do the work or designed portion thereof for the sum stipulated therein supported by data called for by the bidding documents.
- 2. Base bid is the sum stated in the bid for which the bidder offers to perform the work described as the base, to which work may be added or deducted for the sums stated in the alternate bids.
- 3. An alternate bid is an amount stated in the bid to be added to or deducted from the amount of the base bid if the corresponding change in project scope, materials, or methods of construction described in the bidding documents is accepted.
- 4. A price is an amount stated in the bid as a price per unit of measurements for materials or services as described in the contract documents.

PROCEEDURES

- 1. Bids are to be **submitted in duplicate**
- 2. Bidder may list any voluntary alternatives on a separate bid form.
- 3. All copies of the bid shall be enclosed in a sealed envelope. The envelope shall be addressed to the owner, and identified with the words **"BID ENCLOSED VIDEO SYSTEM UPGRADE, Obion County Board of Education"** plainly written on the face thereof.
- 4. Bids are to be filled in by typewriter or manually in ink.
- Bids are to be submitted to: OBION COUNTY BOARD of EDUCATION 1700 NORTH FIFTH STREET UNION CITY, TN. 38261
- 6. Bids are to be received by Sept. 27, 2016 at 11 a.m.
- 7. Bids will be opened immediately thereafter, at the above location.
- 8. The owner retains the right to reject any or all bids,
- 9. It is the intent of the owner to award this project to the lowest reasonable bidder, provided the bid has been submitted in accordance with the requirements of this document, is judged to be reasonable, and does not exceed the funds available for this project.
- 10. Bids are to be signed by persons legally authorized to bind the bidder to a contract.

INSURANCE

The successful bidder shall purchase and maintain insurance for the protection from claims which may arise out of or the result from the contractors operation as part of this project, whether such operations be by the contractor or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

1. Claims under workers or workmen's compensation, disability benefit or other similar employee benefit act.

2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the contractors employees

3 .Claims for damages because of bodily injury, sickness or disease or death of any person other than the contractors employees

4. Claims for damages insured by usual personal injury liability coverage which are sustained by any person as a result of an offense directly or indirectly related to the employment of such persons by the contractor or by any other person

5. Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The insurance required above shall be written for not less than any limits of liability required by law.

GENERAL

The owner shall supply necessary water and electricity for installation. The owner shall permit the use of toilet and wash-up facilities.

GENERAL CONDITIONS

OWNER: The owner is the person or entity identified as such in the owner-contractor agreement and is referred to throughout as if singular in number and masculine in gender. The term owner means the owner or his authorized representative.

The owner shall furnish information or services under the owners control with reasonable promptness to avoid delay in the orderly progress of the work.

If the contractor fails to correct defective work or persistently fails to carry out the work in accordance with the contract documents, the owner, by written order signed personally or by an agent of owner, may order the contractor to stop work, or any portion thereof, until cause of such order has been eliminated.

If the contractor defaults, or neglects to carry out the work in accordance with the contract documents and fails within seven days after receipt of written notice from the owner to commence and continue such corrections, the owner may make good such differences. In such case an appropriate change order shall be issued deducting from payments then and thereafter due the contractor the cost of correcting such deficiencies.

The contractor is the person or entity identified as such in the owner-contractor agreement and is referred to throughout the contract documents as if singular in number and masculine in gender. The term contractor means the contractor or his authorized representative.

Unless otherwise provided in the contract documents, the contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery,

transportation, and other facilities and services necessary for the proper execution and completion of work

The contractor shall at all times enforce strict discipline and good order among his employees, in particular while children are present.

The contractor warrants to the owner that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality. The warranty period shall be for one year from the acceptance of the completed work. All extended warranties offered by the manufacturer shall be effective until such limits expressed by the manufacturer have expired.

The contractor shall pay all sales, consumer, use, and other similar taxes for the work or portions thereof.

The contractor, upon being awarded the contract, shall submit for the owner's information an estimated progress schedule for the work.

The contractor shall be responsible for all cutting, fitting, or patching that may be required to complete the work or to make its several parts fit together properly.

PROTECTION OF PERSONS AND PROPERTY

The successful contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to:

- 1. All employees on the jobsite
- 2. All the work, all materials, and equipment to be incorporated therein.
- 3. All other employees, students, and guest at the job site.
- 4. Other property at the site or adjacent thereto.

QUALIFICATIONS:

"Contractor shall comply with Public Chapter 587 of 2007, as codified in Tennessee Code Annotated Section 49-5-413, which requires all contractors to facilitate a criminal history records check conducted by the Tennessee Bureau of Investigation and the Federal Bureau of Investigation for each employee prior to permitting the employee to have contact with students or enter school grounds when students are present."

QUALITY ASSURANCE

The contractor shall have the experience of at least three (3) acceptable jobs in the United States within the past five (5) years. This work shall be in locations and conditions similar to those at Obion County Schools.

The contractor shall employ only qualified and experienced workers skilled in the work required for this project.

CLEANUP

Refuse and debris accumulated from work is required as part of this project, shall be regularly removed from the job site by the contractor and before final acceptance of this project by the owner.

Successful bidder will be responsible for removal and proper disposal of any existing equipment being replaced, unless otherwise notified in writing by the owner.

WARRANTY

The Contractor shall provide a minimum of 1-year warranty, commencing with the date of final acceptance.

The warranty coverage shall not be pro-rated or limited to the amount of usage. The warranty submitted must have the following characteristics:

- 1. Must warrant materials and workmanship
- 2. Must warrant that the materials installed meet or exceed the product specifications
- 3. Must have provisions to either make a cash refund or repair or replace such portions of the installed equipment materials that are no longer serviceable to maintain serviceable and useable equipment.
- 4. Must be a warranty from a single source covering workmanship and all selfmanufactured or procured materials.

TECHNICAL SUPPORT

The successful bidder shall provide a toll-free line for technical support at no additional charge to the Obion County Schools during the warranty period. Bidder is required to provide 48 hour response time on any problems that may occur with the digital video server, cameras, computers, servers, switches, network cabling and camera cabling.

SUBMITTALS

Submit with bid:

- 1. Manufacturers data certifying compliance with these specifications
- 2. Certified list of existing installations, including owner representative and telephone number, attesting the compliance with quality assurance information.

Submit upon notice of award

- 1. A complete list of suppliers and sub-contractors, especially if suppliers are different than those specified.
- 2. Copies of insurance certificates
- 3. Verification of compliance with TCA 49-5-413

UTILITIES

The successful bidder shall be responsible for the location of all utilities. Any utilities that have to be re-located or repaired as a result of this contract will be the responsibility of the contractor. The Board of Education shall be held harmless of liability in case of any damages.

OUALITY STANDARDS OF INSTALLATION

Upon completion of project, representatives of the Owner, Contractor, and Manufacturer prior to acceptance by the owner shall inspect the installation

The use of "Brand names, Trademarks, and Professional Services" is to establish a minimum standard of quality.

CHANGES IN WORK

The owner may, at any time prior to final acceptance, request changes in the work scope at an agreed upon price. Price is to include labor/materials and may reflect an additional or deduct in price. Change is to be supported by an appropriate change order.

CODE COMPLIANCE

All work performed under this scope must comply with all Federal, State, and Local codes. This compliance is to include but not limited to, IBC, FCC; NEC; NFPA; LIFE SAFETY and TOSHA. All rules and regulations are subject to the interpretation of the authority have jurisdiction.

Any re-work required in-order to comply with these codes shall be performed at the bidder's expense. No change orders or additional charges will be accepted by the owner.

PAYMENT OF CONTRACT

The owner upon final acceptance of the project by the owner will pay a payment of 100% of the contract amount to the contractor

No partial payments for labor or material will be made on this project.

SPECIAL REQUIREMENTS

The operations performed under this contract shall be closely scheduled, coordinated and conducted in such manor and sequence to cause the least interference with normal flow of traffic. Work is not to inhibit the regular operations of school bus traffic unless coordinated with the owner and is to maintain proper access for any emergency and utility personnel.

ACCESS TO JOB SITE

The owner will designate to the contractor means of access to the job site and for vehicle parking. The contractor shall instruct his personnel, sub-contractors and vendors accordingly.

Equipment and supplies may be stored at the job site in an area designated by the owner. The owner will not be responsible for the security for materials stored on the job site and will not be responsible for any damages to materials or equipment used in the scope of work.

Any damages to the ground shall be corrected to the satisfaction of the owner.

SCHEDULE

Upon notice of award, successful bidder is to supply a complete schedule for the scope of work.

COMPONENT SPECIFICATIONS

IP Video Input:	32-ch
Two-way audio input:	1-ch, BNC (2.0 Vp-p, 1 kΩ)
CVBS Output:	Resolution: 704×576(PAL); 704×480(NTSC)
HDMI Output:	1-ch, resolution: 1920 × 1080P / 60Hz, 1600 × 1200 / 60Hz, 1280 × 1024 / 60Hz, 1024 × 768 / 60Hz
VGA Output:	1-ch, resolution: 1920 × 1080P / 60Hz, 1600 × 1200 / 60Hz, 1280 × 1024 / 60Hz, 1024 × 768 / 60Hz
Recording Resolution:	6MP/5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF
Audio Output:	2-ch, BNC(Linear Electrical Level, 600Ω)
Synchronous Playback:	16-ch 4CIF
Playback resolution:	5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF
Capacity:	4TB capacity for each disk minimum
SATA:	8 SATA interfaces
eSATA:	1 eSATA interface
Serial Interfaces:	1 RS-232, 1 RS-485 for PTZ control, 1 RS-485
USB Interface:	3, USB2.0
Alarm In:	16
Alarm Out:	4
Network bandwith:	Up to 200Mbps input, 160Mbps output, up to 128 network streams
Dual network interface:	10M / 100M / 1000M self-adaptive Ethernet interface, dual IP, load balancing, network redund.
Power Supply:	100~240 VAC, 6.3A, 50~60Hz
Consumption:	≤45W
Working Temperature:	-10°C ~ +55°C (14 °F ~ 131 °F)
Working Humidity:	10% ~ 90%
Chassis:	19-inch rack mountable 2U chassis
Dimension:	445 × 470 × 90 mm (17.52" ×18.5"× 3.54")
Weight(without HDD):	\leq 8 kg (17.64 lb) (without hard disk or DVD-R/W)

32 CHANNEL NETWORK VIDEO RECORDER 28TB Hard drive

NETWORK VIDEO MANAGEMENT SOFTWARE

LIVE VIEW

Multi-screens for main view and screen can be separated by dragging the tab Picture capture and real-time recording in live view mode Digital zoom Channels can be managed by group Cycling live view Easy configuration of brightness, contrast, saturation and hue parameters. Record file and capture pictures are easily managed Instant playback functions enables the quick switch of the live view and playback Two-way audio PTZ control full-function remote PTZ and lens control Flexible patrol and pattern settings Record Graphically recording schedule Variety of recording types (event and normal) Remote control the recording on the device side Configurable recording schedule template Distributed PC NVR deployment and management Pre-allocate hard disk for recording

VIDEO PLAYBACK

Record files searching by channel, time, event; fast forward play and single frame play Resume function for disconnected video channels; Filter the search result by record types Locate with processing bar exactly Multi-screen playback simultaneously Capture pictures when playback; Download data when playback Clip record file when playback; Volume control during playback Smart searching for event record when playback

USER MANAGEMENT

Client user of management; Channel-detailed permission control; Three user management levels Functions description

DEVICE MANAGEMENT

Supports DVR/DVS/IPC/IP Dome/ Decoder/NVR connection Adding and deleting device and remote device parameters configuration Search the active on-line devices; Device adding by domain name

LOG MANAGEMENT

Client log query; Remote device log query and back-up; Backup client logs; Check log files

ALARM

Provide multiple alarm types; including HDD full alarm, HDD error alarm; video loss alarm, Video tamper alarm, motion detection alarm, I/O alarm, server status abnormal alarm, etc.

VIDEO WALL

Video wall multiple output mode; Adding decoding streams by dragging mouse

E-MAP

E-Map eagle view operation; parent map and child map function to link the map Locate camera position by dragging channel icon. Alarm information and event image display on the map

OTHERS

Multi-screen display, manual lock screen, display system status (CPU, time_ Configuration files import/export; Display information of channel

Vandal proof IP66 3 Megapixel color fixed lens network dome camera (30 ea. SFHS, 30 ea	•
OCCHS)	

Image Sensor:	1/3" Progressive Scan CMOS
Minimum Illumination:	0.19 lux @F2.0, AGC ON 0 lux with IR
Shutter Time:	1/30s ~ 1/100,000s
Lens:	4mm @F2.0, angle of view: 75.8° (2.8mm, 6mm, 12mm optional)
Lens Mount:	M12
Day& Night:	True
Digital Noise Reduction:	3D DNR
Wide Dynamic Range:	Digital WDR
Video Compression:	H.264/M-JPEG
H.264 Compression Profile:	Main profile
Bit Rate:	32 Kbps~16Mbps
Dual Stream:	Yes
Max Image Resolution:	2048×1536
Frame Rate:	60Hz: 15fps(2048 x 1536), 30fps(1920 × 1080),30fps(1280 x 720)
Image Settings:	Sat, bright, contrast adjust through client soft or web browser
BLC:	Yes, zone configurable
Network Storage:	NAS
Alarm Trigger:	Motion detection, tampering alarm, network disconnect, IP address conflict, storage full, storage error

Protocols:	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, UPnP, ICMP,IGMP,SNMP, FTP, 802.1X, QoS, HTTPS
System Compatibility:	ONVIF, PSIA, CGI
General Functionalities (Security):	Three-level user authentication, password authorization, HTTPS and SSH certificate, IEEE802.1X, basic and digest authentication, watermark, IP address filtering, log-in lockout
Communication Interface:	1 RJ45 10 M / 100 M Ethernet interface
Power Supply:	12 V DC ± 10%; PoE (802.3af)
Power Consumption:	Max. 5W (7W with ICR on)
Working Temperature (Operating Conditions):	-30 °C –60 °C (-22 °F–140 °F) Humidity 95% or less (non-condens)
Impact Protection:	IEC60068-275Eh, 50J; EN50102, exceeding IK10
IR Range:	approx 10 to 30 meters
Dimensions:	Φ 111 × 82 mm
Weight:	500g (1.1 lbs)
Ingress protection:	IP66 / IK10

Image Sensor:	1/3" Progressive Scan CMOS
Minimum Illumination:	0.19 lux @F2.0, AGC ON 0 lux with IR
Shutter Time:	1/30s ~ 1/100,000s
Lens:	2.8mm-12mm Varafocal Lens
Lens Mount:	M12
Day& Night:	True
Digital Noise Reduction:	3D DNR
Wide Dynamic Range:	Digital WDR
Video Compression:	H.264/M-JPEG
H.264 Compression Profile:	Main profile
Bit Rate:	32 Kbps~16Mbps
Dual Stream:	Yes
Max Image Resolution:	2048×1536

Vandal Proof IP 66 3 Megapixel Varifocal Lens Color network dome camera (2 EA. SFHS)

Frame Rate:	60Hz: 15fps(2048 x 1536), 30fps(1920 × 1080),30fps(1280 x 720)
Image Settings:	Sat, bright, contrast adjust through client soft or web browser
BLC:	Yes, zone configurable
Network Storage:	NAS
Alarm Trigger:	Motion detection, tampering alarm, network disconnect, IP address conflict, storage full, storage error
Protocols:	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, UPnP, ICMP,IGMP,SNMP, FTP, 802.1X, QoS, HTTPS
System Compatibility:	ONVIF, PSIA, CGI
General Functionalities (Security):	User authentication, watermark
Communication Interface:	1 RJ45 10 M / 100 M Ethernet interface
Power Supply:	12 V DC ± 10%; PoE (802.3af)
Power Consumption:	Max. 5W (7W with ICR on)
Working Temperature (Operating Conditions):	-30 °C –60 °C (-22 °F–140 °F) Humidity 95% or less (non-condens)
Impact Protection:	IEC60068-275Eh, 50J; EN50102, exceeding IK10
IR Range:	approx 10 to 30 meters
Dimensions:	Φ 111 × 82 mm
Weight:	500g (1.1 lbs)
Ingress protection:	IP66

CABLE DROP (32 EA. SFHS, 30 OCCHS) All cable is to be Cat. 6 network drops for Network Video Recorders

SCOPE OF WORK

Work included in this section shall consist of furnishing all labor, tools, equipment supplies, transportation, sub-contract labor, equipment, training, materials, and 1-year complete warranty necessary to install in place all VIDEO SYSTEM UPGRADE equipment as indicated in these specifications.

Location of work OBION COUNTY CENTRAL HIGH SCHOOL 528 Highway 51 North Troy, Tennessee 38261

SOUTH FULTON MIDDLE/HIGH SCHOOL 1302 John Jones Parkway South Fulton, Tennessee

The successful Bidder shall provide all equipment is required to install a video system upgrade. Other brands of equipment will be considered but must be equal to the components currently being used or specified by the School system.

OBION COUNTY CENTRAL HIGH SCHOOL

It is the intent of the Board of Education to complete the conversion from the existing analog system to a digital format system. This will require installing a total of 30 (thirty) camera's. 24(twenty four) are to be replaced in the career center addition, 4 (four) are to be replaced in section "E" of the original school (2nd floor), and the addition of two camera's at the two main entrances. Site map available for review.

SOUTH FULTON MIDDLE/HIGH SCHOOL

It is the intent of the Board of Education to completely upgrade the existing analog to a digital format system. This will require the change out of 26 (twenty six) camera's, plus the addition of 6 (six) new locations. Site map available for review.

System being bid must have the capability of monitoring, and storing video from 64 sources. All equipment is to be used "in house" while allowing access from a remote location.

The Obion County Schools will provide all Patch Panels and switches for the IP network camera system. Obion County will setup a separate network or VLan existing network to accommodate IP network camera system.

The Obion County School system will be purchasing network IP components throughout the year of this bid. We will be gradually replacing our existing cameras with network IP cameras as funds become available. **Prices must be guaranteed for a period of one year**.

Bidder is required to visit each school site and be familiar with facilities before bidding on this project. Bidder is required to deliver, setup, install and provide a minimum of 4 hours training on each network video system that has been installed.

Any questions and/or clarifications may be addressed to or to schedule a site visit

Please contact:

Phil Graham Maintenance Supervisor Obion County Board of Education Phone (731) 536-4226 or 731.446.2139 grahamp@k12tn.net

Bid Form

Date:

- To: Obion County Board of Education 1700 N. Fifth St. Union City, Tennessee 38261
- From: (Name of Bidder) (Address of Bidder) (City, State, and Zip code) (Phone and fax numbers)
- For: Video system upgrades Obion County Schools Obion County Board of Education Union City, Tennessee

The undersigned, as Bidder, hereby declares that the only person, or persons, interested in the Bid as principal or principals, is or are, named herein and that no other person than herein mentioned has any interest in this Bid or in the contract to be entered into; that this Bid is made without connection with any other person, company or parties, making a bid, and it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the places where the work is to be done, that he has examined the drawings and the project manual for the work and the Bidding Documents relative to the Work to be performed and that this bid is based upon thereon, without exception.

The Bidder proposes and agrees, if this Bid is accepted, to contract with the Owner in the form of contract AIA Document A101, Published by the American Institute of Architects for Contractor and Owner, furnishing thereby all services, labor, and materials to complete the construction of the project in full and complete accordance with the noted, described, and reasonably intended requirements of the Contract Documents.

The Undersigned hereby affirms and states that the prices quoted herein constitute the gross total cost for the work involved in the respective items and that this cost also includes taxes, insurance, royalties, transportation charges, use of tools and equipment, superintendents, overhead, profits and other work, services, and conditions necessarily involved in the work done and the materials furnished, in accordance with the requirements of the contract.

The Bidder agrees that his bid may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Bids shall be filled in by typewriter or manually in ink.

Acknowledge receipt of the following Addenda to the Contract Documents

Addendum #1 _____ date_____

The bids shall be submitted in **duplicate**. All bids shall be enclosed in a sealed envelope. The envelope shall be addressed to the owner, and identified with the words **"BID ENCLOSED, VIDEO SYSTEM UPGRADES, Obion County Board of Education"** plainly written on the face thereof. **Bids must be submitted by Sept. 27, at 11 am.**

Bidder further certifies that: (One must be checked)

_____ All specifications are met as prescribed herein.

_____ Alternate items and specs are attached and described as required herein.

OBION COUNTY CENTRAL HIGH SCHOOL The bidder agrees to perform all of the work described in the bidding documents for a lump sum price of: dollars. (written amount) \$ (numerical amount) SOUTH FULTON MIDDLE/HIGH SCHOOL The bidder agrees to perform all of the work described in the bidding documents for a lump sum price of: dollars. (written amount) \$ (numerical amount) VOLUNTARY ALTERNATE #1 Voluntary Alternate #1 Add \$_____ Deduct \$_____ Base Bid \$_____ (description of alternate) (written amount) \$ (numerical amount)

VOLUNTARY ALTERNATE #2

 Voluntary Alternate #1
 Add \$_____
 Deduct \$_____
 Base Bid \$______

(description of alternate) (written amount)

> \$ (numerical amount)

ADDITIONAL CAMERA MAY BE PURCHASE FOR \$_____ea.

ADDITIONAL CABLING AND SET-UP FOR \$_____ea.

The Bidder acknowledges by his signature below that the Owner reserves the right to reject any and/or all bids, especially any bids that appear to be irregular in nature or inconsistent in content. The bidder further acknowledges that the Owner has the right to evaluate bids and to accept any bid or bids which, in his opinion, may be in His best interest.

By: _____

(signature)

Title:_____

Date:_____

Firm Name:

State of Incorporation

Contractors' License No.: CCTV License No. Tennessee ORI No. **Expiration Date:**

OBION COUNTY BOARD of EDUCATION VIDEO SYSTEM UPGRADE OBION COUNTY CENTRAL HIGH SCHOOL SOUTH FULTON MIDDLE & HIGH SCHOOL

SPECIFICATION PACKAGE

The Obion County Board of Education is now accepting bids to upgrade the existing video systems at Obion County Central High School and South Fulton Middle & High School. Complete specifications are as follows:

ADDENDUM #1

Under component specification "CABLE DROPS" For South Fulton Middle/High School only Change number of drops from 32 to 34. Additional cable drops required from NVR to closest switch location. One to be used for the IP camera network. One to be used for remote access network.