Dear Gentlemen:

The Cartersville School System invites you to submit a proposal for the purchase of **Cartersville Primary School Network based paging, intercom, bell, audio enhancement system, recording**

Return your sealed pricing bid clearly marked **on the outside of the envelope or package to:**

Dr. J. Howard Hinesley, Superintendent

Cartersville School System

RFP # 9400-227-205 ENCLOSED

P.O. Box 3310, 15 Nelson Street

Cartersville, Georgia 30120

The proposal is due no later than 2:00 p.m., Monday, March 27, 2017.

The Cartersville School Board reserves the right to accept and/or reject any and all bids.

We invite your participation.

Sincerely,

Richard Dyke

Director of Finance

Enclosures

Please include this cover sheet as (page 1) of your proposal

PROPOSAL FORM

Cartersville School System
P.O. Box 3310
15 Nelson Street
Cartersville, Georgia 30120

Gentlemen:

We have carefully examined and fully understand the Instructions to Bidders and other requirements indicated in the specifications as prepared by you.

We propose to enter into a contract to furnish **Cartersville Primary School Network based paging, intercom, bell, audio enhancement system, recording** as specified at the price quoted. RFP # 9400-227-205

Total price of all requested items:

Approximate date of delivery:

_____
Name of Company

_____
Signature of Company Representative Authorized to Submit this Proposal

_____
Printed Name of Representative

_____
Business Address/ Street, City, State, Zip Code

_____ _____ _____
Phone Number Fax Number Email

Office use only

Request for Proposal
Cartersville Primary School
Network based paging, intercom, bell, audio enhancement system, recording

February 27, 2017

Prepared by:
Cartersville City Schools Technology Department
310 Old Mill Road
PO Box 3310
Cartersville, GA 30120

RFP #9400-227-205

INSTRUCTION TO BIDDERS

1. Proposals are due no later than 2:00 PM., Monday, March 27, 2017.

2. Proposals must be submitted on the forms enclosed. Bidders may attach other appropriate information to best evaluate the proposal.

3. Proposals must meet the requirements relating to any and all Georgia Department of Education guidelines.

4. There will be a **mandatory** pre-bid meeting held on Tuesday, March 14, 2017 @ 2:00 PM EST. at the Cartersville School System's Central Office located at 15 Nelson Street, Cartersville Georgia.

5. The Cartersville School Board reserves the right to accept or reject any and all proposals.

6. Work is to begin no earlier than May 20, 2017 and must be completed no later than July 24, 2017.

7. Payment will be made within 30 days of the completion of project.

8. Contractor must remove and dispose of all trash/ debris generated during the installation of equipment.

9. Contractor is responsible for replacing any and all ceiling tile or grid that is damaged as a result of the installation of equipment.

10. Contractor must provide a copy of **Certificate of Liability Insurance, E-Verification number, Workers Compensation Insurance and a W-9 form.**

OVERVIEW OF PROJECT

The Cartersville City School System is seeking qualified bids to provide the following:

CLASSROOM EQUIPMENT FOR NETWOKRED BASED PAGING, INTERCOM, BELL SOUND DISTRIBUTION AND CLASSROOM SOUNDFIELD ENHANCEMENT SYSTEM WITH TEACHER PERSONAL ALERT ALARM SYSTEM SUPPORT WITH 24/7 RECORDING & EDUCATIONAL RECORDING

Cartersville Primary School campus will begin a total rewire on May 20, 2017 and winner of this bid must work alongside general contractor during rewire of electricity and low voltage.

All installations must be complete and functioning no later than July 24, 2017.

TIMELINE

Issue RFP/Publish on Website	February 27, 2017
Proposals Due	March 27, 2017 2:00 pm
Tentative Date Vendor Selection	April 10, 2017
Projected completion	July 24, 2017

MANDANTORY PRE-BID MEETING

There will be a **mandatory** pre-bid meeting held on Tuesday, March 14, 2017 @ 2:00 PM EST. at the Cartersville School System's Central Office located at 15 Nelson Street, Cartersville Georgia.

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK:

A. Provide a combined educational presentation system, consisting of a classroom sound amplification system (CSAS), a teacher personal alert security system, and seamless integration with network based paging, intercom and bell system with all necessary materials and labor to fulfill the requirements and the intent of the specifications to form an integrated classroom technology, building wide communications, 12 Mega Pixel classroom 360-degree camera and alert system. Each system shown in the plans, in classrooms or any teaching station shown, is a complete distinct and individual system as specified herein.

B. Equipment shall be furnished and installed as specified unless written approval for substitutions is obtained from the engineer. Catalog sheets of all proposed equipment shall be provided with the proposal.

C. All electronic equipment shall be new and of current model. Systems shall be guaranteed for a period of one (1) year from the date of completion against defective materials, inferior workmanship or improper installation adjustment. Guarantee shall cover all parts and labor.

D. The contractor shall furnish the owner with three (3) complete sets of service and operating literature.

E. All equipment shall be installed by a communications contractor with at least five (5) years' experience installing similar systems. The contractor shall be the factory authorized distributor for the geographical area and shall maintain complete installation and service facilities.

F. All work shall be done by expert technicians qualified in the field with knowledge of systems and detailed requirements for fine-tuned performance. Workmanship shall comply with standard professional broadcast practice concerning grounding, shielding, cable dressing, cable termination and equipment mounting. All mounting holes shall be utilized for any equipment.

G. No amplifier shall be connected to a load that exceeds 90% of the rated output.

H. Systems shall function without audible distortion, hum, buzz or rattle under normal operating conditions. Equipment shall be installed plumb and square.

I. Cables shall be marked with commercial wire markers and shall be designated with the architectural room number or description of the area served by that circuit.

J. Commissioning of each system shall be provided by the manufacturer. Each system shall be commissioned to ensure that it is fully operational, and fully integrated into a SAFARI Montage system.

K. All equipment shall be installed as shown on the drawings and in strict accordance with the specifications. Any errors, conflicts, or omissions discovered in the specifications or the drawings shall be submitted in writing to the engineer for clarification. Installation shall not proceed until questions have been resolved.

1.2 QUALIFICATIONS:

A. Any system and/or equipment proposed as an equal to that specified must be proven to conform to the standards established herein. The contractor must obtain the architect's or engineer's approval in writing, prior to bidding equipment other than that specified. The manufacturer's name, model numbers and three (3) copies of shop/working drawings complete with catalog sheets, technical and installation data shall be submitted for approval.

B. Qualified respondents must submit proof of certification and qualifications, including a current authorization letter from each manufacturer dated after the release of this bid, personnel resume's and copies of relevant certificates. Required Certifications to be considered:

1. Audio Enhancement Authorized Dealer
2. SAFARI Montage Authorized Dealer
3. SAFE System Certified Installer
4. SAFARI Montage Installer Certification
5. SAFARI Montage Certified Instructional Trainer
6. RCDD
7. CTS
8. VIEWpath Certified Installer

1.3 SUBMITTALS:

A. PRODUCT DATA:
1. Submit manufacturer's data sheet including specifications, installation instructions, and general recommendations for each piece of equipment specified.

B. SHOP DRAWINGS:
1. Submit dimensioned drawings and wiring.

PART 2 – PRODUCTS

2.1 GENERAL

A. The system shall provide sound enhancement to amplify a teacher's voice to overcome the deleterious effects of background noise, reduce teacher fatigue and assure speech clarity of class presentation and participation. The system shall also provide an inconspicuous personal alert for the teacher, for future implementation, enabling her to notify a central location during an emergency situation. The classroom system shall also integrate with the schools' network based building wide communication system. This shall be done via either directed UDP, SIP based protocol, or multi-cast IP based communications. Intercom communications in the classroom must be full duplex. The building wide communication, local amplification and teacher personal alert functionality must be provided in a single integrated box. Additionally, the system must provide an infrared wireless system with no channel restrictions, no interference, a room contained signal and inputs for (2) microphones, and up to five multi-media sources as well as an output for personal FM systems. Provide the ability to power up to eight speakers. System includes speakers, cables, microphones, transmitters, receivers, nickel metal hydride rechargeable batteries, chargers, etc., as required for a complete operational system.

B. A Classroom Camera providing a 12 mega pixel 360-degree view of the classroom shall be provided, with the capability of being recorded 24/7. The camera shall be capable of providing both H.264 and H.265 encoding formats with AAC audio.

C. Provide a complete system by Audio Enhancement. Substitutions are not permitted.

2.2 CLASSROOM SOUND AMPLIFICATION AND BUILDING COMMUNICATION SYSTEM (CSAS) EQUIPMENT:

A. Receiver/Amplifier (Audio Enhancement, MS450):

B. Provide a Receiver/Amplifier with ability to provide functions described above with performance as follows:

1. Audio Power: 32 watts RMS power amplifier
2. Full Duplex, Hands Free communications on Intercom Call
3. Secondary amplifier powered only by the POE power source for emergency paging applications
4. 1% percent THD across full frequency range of amplifier.
5. Frequency Response: 40 Hz to 20 kHz
6. Power Requirements: 24VDC 2.5 Amp
7. Infrared Receiving frequencies: 2 selectable frequencies from 2.00 MHz to 4.00 MHz
8. Signal-to-noise: >65dB
9. External Sensor(s) as required
10. Mounting Bracket as required
11. Feedback Blocker
    a. The system shall have the ability to actively control feedback. This shall be done via an analog circuit that provides up to five active filters to control specific frequencies,
    b. The Feedback Blocker shall also have the ability to lower the overall of the system by up to 6dB, during a user error situation where the overall system gain is manually turned up too high
    c. The Feedback Blocker system shall automatically remove the filtering upon resolution of the user initiated error condition
    d. The Feedback Blocker shall be of an analog design – in order to avoid the detrimental effects of digital sampling, only analog systems shall be considered in order to implement this feature.
12. Controls:
    a. The primary control of the system must be done through the teacher microphone or other remote control device. Any system that utilizes front panel controls will not be considered, because the system will be integral to the building wide communications system.

b. The following functions must be available via USB connection for setup during installation
    i. Input Control for multi-media sources and mixed IR source
    ii. Equalizer Controls
    iii. Discreet Output volume controls for each input

13. Connections – The following connections must be available:
    a. 5 Multi-Media inputs
        i. 4 on the MS450 and 1 on the Satellite Infrared receiver system
    b. Dedicated Line output
    c. 2 independent speaker connections
        i. The system must provide a connection designated as the speakers that will be powered during a disruption in the mains powered power supply.
    d. Network Connection
        i. The system must have a network connection with POE power.
        ii. POE must be present on the system in order to provide power for the amplifier during a power emergency
        iii. The system shall have the ability to switch automatically from a mains powered amplifier, to the amplifier powered by POE in order to insure operation so the system 100% of the time.

14. Infrared level control of microphone level from the teacher microphone, via the infrared wireless system must be provided.
15. System must have the ability to decrease the level of the multi-media presentation when the teacher speaks. This must be done actively, only quieting the multimedia when the teacher is actually talking into the microphone. (Teacher Voice Mute)
16. Integrated Network Based Communications
    a. The System must support the following protocols:
        i. Directed UDP
        ii. Unicast Audio
        iii. Multi-Cast Audio
        iv. SIP
    b. The system must have integrated SIP communications and be able to communication bi-directionally with any VOIP communications system that follows the standard SIP protocols.
    c. The system shall also have the ability to operate with multi-cast IP messages as well.

C. INTEGRATED INFRARED SENSOR / RECEIVER – IR SATELLITE:

1. The Integrated Infrared Sensor/Receiver will be an independent system, with all necessary electronics to support the infrared receiving functionality mounted in the ceiling. The sensor/receiver will be connected to the amplifier through a universal twisted pair cable, using balanced audio connections. Power for the infrared sensor receiver will be provided through the same cable as the balanced audio connections.
2. The sensor receiver will provide the following functionality. These features must be included on board the sensor/receiver, and not require any external support to perform these functions.
    a. Dual Channel Infrared reception
    b. Auxiliary Input
    c. Remote control of both infrared channels, and the auxiliary input from the teacher microphone
    d. Public address system mute terminals – This is a contact closure connection when closed, it mutes the audio output from the sensor/receiver
    e. Advanced Feedback Blocker
        i. The system shall have the ability to actively control feedback. This shall be done via an analog circuit that provides up to five active filters to control specific frequencies,
        ii. The Feedback Blocker shall also have the ability to lower the overall of the system by up to 6dB, during a user error situation where the overall system gain is manually turned up too high
        iii. The Feedback Blocker system shall automatically remove the filtering upon resolution of the user initiated error condition
        iv. The Feedback Blocker shall be of an analog design – in order to avoid the detrimental effects of digital sampling, only analog systems shall be considered in order to implement this feature.
    f. Audio Output
        i. The system shall have the ability to provide both 3 independent audio signals (Ch 1, Ch 2, and Aux) or with the change of a DIP switch, provide a mixed signal.
        ii. The system shall provide an audible tone when the remote volume control on the teacher microphone is used. It will also provide a low & high output level, and an on/off selection via a DIP switch setting
        iii. The system shall have the capability of attenuating its output level by -10 dB with a DIP switch setting
    g. Emergency Alert Contacts
        i. The system shall provide a trigger signal when the teacher presses and holds a button on her transmitter for more than 2 seconds.
        ii. The system shall be capable of providing a visual

indication of 3 red LED's when the teacher initiates a trigger signal

iii. The system shall also be capable of receiving a trigger acknowledgement signal back from an external source, and altering the visual indicator from 3 red LED's to 2 Green and 1 red LED.

h. Control System Integration

i. The system shall have on board the capability of being controlled via RS-232 protocol.

ii. The system shall also have the capability of broadcasting RS-232 commands when the teacher presses the up/down volume controls on their microphone

i. Power Requirements: 24Vdc, Power Supplied from the amplifier.

j. Receiving Frequencies: 2 selectable frequencies: 2.3 MHz and 2.8 MHz.

k. Receiver Type: Tuned Radio Frequency (TRF)

l. Signal-to-noise: >80Db.

m. External Sensor(s}

i. The system must be capable of operating in a standard classroom without the addition of any external sensors

ii. For larger spaces, the system must be capable of support up to 4 additional infrared sensors

n. Mounting Bracket as required

o. Controls: System must have available the following controls

i. Channel 1 Volume Control – Fully controllable from the teacher microphone remotely through the Infrared system

ii. Channel 2 Volume Control – Fully controllable from the teacher microphone remotely through the Infrared system

iii. Auxiliary Input Volume Control – Fully controllable from the teacher microphone remotely through the Infrared system

D. 4-Channel Body Pack Transmitter (Audio Enhancement Infrared Enhanced Teardrop Microphone):

1. Provide a 4-channel body pack transmitter with performance as follows:
2. Sub-carrier frequencies: 4 selectable frequencies from 2.00 MHz to 4.00 MHz
3. Audio distortion: <1.0% (±40kHz deviation @ 1kHz)
4. Integrated microphone.
5. Internal charger circuit.
6. Built-in infrared emitters.
7. Power button functionality

a. Power on – turns the microphone on when microphone is off and button is pressed
b. Mute – mutes the microphone when pressed and released once microphone is turned on
c. Power Off – push and hold to turn power off

8. Function (F) Button Features
   a. F2 Functionality – Provides security alert when button is pressed and held for more than 2 seconds
   b. F1 Functionality – Provides simple logic signal on F1 terminals on the back of the Ultimate IISE
9. External Inputs
   a. Provide an inputs for an external microphone
   b. Provide an input for a stereo auxiliary input (Mixed to Mono in microphone)
10. Microphone Element – The teacher microphone shall utilize a 10mm microphone element to insure optimum frequency response and maximum pickup of teacher's voice.
11. Power 1 - "AA" NiMH Batteries (Systems using 2 batteries will not be considered)
12. Provide remote volume control for the system from the teacher's transmitter
    a. Volume control via the infrared wireless microphone system to allow the teachers to remotely adjust their own volume level.
    b. Volume control for the other channel from the teacher's microphone
    c. Volume control for the auxiliary inputs
    d. 'F' (Function) Button – Provide remote control functionality that allows for enabling additional multi-use functions from the teacher microphone.
13. Smart Sensor Charging Circuit
    a. Charging circuitry in microphone must have the ability to sense what type of battery has been placed in the microphone. The charging circuitry must also carefully manage the charge and dis-charge cycles of the batteries to maximize battery life.
    b. A system that simply senses voltage present on a 3rd contract is not acceptable; the charging circuitry must be able to distinguish between NiMH, NiCD and Alkaline batteries.

E. 4-channel hand held transmitter (Audio Enhancement Infrared Handheld Microphone):

1. Sub-carrier frequencies: 4 selectable frequencies from 2.00 MHz to 4.00 MHz
2. Integrated microphone
3. Internal charger unit.
4. Power 1 - "AA" NiMH Batteries (Systems using 2 batteries will not be considered)
5. 1/8" (3.5mm) auxiliary input connection - Provide an input for a stereo auxiliary input (Mixed to Mono in microphone)
6. Operational Modes – the handheld microphone must be equipped with two

operational modes

a. Push-to-Talk Mode – the user simply depressed the power button to talk, and when released the microphone automatically turns off – this provides for a number of separate microphones to be used consecutively and greatly reduces the chance of channel interference

b. Power-On Mode – The user depresses the power button, and slide is vertically into the on position – this holds the microphone in the on state for continuous operation

7. Microphone Element – The Handheld microphone shall utilize a 10mm microphone element to insure optimum frequency response and maximum pickup of teacher's voice.

8. Smart Sensor Charging Circuit

a. Charging circuitry in microphone must have the ability to sense what type of battery has been placed in the microphone. The charging circuitry must also carefully manage the charge and dis-charge cycles of the batteries to maximize battery life.

b. A system that simply senses voltage present on a 3rd contract is not acceptable; the charging circuitry must be able to distinguish between NiMH, NiCD and Alkaline batteries.

F. EXTERNAL DOME SENSOR (Audio Enhancement Infrared Dome Sensor):

1. Power: Powered by receiver.
2. 360-degree Reception Angle, Ceiling mounted dome sensor.
3. Cable: Minimum 32.8' (10m), Co-Ax Cable (Provide Plenum rated only where required by code)
4. Mounting: Metal bracket.
5. Internal construction of diodes in 360-dgree sensor shall be lensed to provide superior infrared reception. Unlensed diodes shall not be considered.

G. Loudspeaker:

1. Provide complete distributed ceiling mounted speaker system (Metal back box, speaker, grill, etc.). Audio Enhancement Model CS-09, number as required (minimum 4, no cluster) with performance and safety features as follows:

2.

a. Frequency Range: 70 Hz to 15 kHz (-10dB)
b. Frequency Resp: 100 Hz to 14 kHz +/- 3dB
c. Power Handling: 50 Watts continuous
d. Driver type: 4 in.(102 mm) Cone
e. System type: Tuned and vented
f. Sensitivity: 88 dB 1 Watt/1 Meter.
g. Impedance: 8 Ohms nominal
h. Mounting: Integrated C-Clamp

i. Plenum rating: Speaker back can meet UL2043 criteria for plenum installation
j. Terminals: All metal spring terminals
k. Dimensions: Depth 5.8 in. (147.3 mm)
l. Grill Diameter: 8.5 in. Dia. (216 mm)
m. Mounting hole: 7.0 in. (178 mm)
n. Weight: 3.0 lbs. (1.36kg)

H. Bells, Paging Zone Management Head end (Audio Enhancement SAFE Commander software – Substitutions not permitted)

1. Provide a complete solution for managing bell schedules, organizing paging zones, and includes functionality to provide a stand-alone SIP based system when integration with phone system is not desired or possible
2. Provide a complete solution that is software based, which can be run on a local computer or server, and does not require any additional hardware at the head end, beyond access terminals such as client computers.
3. Provide a complete system that allows access through computers with both client and browser access
4. Provide a system which is Easy-to-use system for school bells, paging, intercom, and emergency notification.

a. Play school announcements, and music
b. Play scheduled audio and send live audio pages to PCs or Macs around your organization
c. Use network audio players to play scheduled audio and live pages in classrooms and other buildings
d. Send automated pages to phone-based paging systems
e. Send live pages for emergency notification to network audio players and client PCs and Macs
f. Send live pages and trigger emergency notifications from SIP phones
g. Support must be provided for SIP/Multicast Version for integration with SIP/2.0 compliant systems including 3CX, Asterisk, FreePBX, Cisco, Panasonic, Extreme Networks, Enterasys, Sangoma

2.3 TEACHER PERSONAL ALERT SYSTEM (BASIS OF DESIGN – AUDIO ENHANCEMENT SAFE SYSTEM)

A. SAFE System Controller (Audio Enhancement – SAFE Controller)

1. Provide a system administration and management appliance as part of the teacher personal alert and camera system. This appliance shall be powered solely by POE provided by the school's network. This will insure that the system will be maintained during a power outage based on the district provided uninterruptable power supplies.

2. The SAFE System Controller shall periodically pole every device which is part of the SAFE System. It shall monitor every device on a schedule not to exceed 200 seconds.
3. The SAFE System Controller shall maintain a log of all network transactions, including failed polling of a device.
4. The SAFE System Controller shall manage all network transactions regarding the SAFE System. The Controller shall be responsible for alerting the MS1000 when a SAFE Alert has occurred.
5. The SAFE System Controller shall provide a robust e-mail service, which will allow the unit to notify appropriate response personnel when an alert occurs, or when part of the SAFE System is offline.

B. Administration Notification Box (Audio Enhancement – MS-1000)

1. Provide a dedicated alert system for the front office of the school. This must be a standalone device, not part of another system. Provide a minimum of 1 system per building or as specified. All systems shall have the following features:
   a. Capable of receiving and distinguishing XML messages from every classroom alert system in the school
   b. Connections
      i. 24 Volts Power
      ii. Network Connection
   c. Controls
      i. Alarm Reset/Test Button
      ii. Up & Down arrow to scroll through alerts
      iii. Alarm Cancel
      iv. Dry Contract Relays
         1. Provide 3 double pole, double throw dry contact relays, which are activated upon receiving an alert message.
   d. Indicators
      i. Power – LCD Illumination
      ii. 2-Line LCD Display – Displays location and date/time of alert that is received
      iii. Audible Alarm
      iv. Visual Alarm (strobe)

2.4 CLASSROOM CAMERA

A. Provide a classroom camera with 360° monitoring a wide variety of transmission modes a super-wide-angle fisheye lens, 360° monitoring is possible with a single camera. The 360° camera shall include a wide variety of image capture modes that perform distortion correction:

1. Panorama,
2. Double Panorama,
3. Quad PTZ,
4. Single PTZ,
5. Quad streams (H.264/VGA).
6. Normal View

B. Educam Camera – Alarm Notification Interface (Audio Enhancement Educam360-A)

a. Additional Required Specifications:

i. 12M progressive scan CMOS
ii. Multiple H.264 and H.265 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by enhanced.
iii. AAC Audio Encoding Required
iv. Smooth PTZ operation without mechanical action
v. DWDR, Day/Night(ICR), 3DNR,ROI, AWB, AGC, BLC
vi. Built-in distortion correction function
vii. A fish-eye lens control function realizes intelligible screen operation intuitively.
viii. Privacy Zone can mask up to 4 private areas, such as house windows and entrances/exits.
ix. Must provide IR Emitters for providing IR light for low lighting situations
x. Alarm sources including 3 terminal input, VMD can trigger actions such as FTP image transfer, Email notification, Indication on browser, and Alarm terminal output.

2.5 NETWORK DVR VIDEO MANAGEMENT AND DISTRIBUTION SYSTEM: PROVIDE A COMPLETE SYSTEM BY AUDIO ENHANCEMENT. (AUDIO ENHANCEMENT VIEWPATH SYSTEM)

A. NETWORK DIGITAL VIDEO ENCODER

1. The system shall provide for Network Digital Video recording. Recording shall be both schedulable and on-demand. The on-demand recording shall be accomplished via one-button recording. Recording shall be automatically uploaded onto the video file server. A total of six or more simultaneous recordings are required.
2. The N-DVR shall record direct-input data streams from the classroom camera. Those recordings shall be catalogued and archived according to LDAP identification and user associations by group or school.
3. The N-DVR shall record a channel or direct data stream from the classroom camera, but allow restricted playback only to those users who initially requested

the recording.

4. The recordings and media artifacts of the N-DVR shall conform to the IMS Global standards for meta-data input. The media artifacts shall be transferrable to and usable by any IMS Global – Common Cartridge Compliant Learning Management System or Moodle.
5. The N-DVR recordings and media artifacts shall be automatically converted into a H.264/AAC hinted stream. The N-DVR shall be responsible for transferring this recorded media artifact to the primary Learning Object Repository. Of the recordings (data files) produced by the recording and storage process, at least one must be compatible for playback via any mobile platform.
6. The N-DVR shall facilitate various playback bit-rates of recorded artifacts. Retrieval and delivery of these artifacts shall be dependent on the user's login scenario – including LDAP credentials, presence within or outside of the local area network (LAN), whether or not the user is browsing on a mobile device and internal data throughput capabilities. The media playback bitrate of the recorded media shall also be selectable in order to accommodate network overhead concerns.
7. The N-DVR shall automatically create and assign a thumbnail image to visually represent the content of the recording.
8. All media artifacts and recordings (data files) from the N-DVR shall be assumable into the same meta-data infrastructure and provide for the same state standards and common core correlations as other media within the LMS.
9. Media artifacts and recordings (data files) produced by the N-DVR shall be editable and able to be segmented in order to highlight, tag and otherwise identify where key learning concepts exist within the recording. The complete N-DVR and recording management system shall allow teachers and end-users to integrate only those key learning concepts into a digitally managed scope and sequence.

B. Hardware Specifications

1. Server hardware changes often, the technical specifications listed below are considered minimum requirements.
   a. Technical Specifications – Management Server
      i. 2.4–2.7 GHz Quad-Core Intel® Xeon® Processor
      ii. 12 GB of RAM
      iii. Solid State Recording Drives
      iv. hot swappable hard drive bays
      v. Network: (2) 100/1000 Mb Network Port
      vi. Front-mounted connectors: 2 USB
      vii. Dimensions: (Determined by currently available technology)

   b. Technical Specifications – Six Stream NDVR (Must be capable of capturing a minimum of six (6) simultaneous network audio/video streams)
      i. 2.4–2.7 GHz Quad-Core Intel® Xeon® Processor

ii. 12 GB of RAM
iii. Solid State Recording Drives
iv. hot swappable hard drive bays
v. Network: (2) 100/1000 Mb Network Port
vi. Front-mounted connectors: 2 USB
vii. Dimensions: (Determined by currently available technology)

c. Technical Specifications – Twelve Stream NDVR (Must be capable of capturing a minimum of twelve (12) simultaneous network audio/video streams)
i. 2.4–2.7 GHz Quad-Core Intel® Xeon® Processor
ii. 12 GB of RAM
iii. Solid State Recording Drives
iv. hot swappable hard drive bays
v. Network: (2) 100/1000 Mb Network Port
vi. Front-mounted connectors: 2 USB
vii. Dimensions: (Determined by currently available technology)

d. Technical Specifications – Eighteen Stream NDVR (Must be capable of capturing a minimum of twelve (18) simultaneous network audio/video streams)
i. 2.4–2.7 GHz Quad-Core Intel® Xeon® Processor
ii. 12 GB of RAM
iii. Solid State Recording Drives
iv. hot swappable hard drive bays
v. Network: (2) 100/1000 Mb Network Port
vi. Front-mounted connectors: 2 USB
vii. Dimensions: (Determined by currently available technology)

C. Classroom audio video recording system
1. The recording system:
a. Will record both audio and video feed to a single file
b. Will allow the file to be saved automatically to the VOD system
c. Will utilize an IP based camera with the ability to control the PAN, TILT and ZOOM and the VOD system will be able to control the camera.
d. Allows for instant recording from the VOD interface
e. Allow for scheduled recording from the VOD interface
f. Allow individuals at the classroom level to control who may see the classroom video and audio stream.
g. Allows the person who initiates the recording to control access to the recorded video file.
h. Has the ability to record based on motion detection within the sight of the camera during non-school times.

2.6 INTERCOM & PAGING COMPONENTS

A. The following components should be provided in quantities based on the needs of the individual school. The contractor is responsible for performing a walk through, and recommending to the school district the appropriate number of each of the following items to create a complete & functional Intercom, Bells & Paging system.

B. Provide amplifiers for paging common zones, cabling and other accessories for a complete functional system. It is the intent of these specifications that a complete system will be provided.

C. Intercom Paging System Surface Ceiling Speaker (Audio Enhancement CS-70V)

1. The ceiling flush mounted speaker shall consist of speaker, 70 Volt Tap settings and round grille.
2. The speaker assembly, housing and hardware shall be electrically and acoustically matched for a frequency response of 60 Hz to 12 kHz.
3. The speaker element shall be cone type with 5 oz (142 g) ceramic magnet.
4. Maximum dimensions of the grille shall be: 13.0" (33.02 cm) diameter x 3.0" (7.62 cm) deep.
5. Shipping weight shall be approximately 3.75 lbs (1.7 kg).

D. Intercom Paging System Surface Wall Speaker:

1. Wall speaker shall consist of a speaker, volume settings and sloped baffle.
2. The speaker, housing and hardware shall be electrically and acoustically matched for a frequency response of 60 Hz to 12 kHz.
3. Operating temperature shall be -20 to + 55 °C (-40 to + 131 °F).
4. Maximum dimensions of the housing shall be 10.13" (25.73 cm) H x 12.31" (31.27 cm) W x 4.63" (11.75 cm) D.
5. Approximate weight is 4.25 lbs (1.91 kg).

E. Intercom Paging System Paging Horn:

1. Shall a weather-resistant, high efficiency reentrant type horn speaker.
2. Shall be equipped with an amplifier and externally accessible volume control.
3. Shall include an adjustable swivel base.
4. The frequency response shall by 275 Hz to 14 kHz.
5. Dispersion shall be 90° horizontal and 90° vertical.
6. Sound pressure level shall be 121 dB measured at 4 feet (1.22 m) on axis with an input to the amplifier module being -10 dBm at 1 kHz.
7. Distortion shall be less than 2.0% at rated output of 15 watts RMS.
8. Input impedance shall be 600 ohms nominal.
9. The amplifier shall operate on a -24 Vdc nominal, positive ground power supply.
10. Operating current shall be 900 mA at -24 Vdc
11. Operating temperature shall be -4 to 131 °F (-20 to 55 °C).
12. Operating humidity shall be 0-95% noncondensing.
13. Dimension of the horn shall be 8" (20.3 cm) W x 8" (20.3 cm) H x 9:" (22.9 cm) D.
14. Weight shall be approximately 4.0 lbs (1.8 kg).

F. NETWORK PAGING INTERFACE - (Audio Enhancement, MS250)

1. Provide a Network Interface with performance as follows:
   a. Full Duplex, Hands Free communications on Intercom Call

b. Amplifier powered only by the POE power source for emergency paging applications
c. Mounting Bracket as required
d. Connections – The following connections must be available:
    i. 2 Line Output – 1 Terminal Block, 1 - 3.5mm Jack
    ii. 2 External I/O Connections – Terminal Block
    iii. RJ45 for POE Network Connection
e. 1 speaker connection
    i. The system must provide a speaker connection which is powered exclusively by the POE power from the network
f. Network Connection
    i. The system must have a network connection with POE power.
    ii. POE must be present on the system in order to provide power for the amplifier during a power emergency

g. Integrated Network Based Communications
    i. The System must support the following protocols:
        1. Directed UDP
        2. Unicast Audio
        3. Multi-Cast Audio
        4. SIP
h. The system must have integrated SIP communications and be able to communication bi-directionally with any VOIP communications system that follows the standard SIP protocols.

i. The system shall also have the ability to operate with multi-cast IP messages as well.

G. Intercom Paging System Push to Talk Microphone – Admin Office

1. Provide a Push to Talk Microphone with Network Interface at the administrative office.
2. Push to Talk Microphone Network Interface shall be Audio Enhancement MS-250

H. OTHER COMPONENTS

1. Intercom Paging System Standard / Emergency Call-In Switch with Volume Control:

    a. The "Normal" call switch shall be a momentary pushbutton style switch with an accommodation to prevent accidental activation.
    b. The unit shall be compatible with single gang electrical boxes.

2. Common Area Zones

1. Provide 1 Network Interface for each common area zone defined on the drawings. Common area zone network interface shall be Audio Enhancement MS250 – no substitutions
2. Provide a 70 Volt amplifier and appropriate number and style of speakers to adequately cover each common area zone as defined by the drawings.

3. Intercom Paging System Ceiling Speaker. Speaker style shall be appropriate to the manufacturer selected:

   a. Speaker Specifications

   1. Provide complete distributed ceiling mounted speaker system (Metal back box, speaker, grill, etc.). number as required (minimum 4, no cluster) with performance and safety features as follows:

   2.
      a. Frequency Range: 70 Hz to 15 kHz (-10dB)
      b. Frequency Resp: 100 Hz to 14 kHz +/- 3dB
      c. Power Handling: 50 Watts continuous
      d. Driver type: 4 in.(102 mm) Cone
      e. System type: Tuned and vented
      f. Sensitivity: 88 dB 1 Watt/1 Meter.
      g. Impedance: 8 Ohms nominal
      h. Mounting: Integrated C-Clamp
      i. Plenum rating: Speaker back can meet UL2043 criteria for plenum installation
      j. Terminals: All metal spring terminals
      k. Dimensions: Depth 5.8 in. (147.3 mm)
      l. Grill Diameter: 8.5 in. Dia. (216 mm)
      m. Mounting hole: 7.0 in. (178 mm)
      n. Weight: 3.0 lbs. (1.36kg)

PART 3 – EXECUTION

3.1 INSTALLATION OF SOUND SYSTEMS:

A. Install each system shown as indicated, in accordance with equipment manufacturer's instructions, and with recognized industry practices, to ensure that system equipment complies with requirements. Comply with requirements of NEC and applicable portions of NECA's "Standard of Installation" practices.

B. Provide each individual CSAS with a Satellite receiver, MS450 integrated amplifier and network communications, teacher microphone with transmitter, hand held microphone, external sensors as required, speakers as required (minimum 4) and all cable necessary.

Before rough-in, test each application for the number and location of sensors and speakers required. Install sensors as required for complete coverage in all parts of the space. Coordinate the number of speakers required with the reflected ceiling needs. Provide a back box for each speaker and verify all support requirements. Provide audio wiring from the amplifier to the video system controller in the room.

C. Coordinate with other electrical work, including cable/wire, raceways, electrical boxes and fittings, as appropriate to interface installation with other systems work.

3.2 FIELD QUALITY CONTROL:

A. The contractor shall be responsible to fully implement the system including programming and configuration of each system. The contractor shall coordinate all programming and configuration with the telecommunications contractor and the IT contractor.

3.3 EQUIPMENT CHECKOUT:

A. Provide equipment checkout by a factory trained and authorized technician before energizing circuits. Make final connections under his direction.

3.4 TESTING:

A. Upon completion of installation of the, system and after electrical circuitry has been energized, demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and proceed retesting.

3.5 WARRANTY:

A. The contractor shall warrant the equipment to be new and free from defects in material and workmanship, and will, within one year from date of installation, repair or replace any equipment found to be defective. This warranty shall not apply to any equipment which has been subject to misuse, abuse, negligence, accident or unauthorized modification.

3.6 TRAINING:

A. Provide a minimum of four (10) hours (minimum) training on the operation and

maintenance of the audio/visual presentation system, at job site. Provide programming and software training as required to allow the district to do any programming that the supplier is allowed to do during commissioning, testing, service and field additions or deletions to the system. Illustrate utilization of all components, DVD, VCR, projector, etc. and the interaction of the complete system. Conduct separate 2-hour sessions in each "pod" and each grade level. Provide this training at no cost to the Owner, including transportation, lodging, meals and training manuals.

EVALUATION PROCESS

The evaluators will consider how well the vendor's proposed solution meets the needs of the Cartersville City School System as described in the vendor's response to items listed in the technical requirement section of this RFP. It is important that the responses be clear, concise and complete so that the evaluators can adequately understand all aspects of the proposal. The evaluation process is not designed to simply award the contract to the lowest cost vendor. Rather, it is intended to help the Cartersville City School System select the right vendor with the best combination of professional attributes, experience, product attributes, and price. The Cartersville City School System reserves the right to require that a subset of finalists make a presentation for consideration.

This RFP provides general and technical information to be used to guide you in crafting your proposal. Your submitted responses will be the primary source of information used for the system evaluation and selection. Please include all required and appropriate information with your proposal.

At the completion of the RFP process, the Cartersville City School System will determine the viability of moving forward and complete negotiations with the chosen vendor to provide equipment and services, representing, but not limited to, solutions that best meet the need of the Cartersville City School System's criteria in cost, product design and management capability, and vendor prior experience and references.

VENDOR COMMUNICATION

Upon release of this RFP, all vendor communications concerning the overall RFP should be directed to the School System's delegate listed below. Any oral communications will be considered unofficial and non-binding to the Cartersville City School System. Questions should be submitted in e-mail form to the School System's delegate. Vendors should rely only on written, faxed, or e-mailed statements issued by the School System's delegate.

Kristy Hovers
Technology Coordinator
Cartersville School System
PO Box 3310
310 Old Mill Road
Cartersville, GA 30120
Office: 770-387-5571
Fax: 770-607-7501
Email: khovers@cartersville.k12.ga.us

RIGHT OF SELECTION/REJECTION – WAIVER OF IRREGULARITIES

The Cartersville City School System reserves the right to reject any or all proposals, to waive any minor irregularities contained in any proposal, and to accept any proposal deemed to be in the best interest of the Cartersville City School System. Selection of a vendor solution shall not be construed as an award of contract, but as a commencement of contract negotiation, including but not limited to the contract price proposed.

RFP REVISIONS

The Cartersville City School System reserves the right to change the schedule or issue amendments to the RFP at any time. The Cartersville City School System also reserves the right to cancel or reissue the RFP at any time

PROPOSAL AMENDMENT

The Cartersville City School System shall not accept any amendments, revision, or alterations to proposals after the deadline for proposal submittal unless such is formally requested, in writing, by the Cartersville City School System.

COMMITMENTS

All quotes should be submitted initially on the most complete basis and with the most favorable financial terms available. The selected vendor's proposal may, at the Cartersville City School System's option, be made part of the final purchase contract. All representations in the vendor's proposal may be considered commitments to supply the system as described. Vendors may submit more than one proposal in response to this RFP. However, each proposal must be a separate, complete package, which can be considered independently of any other proposals from the same vendor.

CONTRACT AWARD AND EXECUTION

The Cartersville City School System reserves the right to make an award without further discussion of the proposal submitted. Therefore, the proposal should be initially submitted on the most favorable terms the vendor can offer. It is understood that the proposal will become a part of the official file on this matter without obligation to the Cartersville City School System. The general conditions and specifications of the RFP and the successful vendor's response, as amended by agreements between the Cartersville City School System and the vendor, will become part of the contract documents. Additionally, the Cartersville City School System will verify vendor representations that appear in the proposal. Failure of the vendor's products to meet the mandatory specifications may result in elimination of the vendor from competition or in contract cancellation or termination. If selected vendor fails to sign and return the contract within the required stated timeframe, the Cartersville City School System may elect to cancel the award and award the contract to the next best vendor. No cost chargeable to the proposed contract may be incurred before the vendor has received a fully executed contract.

COMPENSATION

No payment of any kind will be provided to the submitting vendor, or parties they represent, for obtaining any of the information solicited. Procurement of all equipment and services will be in accordance with subsequent contractual action.

PAYMENT TERMS AND CONDITIONS

The proposal must contain a fee schedule that includes payment terms and conditions, and line items for equipment, software, support/maintenance subscriptions, and warranties. Payment terms will be Net 30 days after installation and invoice.

ALTERNATIVE SPECIFICATIONS
Specifications must be attached if proposal is based on specifications different than specified by the school system. The Board of Education will determine if the item proposed is equal or comparable.

RFP ATTACHMENTS AND SUBMISSION

- Proposals must be submitted with the proposal form enclosed.
- Bidders may attach other appropriate information to best evaluate the proposal.
- Bidder must submit a copy of Certificate of Insurance with bid including workers compensation. Vendor's full compliance with all applicable federal and state security and immigration laws, including without limitation the Georgia Security and Immigration Compliance act as amended, O.C.G.A. 13-10-90, O.C.G.A. 13-10-91 and Georgia Department of Labor Rule 300-10-1, et.seg. is a condition to the quote and contract. Vendor is required to affirm compliance by completing and returning the Georgia Security and Immigration Compliance Documents with Vendor's quote.

Please submit (2) hard copies of the proposal, sealed and in its entirety, to the Cartersville City School System delegate at the address below no later than 2:00 PM, March 27, 2017.

Dr. J. Howard Hinesley, Superintendent
Cartersville School System
PO Box 3310
15 Nelson Street
Cartersville, GA 30120