# Request for *proposal*

**INTERCOM SYSTEM FOR JAMES BRIDGER MIDDLE SCHOOL**
**RFP# 2024-PUR-016**

PROPOSALS MUST BE RECEIVED BY:
**9:00 AM (CST) ON FRIDAY, MAY 24, 2024**

Please mark your sealed envelope **"RFP #2024-PUR-016 Intercom System for James Bridger Middle School Proposal"** and deliver to the following address and person:


Lisa Patrick
Purchasing Supervisor
Lisa_Patrick@isdschools.org

201 N. Forest Avenue
Independence, MO 64050
816-521-5599 extension 10610


*All questions, requests for information or clarification pertaining to this bid must be submitted in writing to the above e-mail address. The deadline for questions is Friday, May 10, 2024 at 2:00 PM (CST)*

It is the responsibility of interested firms to check the website: http://sites.isdschools.org/purchasing/bids-and-rfps for any addendums or notices of information prior to the opening date and time of this RFP. All addendums must be signed and included with your submitted Proposal.

2024-PUR-016
Intercom System for James Bridger Middle School
*Lisa Patrick*
Independence School District
Facilities & Purchasing
201 N. Forest Avenue
Independence, MO 64050
(816) 521-5599 ext. 10610

# *TABLE OF CONTENTS*

**2024-PUR-016**
**Intercom System for James Bridger Middle School**
***Lisa Patrick***
**Independence School District**
**Facilities & Purchasing**
**201 N. Forest Avenue**
**Independence, MO 64050**
**(816) 521-5599 ext. 10610**

**Proposal Due:**
May 24, 2024
9:00 a.m.

## 1. Background

### *1.1. Notice*

1.1.1. Independence School District (the "District") seeks a contractor ("Contractor") to perform intercom system replacement. If your firm is interested, please submit the information requested in this Request for Proposal (RFP) to the Independence School District office by 9:00 a.m. on May 24, 2024. All information necessary for the submittal is contained in this RFP.

***1.2. RFP Schedule -*** The timeline listed below is the District's estimation of time required to complete the RFP process. All efforts shall be made to abide by this schedule; however, it is subject to change due to different circumstances.

1.2.1. Issue RFP: April 18, 2024

1.2.2. **Pre-bid Meeting and Inspection of property** will be held on May 6, 2024 at 10:00 a.m. at James Bridger Middle School located at 18200 E M78 Highway, Independence, MO 64057.

1.2.3. Deadline to submit written questions: May 10, 2024, 2:00 p.m.

1.2.4. Deadline to submit proposals: May 24, 2024, 9:00 a.m.

1.2.5. Vendor selection date: June 11, 2024, 6:00 p.m. - ISD Board of Education Meeting

## 2. Description of Services (or Project)

### *2.1. Replacement of Intercom System*

2.1.1. *See Attachment A with Specifications with additional information to include. See map of building in Attachment B.*

### *2.2. Location*

2.2.1. *James Bridger Middle School*

*2.2.1.1. 18200 E M78 Highway, Independence, MO 64057*

***2.3. Equipment***

2.3.1. *Provide all equipment needed to complete project.*

***2.4. Inspection***

2.4.1. Contractor must visit site before submitting their proposal and be responsible for all measurements on the project. Contractor is responsible for exact measurements.

***2.5. Project Schedule***

2.5.1. Vendor selection date: June 11, 2024, 6:00 p.m. - ISD Board of Education Meeting

2.5.2. Contract Date: June 12, 2024 – All other Locations and areas in Attachment B

2.5.3. Planned commencement of service June 12, 2024.

2.5.4. Planned substantial completion of service: Site specific agreed upon by District time PO is issued.

2.5.5. Planned final completion of service: Site specific agreed upon by District time PO is issued.

**3. Scope of Services**

***3.1. Hours of service***

District Buildings are available from 6:00 a.m. till 10:00 p.m. during non-student contact days.

***3.2. Terms and conditions***

3.2.1. Contractor is to provide tear out, disposal (& provide dumpster), protect existing flooring and installation to factory specifications as noted in their manufacturer specifications.

3.2.2. Exact styles, collection and colors will be picked by District after award of bid by winning Contractor.

***3.3. Exclusions***

***3.4. Term***

3.4.1.1. June 12, 2024 through August 2, 2024 with same pricing or agreed upon annual increase.

3.4.2. Renewals- Contractor is to hold prices good for a period of 1 year from the Start date of June 12, 2024.

3.4.3. Start date

3.4.3.1. June 12, 2024

3.4.4. Date of substantial completion

3.4.4.1. July 30, 2024

3.4.5. Date of final completion

3.4.5.1. August 2, 2024

**4. Required Insurance**

***4.1. Liability***

4.1.1. $100,000 per incident

4.1.2. $300,000 per year

***4.2. Workers Compensation***

4.2.1. Statutory limits

***4.3. Bond***

4.3.1. Bid: 5 percent of bid amount

4.3.2. Payment (executed with connection of Contract): 100 percent of amount of Agreement

4.3.3. Performance (executed with connection of Contract): 100 percent of Amount of Agreement

**5. Disclosures and notifications**

***5.1. Conflicts of interest***

5.1.1. Proposal must state whether proposer has any professional, business, or familial relationship with any current member of the Board of Education of the District or with any administrator of the District.

***5.2. Cooperative Procurement***

5.2.1. Indicate whether, if the District accepted your proposal, you would provide the same products and services under the same prices and terms to any public school district or any other non-profit organization having membership Mid-America Council of Public Purchasing (MACPP), Mid-America Regional Counsel (MARC) or Greater Suburban Kansas City Joint Purchasing Cooperative (GSKCJPC- currently 20 local district members) and/or located within the greater Kansas City metropolitan trade area.

_____YES_____NO SIGNATURE: _____

5.2.2. The prices, terms, and conditions of this RFP and any subsequent term agreement would control the terms of any subsequent agreement from date of contract for a period of not less than 1 calendar year.

5.2.3. Organizations represented by MACPP, MARC or GSKCJPC have no obligation under the cooperative procurement agreement to use the RFP, proposal, or agreement unless they are specifically named in the RFP as a joint respondent.

5.2.4. The ordering jurisdiction will issue purchase orders and be responsible for all receiving, inspection, payments and other agreement administration.

5.2.5. Each jurisdiction that is a party to the joint proposal may act as Administrative Contracting Officer with responsibility to issue purchase orders, inspect and receive goods, make payments, and handle disputes involving shipment to the jurisdiction.

## 6. Contract terms

### *6.1. E-Verify*

6.1.1. Missouri law requires all companies doing business under contracts greater than $5,000 with government entities to attest that all their employees and subcontractor's employees are "lawfully present in the United States."

### *6.2. Prevailing Wage*

6.2.1. Missouri law requires agreements to contain the following prevailing wage terms, **if the project is over $75,000**: "A wage of no less than the prevailing hourly rates of wages for work of a similar character in the locality in which the work is performed shall be paid to all workmen employed by or on behalf of any public body engaged in public works exclusive of maintenance work" (§ 290.220) and "Not less than the prevailing hourly rate of wages specified in wage determination as requested from the State shall be paid to all workers performing work under this contract" (§ 290.250). The contractor shall

forfeit as a penalty to the State, County, City, and County, City, Town, District or other political sub-division on whose behalf the contract is made or awarded. Ten ($10.00) Dollars for each worker employed, for each calendar day, or portion thereof such worker is paid less than the said stipulated rates for any work done under this contract by him or by any sub-contractor under him. § 290.250. All payroll records of the contractor are to be submitted to the School District, with the approved Prevailing Wage Statement, prior to final acceptance of the project.

### *6.3. Liquidated Damages*

6.3.1. The District may assess liquidated damages for work not completed as agreed upon for up to $50 per day.

### *6.4. Applicable law*

6.4.1. Missouri law will govern contracts entered into pursuant to this RFP.

### *6.5. Termination*

6.5.1. The District may terminate contracts entered into pursuant to this RFP without cause upon 30 days' notice.

### *6.6. Compliance with laws and policies*

6.6.1. Proposer must comply with all federal and state anti-discrimination laws.

6.6.2. All work shall be done in strict accordance with the provisions of the current edition of the building codes adopted by the City of Independence, Missouri and all city ordinances in effect during performance of this contract.

6.6.3. Contractor must be licensed to do business in the City of Independence.

6.6.4. All work shall meet or exceed the Americans with Disabilities Guidelines.

6.6.5. *A-133 Compliance Supplement*: The contractor must certify that they and their principals are not debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal Department or Agency.

6.6.6. *Excessive Unemployment*: The Missouri Department of Labor and Industrial Relations has determined that a period of "Excessive Unemployment" remains in effect and will remain in effect if the unemployment rate exceeds 5% in the state of Missouri. Only Missouri laborers and laborers from nonrestrictive states are allowed by law to be employed on Missouri's public works projects. (See Sections 290.550 through 290.580 RSMo).

6.6.7. *AHERA Notification*: the District has completed the removal of friable asbestos in all District school buildings. In addition, all facilities have now been inspected by a certified asbestos inspector as required under the ASBESTOS HAZARD EMERGENCY RESPONSE ACT OF 1986 (AHERA). A copy of the AHERA Plan has been filed with the State of Missouri and a copy is on file with each building administrator. The AHERA Plan is available for inspection during regular school hours.

6.6.8. *OSHA Training*: As a condition of the Contract entered pursuant to this RFP, a Contractor must provide a 10-hour Occupational Safety and Health Administration (OSHA) Construction Safety Program ("Program") for Contractor's on-site employees as mandated by RSMo 292.675. Said Program must include a course in construction safety and health approved by OSHA or a similar program approved by the Missouri Department of Labor and Industrial Relations. This requirement includes the following: All of Contractors' on-site employees must complete the Program within 60 days of beginning work on the Project; Any employee found on the work site subject to this requirement without documentation of the successful completion of the Program will be given 20 days to produce such documentation before being subject to removal from the Project; Contractor's failure to comply with these requirements will subject it to penalties. Contractor shall forfeit as a penalty to the Owner $2,500.00 plus $100.00 for each employee employed by Contractor or Contractor's Subcontractor, for each calendar day, or portion thereof, such employee is employed to work under this Contract without the required training. Said penalty shall not accrue until the period in subsections 1 and 2 have elapsed. Contractor will be subject to said penalties notwithstanding any other provision to the contrary in this Construction Contract. Contractor shall require its contracts with all Subcontractors to contain these provisions. Contractor shall be responsible for penalties to Owner due to any Subcontractor's employees' failure to produce documentary evidence of training in the required Program. Contractor may withhold all sums necessary to cover any penalty from Subcontractor by suing in the circuit court of the county in which the project is located. Contractor shall have no right of recovery against Owner

6.6.9. *Lead Paint Guidelines*: After April 22, 2010, contractors and their individual crew members working in pre-1978 school buildings that are child occupied and residential properties will be required to obtain their Renovator Certification by an accredited EPA Training Provider.

### *6.7. Background Checks*

6.7.1. Contracts entered pursuant to this RFP must require that all employees who have unsupervised interaction with students will be fingerprinted and background checked under the background checks required by the District's Board Policies. Results of

background checks of employees working directly with students must be provided to District. District reserves the right to refuse to allow any employee access to students if the employee completes no background check acceptable to the District.

### *6.8. Indemnity*

6.8.1. The District will not agree to indemnify any contractor for its own negligence, for injuries or damages that do not arise from acts or omission of the District, or for injuries or damages for which the District has sovereign immunity.

### *6.9. Change orders*

6.9.1. Change orders that exceed the greater of $15,000 or 5% of the total originally contracted amount are subject to Board approval prior to performance of the work and are subject to re-bid. (See Board Policy 7210.)

### *6.10. Proposed contract*

6.10.1. Proposals must include a copy of proposed contracts or service agreements if available or disclose terms required by the proposer of this RFP.

## 7. Interpretation, Questions, Withdrawal

### *7.1. Interpretation*

7.1.1. The District will make no oral interpretations for proposers of meaning of the terms in this RFP.

7.1.2. Requests for interpretations to the meaning of this RFP must also be made in writing to Independence School District no later than 2:00 p.m., May 10, 2024 and failure by the successful proposer to do so shall not relieve the proposer of the obligations to execute such services under a later interpretation by the school district.

7.1.3. All interpretations made to the proposers will be issued in addenda to the RFP and will be posted on the ISD website ISDSchools.org and be the sole responsibility of the Bidder to obtain and acknowledge.

### *7.2. Questions*

7.2.1. Submit written questions to the following person:

Lisa Patrick
Purchasing Supervisor
lisa_patrick@isdschools.org

201 N. Forest Avenue
Independence, MO 64050
816-521-5599 extension 10610

***7.3. Withdrawal***

7.3.1. Any Contractor may withdraw his proposal prior to the scheduled closing time for receipt of proposals.

7.3.2. No proposal shall be withdrawn for thirty (30) days after the scheduled closing time for receipt of proposals.

**8. Quote**

***8.1. Amount- U.S. Dollars***

***8.2. Rate- U.S. Dollars***

**9. Proposal submission and opening**

***9.1. Submission***

9.1.1. Submit proposals in a sealed envelope marked "INTERCOM SYSTEM FOR JAMES BRIDGER MIDDLE SCHOOL PROPOSAL 2024-PUR-016" and deliver to the following address and person:

Lisa Patrick
Purchasing Supervisor
lisa_patrick@isdschools.org
201 N. Forest Avenue
Independence, MO 64050
816-521-5599 extension 10610

***9.2. Opening***

9.2.1. The proposals will be opened and publicly read at the following location on the following date and time:

Date: May 24, 2024

Time: 9:00 a.m.

Location: Facilities Office
201 N. Forest Avenue
Independence, MO 64050.

**10. Reservation of Rights**

***10.1. INDEPENDENCE SCHOOL DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL PROPOSALS AND WAIVE ANY INFORMALITY IN THE PROPOSAL OR REQUEST FOR PROPOSAL.***

**11. Proposal Evaluation**

***11.1. Award***

11.1.1. The contract will be awarded to the firm submitting the best responsible proposal complying with this RFP if the proposal is reasonable and in the best interest of the District to accept. The firm selected will be notified at the earliest practical date. The decision regarding acceptability of any firm's qualifications/proposal shall remain entirely with the District, at the District's sole discretion. The criteria for making this judgment will include but not be limited to price, demonstrated capability, past work completed and general responsiveness to the RFP.

11.1.2. The District notifies all proposers that minority business enterprises will be afforded full opportunity to submit proposals in response to this Request and will not be discriminated against on the grounds of race, color, or national origin in consideration of an award. Proposer agrees that should any person who performs work because of race, religion, color, sex, national origin, or ancestry.

11.1.3. The District reserves the right to reject any or all proposals, to waive any informalities or technical defects in proposals, and unless otherwise specified by the District, to accept any item or groups of items in the proposal, as in the best interest of the District.

***11.2. Acceptance Period***

11.2.1. All proposal offers must be firm for 120 days to allow for a signed contract. After that, prices are to be good for 1 calendar year from the contract date of June 12, 2024 unless mutually agreed upon.

2024-PUR-016
Intercom System for James Bridger Middle School
*Lisa Patrick*
Independence School District
Facilities & Purchasing
201 N. Forest Avenue
Independence, MO 64050
(816) 521-5599 ext. 10610

# Appendix A
# FEDERAL WORK AUTHORIZATION PROGRAM AFFIDAVIT

I,_____, being of legal age and having been duly sworn upon my oath, state the following facts are true:

1. I am over twenty-one years of age; and know of the matters set forth.
2. I am employed by _____("Company") and have authority to issue this affidavit on its behalf.
3. Company is enrolled in and participating in the United States E-Verify federal work authorization program regarding Company's employees working in connection with the services Company is providing to, or will provide to, the District, to the extent allowed by E-Verify.
4. Company does not knowingly employ any person who is an unauthorized alien in connection with the services the Company is providing to, or will provide to, the District.

FURTHER AFFIANT SAYETH NOT.

By:_____
(individual signature)

For _____
(company name)

Title:_____

Subscribed and sworn to before me on this _____day of _____, 202___.

_____
NOTARY PUBLIC

My commission expires:

2024-PUR-016
Intercom System for James Bridger Middle School
*Lisa Patrick*
Independence School District
Facilities & Purchasing
201 N. Forest Avenue
Independence, MO 64050
(816) 521-5599 ext. 10610

# Appendix B

## REFERENCES AND EXPERIENCE

How many years has your firm been in business? _____ Years

**List references and prior experience; preferably with other school districts or governmental agencies, in the last 3 – 5 year period; work or services in the same type and size to the project being proposed.**

School District/Business_____

Address_____

Contact Person_____ Phone#_____

Description of services performed and completion date_____

_____

School District/Business_____

Address_____

Contact Person_____ Phone#_____

Description of services performed and completion date_____

_____

School District/Business_____

Address_____

Contact Person_____ Phone#_____

Description of services performed and completion date_____

_____

2024-PUR-016
Intercom System for James
Bridger Middle School
*Lisa Patrick*
Independence School District
Facilities & Purchasing
201 N. Forest Avenue
Independence, MO 64050
(816) 521-5599 ext. 10610

## Appendix C

## PERSONNEL QUALIFICATIONS

Bidders are REQUIRED to provide the information below in FULL DETAIL.

Indicate the person who will be supervising project and years of experience in similar work.

Name: _____ Number of Years: _____

Type of Experience:
_____

Complete the following for employees that would be working on this project. List any previous work directly relating to the scope of this project for other school districts and/or governmental agencies or private companies in the last five years. Attach a separate sheet of paper if needed.

| EMPLOYEE NAME | QUALIFICATIONS | EXPERIENCE/TRAINING |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

2024-PUR-016
Intercom System for James
Bridger Middle School
*Lisa Patrick*
Independence School District
Facilities & Purchasing
201 N. Forest Avenue
Independence, MO 64050
(816) 521-5599 ext. 10610

# Appendix D

## BID PROPOSAL SUBMISSION FORM – Intercom System for James Bridger Middle School

Proposal of_____(hereinafter called "Bidder"), organized and existing under the laws of the State of_____, doing business as a corporation, a partnership, an individual (circle one) to the Board of Education, School District of Independence, Missouri (hereinafter called "Owner").

1. In compliance with your Advertisement for Bids, Bidder hereby proposes to perform all work for the *INDEPENDENCE SCHOOL DISTRICT – Intercom System for James Bridger Middle School*. In strict accordance with the Contract Documents, within the time set forth herein and at the prices stated below, bidder should propose on individual base bids for specific project locations as noted below. Owner will award contract per individual base bid.
2. By submission of this Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to its own organization, that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.
3. Bidder acknowledges receipt of the following ADDENDA:____
4. The undersigned, having familiarized itself with local conditions affecting the cost of the work at the place where the work is to be done and with all Bidding Documents, including the Instructions to Bidders, Plans and Specifications, General and Supplementary Conditions, the Standard Form of Agreement and the other Contract Documents, and having examined the location of the proposed work and considered the availability of labor and materials, hereby proposes and agrees to perform everything required to be performed, and to provide and furnish any and all labor, materials, supervision, necessary tools, equipment, and all utility and transportation service necessary to perform and complete in a workmanlike and timely manner all of the work required for the project, all in strict conformance with the Instructions to Bidders and other Contract Documents (including Addenda noted above, the receipt of which is hereby

acknowledged), for the lump sums hereinafter specified.

## Appendix D (Cont)

RESPECTFULLY SUBMITTED:

| | |
|---|---|
| Signature | Title |
| Name (Please type or write clearly) | Date |
| Company Name | Telephone Number / Fax Number |
| Street | Email address |
| City, State, Zip Code | License number (if applicable) |

By signing, he/she certifies that they are an authorized agent of said company and has the authority to legally enter into a binding Service Agreement.

SEAL – (If BID is by a corporation)

## Appendix D (Cont)

| ***BID SHEET*** | | |
|---|---|---|
| **Project:** | Intercom System for James Bridger Middle School | |
| **RFP#:** | 2024-PUR-016 | |
| **Owner:** | Independence School District | |
| **Date:** | May 14, 2024 | |
| **Contractor Name** | | |
| Schools | **James Bridger Middele School** | **Total** |
| Location Addresses | *18200 E M78 Highway, Independence, MO 64057* | |
| Intercom System (Include backup documentaion) | $ - | $ - |
| Disposal (Provide dumpster), Removal Charges, Installation Charges, Freight and Delivery Charges | $ - | $ - |
| TOTAL BID | $ - | $ - |
| Bid Bond | | $ - |
| Warranty in Years | | |
| | | |

Company Name: _____

Printed Name: _____

Signature: _____

Date: _____

2024-PUR-016
Intercom System for James
Bridger Middle School
*Lisa Patrick*
Independence School District
Facilities & Purchasing
201 N. Forest Avenue
Independence, MO 64050
(816) 521-5599 ext. 10610

# ATTACHMENT A

SECTION 275123.50 - EDUCATIONAL INTERCOMMUNICATIONS AND PROGRAM SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 DESCRIPTION

A. At the time of bid, any exceptions taken to these specifications, all variances from these specifications and all substitutions of operating capabilities or equipment called for in these specifications shall be listed in writing and forwarded to the Architect / Engineer. Any such exception, variances or substitutions which were not listed at the time of bid and are identified in the submittal, shall be grounds for immediate disapproval without comment.

1.3 SCOPE OF WORK

A. The work covered by this section of the specifications shall include all material, labor, hardware, software, firmware and programming to install a complete and operating system as described herein and shown on the drawings. It shall be complete with all necessary materials, labor, hardware, software, firmware and programming specifically tailored for this installation. It shall be possible to permanently modify the software on site by using a system administrator software network interface.

B. Any and all miscellaneous materials, labor, hardware, software, firmware and programming that is not listed in this specification section that is required to provide a complete and operating system shall be provided as part of the scope of work for this installation.

C. The work covered by this section of the specifications shall be coordinated with any and all trades that are affected by the installation of this system. All work is to be complete and as required and specified elsewhere under these project specifications.

D. All of the actual required system components and cabling are not shown or specified as this varies between acceptable manufacturers and suppliers. It shall be the responsibility of the contractor to obtain this information from the acceptable supplier and or manufacturer and include cost of same in his bid.

## 1.4 APPLICABLE CODES AND STANDARDS

A. The system shall be installed in strict accordance with all the requirements of the National Electric Code.

B. The system shall be installed in accordance with the requirements of the Americans with Disabilities Act (ADA).

C. The system shall be installed in strict accordance with the requirements of all other applicable codes as well as all Federal, State and local codes.

## 1.5 SUMMARY

A. Section includes microprocessor-switched, IP-based telephone/intercommunications and program systems with the following components:

1. Administrative console.
2. Call control console.
3. Speaker-microphone stations.
4. Call-switch unit.
5. All-call amplifier.
6. Intercommunication amplifier.
7. Paging amplifier.
8. Loudspeakers/speaker microphones.
9. Conductors and cables.
10. Raceways.
11. Local Area Network (LAN):

## 1.6 DEFINITIONS

A. DHCP: Dynamic Host Configuration Protocol.

B. FXO: Foreign eXchange Office.

C. H.323: Audio and Video Protocol.

D. SIP: Session Initiation Protocol.

## 1.7 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For educational intercommunications and program systems.

1. Include plans, elevations, sections, and mounting details.
2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection..
3. Include scaled drawings for administrative console and speaker-microphone station, arrangement of built-in equipment.
4. Include diagrams for power, signal, and control wiring.

    a. Identify terminals to facilitate installation, operation, and maintenance.
    b. Single-line diagram showing interconnection of components.
    c. Cabling diagram showing cable routing.

## 1.8 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For educational intercommunications and program systems to include in operation and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

1. A record of final matching transformer-tap settings and signal ground-resistance measurement certified by Installer.
2. A record of Owner's equipment-programming option decisions.
3. Plans, drawn to scale, indicating location, designation, and connection of intercommunications system components.

## 1.9 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.10 COORDINATION

A. Coordinate layout and installation of ceiling-mounted speaker microphones and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Bogen Communications

2.2 SYSTEM DESCRIPTION

A. Equipment: Modular type using solid-state components, fully rated for continuous duty unless otherwise indicated. Select equipment for normal operation on input power usually supplied at 110 to 130 V, 60 Hz in a satisfactory manner without the requirement of any external power conditioning equipment. Comply with UL 813.

B. Expansion Capability: Increase number of stations in the future by 25 percent above those indicated without adding any internal or external components or main trunk cable conductors.

C. Integration: Coordinate features and select components to form an integrated system. Match components and interconnections for optimum performance of specified functions.

D. Local Area Network: The system will utilize a LAN for the connectivity of all devices and components within the facility for the transmission of electronic data. The LAN will be a separate standalone structure in support of the intercommunication system.

E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for location and application.

F. Weather-Resistant Equipment: Listed and labeled by an NRTL for duty outdoors or in damp locations.

2.3 FUNCTIONAL DESCRIPTION OF IP-BASED TELEPHONE/INTERCOMMUNICATION SYSTEMS

A. Integrated central system with the following:

1. Direct-dial, full duplex private telephone communications between all locations equipped with telephones and IP-addressable speaker-microphone. Call initiation among administrative consoles and between administrative consoles and remote stations by dialing station's number on a 12-digit keypad.
2. 16 channels for unrestricted simultaneous communications.
3. Initial system operation with administrative console and remote stations, expandable to 720 stations.
4. Direct-dial, two-way amplified voice intercommunication between administrative console telephones and remote stations without use of press-to-talk or talk-listen switches.
5. Automatic queuing for intercommunication channels, with automatic call waiting.
6. Call transfer among administrative consoles.
7. Display of selected station and answering calling station by pressing a single "response button."
8. Simultaneous communication with other stations on system by dialing a designated number on a 12-digit keypad.
9. Automatic gain control to ensure constant intercom speech level.
10. Simultaneous distribution of emergency announcements to all locations equipped with speakers by dialing a predetermined code number.
11. User-selectable facility for providing selected telephone stations with dial tone for external telephone calls.
12. Assignment of speaker locations within any one or more of eight zones for zone paging or time signal reception.
13. Digital readout displays on which up to three incoming calls are displayed with additional calls stored for subsequent display.
14. Off-site diagnostics to monitor system functions, operations, and faults through a serial data port on central-control station.
15. Control of simultaneous distribution of program material to various combinations of remote stations or groups by using keypad to control sources and distribute programs.
16. User-programmable features include the following:

    a. Station calling by room number.
    b. Room station call-in priority levels.
    c. Audible signal schedule functions.
    d. Schedule characteristics of audible signals.
    e. Call-in tone characteristic.
    f. Precedence among administrative consoles as destinations for incoming calls from room stations.
    g. Grouping rooms and speakers into zones for paging and program distribution purposes.
17. System shall provide the distribution of emergency announcement(s) from any authorized telephone to all areas furnished with a loudspeaker. Emergency announcements shall have the highest system priority

18. Telephone interconnect shall be capable of accepting H.323, SIP, and FXO type protocols and include the following features:

    a. Direct connection to central office trunk lines with initial system wiring for trunk lines.
    b. Routing of outside trunk lines for "attendant answer incoming" and "direct inward line" functions.
    c. Station programming for access to outside trunk lines to be any of the following:

        1) Totally unrestricted access.
        2) Restricted access.
        3) No access.

    d. Night-answer mode to allow one or all of the following:

        1) Incoming call transferred to predetermined extension.
        2) Tone transmitted to speakers to notify key personnel to answer telephone.
        3) Dial tone to remote stations to allow answering call from all locations.

    e. Call control console to perform as follows:

        1) Identify, answer, and route incoming outside calls, with reminder and recall features.
        2) Directly access outside trunk lines.
        3) Hold, park, and transfer calls.
        4) Screen outside calls.

19. Individual Space Guidelines
    a. All wiring shall be Category 6 for connections to speakers, call switches, etc… for future migration to a complete IP based intercom paging system. Horizontal cabling shall be installed from the outlet/device to the nearest Data Hub Room or Head End Room. Horizontal cabling shall terminate at the patch panels in the equipment rack in the data room in accordance with the specifications
    b. Each classroom / educational space to have a dedicated intercom paging circuit to the intercom paging system head-end or remote network intercom expander to provide two (2) way communications from the administrative console (s) or building telephone system handset to each classroom/educational space individually via the talkback speaker or room telephone.
    c. Each office / conference room space to have a dedicated intercom paging circuit to the intercom paging system head-end equipment or remote network intercom expander to provide two (2) way communications from the administrative console(s) or building telephone system handset to each office / administrative space individually via the talkback speaker or room telephone.
    d. Each corridor/common space to have dedicated speaker circuits to the intercom paging system head-end or remote network intercom expander to provide one (1)

way communications from the administrative console(s) or building telephone system handset to each corridor/common space individually.

e. The cafeteria to have dedicated speaker circuit to the intercom paging system head-end or remote network intercom expander to provide two (2) way communications from the administrative console(s) or building telephone system handset to the space individually via the talkback speaker.
f. The cafeteria shall also have dedicated speaker circuits to the intercom paging system head-end or remote network intercom expander to provide one (1) way communications from the administrative console(s) or building telephone system handset to each corridor/common space individually.
g. The gymnasium to have dedicated speaker circuits to the intercom paging system head-end or remote network intercom expander to provide two (2) way communications from the administrative console(s) or building telephone system handset to the space individually via the talkback speaker.
h. Each paging horn in the gymnasium to have dedicated speaker circuit to the intercom paging system head-end or remote network intercom expander to provide one (1) way communications from the administrative console (s) or building telephone system handset to each paging horn individually

B. Remote Stations:

a. Having privacy from remote monitoring without a warning tone signal at monitored station. Designated speaker-microphone stations have a privacy switch to prevent another station from listening and to permit incoming calls.
b. Communicating hands free.
c. Calling administrative console by actuating call switch.
d. Returning a busy signal to indicate that station is already in use.

C. Speakers: Free of noise and distortion during operation and when in standby mode.

## 2.4 ADMINISTRATIVE CONSOLE FOR MICROPROCESSOR-SWITCHED SYSTEMS

A. 12-Digit Keypad Selector: Transmits calls to other stations and initiates commands for programming and operation.

B. Volume Control: Regulates incoming-call volume.

C. Tone Annunciation: Momentary audible tone signal announces incoming calls.

D. LED Annunciation: Identifies calling stations and stations in use. LED remains on until call is answered.

E. Speaker Microphone: Transmits intercom voice signals when used via a voice-operated switch.

1. Minimum Speaker Sensitivity: 91 dB at one meter, with 1-W input.

F. Hard Buttons: To transfer and place calls on hold.

G. Reset Control: Cancels call and resets system for next call.

H. Digital Display: 16-digit alphanumeric LCD readout to register up to four three-digit station numbers.

I. Central-Equipment Cabinet: Comply with EIA/ECA-310-E. Lockable, ventilated metal cabinet houses terminal strips, power supplies, amplifiers, system volume control, and other switching and control devices required for conversation channels and control functions.

## 2.5 CALL CONTROL CONSOLE

A. Microprocessor-based instrument to process outside and internal calls with a 12-digit keypad selector.

B. 20-character alphanumeric display for the following:

1. Simultaneous display of up to three calling stations plus last station dialed.
2. Display of calls in order received with emergency calls taking precedence on the display.
3. Review of calls stored in groups of four.
4. Display of prompt messages to assist in system operation.

C. Programmable Keys: Minimum of 20 with LED indicators for ringing/busy status; programmable for trunk and operator functions.

D. Transfer Button: Calls to busy extensions and unanswered calls automatically returned to call control console.

E. Hold Button: With reminder feature every 30 seconds for parked calls or calls placed on hold.

F. Release Button: For use with parked calls or calls placed on hold.

G. Page Button: For engaging system paging functions.

H. Programmable for night answer, remote answer, and remote pickup features.

I. Programmable for distribution of emergency announcements, all-page announcements, zone-page announcements, and emergency/evacuation alert.

J. Central-Control Cabinet Equipment: Central switching equipment, central office adapter module, line link modules, power supplies, chassis adapters, and other switching and control devices required for trunk and internal conversation channels and control functions.

## 2.6 STAFF AND CLASSROOM TELEPHONE STATIONS

A. Faceplate: Stainless steel or anodized aluminum with tamperproof mounting screws.

B. Enclosure: Galvanized steel with 2-1/2-inch minimum depth.

C. 12-Digit Keypad: Input device to initiate calls and commands.

D. Volume Control: Regulates incoming-call volume.

E. Tone Annunciation: Momentary audible tone signal announces incoming calls.

F. LED Annunciation: Identifies calling stations and stations in use. Lamp remains on until call is answered.

G. Speaker Microphone: Transmits intercom voice signals when used via a voice-operated switch.

1. Minimum Speaker Sensitivity: 91 dB at one meter, with 1-W input.

H. Handset with Hook Switch: Telephone type with 18-inch-long, permanently coiled cord. Arrange to disconnect speaker when handset is lifted.

## 2.7 SPEAKER-MICROPHONE STATIONS

A. Mounting: Flush unless otherwise indicated, and suitable for mounting conditions indicated.

B. Faceplate: Stainless steel or anodized aluminum with tamperproof mounting screws.

C. Enclosure: Two-gang galvanized steel with 2-1/2-inch minimum depth.

D. Speaker: Minimum axial sensitivity shall be 91 dB at one meter, with 1-W input. Voice coil shall be not less than 3 inches, 2.3 oz. minimum; permanent magnet.

E. Tone Annunciation: Recurring momentary tone indicates incoming calls.

F. Call Switch: Mount on faceplate. Permits calls to administrative console.

G. Privacy Switch: Mount on faceplate. When in on position, switch prevents transmission of sound from remote station to system; when in off position, without further switch manipulation, response can be made to incoming calls.

2.8 CALL-SWITCH UNIT

A. Mounting: Flush unless otherwise indicated, and suitable for mounting conditions indicated.

B. Faceplate: Stainless steel or anodized aluminum with tamperproof mounting screws.

C. Enclosure: Single-gang box with stainless-steel faceplate.

D. Call Switch: Momentary contact signals system that a call has been placed.

E. Privacy Switch: Prevents transmission of sound signals from station to system.

F. Volume Control: Operated by screwdriver blade through a hole in faceplate to adjust output level of associated speaker.

2.9 ALL-CALL AMPLIFIER

A. Output Power: 70-V balanced line. 80 percent of the sum of wattage settings of connected for each station and speaker connected in all-call mode of operation, plus an allowance for future stations.

B. Total Harmonic Distortion: Less than 5 percent at rated output power with load equivalent to quantity of stations connected in all-call mode of operation.

C. Minimum Signal-to-Noise Ratio: 60 dB, at rated output.

D. Frequency Response: Within plus or minus 2 dB from 50 to 12,000 Hz.

E. Output Regulation: Maintains output level within 2 dB from full to no load.

F. Input Sensitivity: Compatible with administrative console and central equipment so amplifier delivers full-rated output with sound-pressure level of less than 10 dynes/sq. cm impinging on administrative console, speaker microphones, or handset transmitters.

G. Amplifier Protection: Prevents damage from shorted or open output.

2.10 INTERCOMMUNICATION AMPLIFIER

A. Minimum Output Power: 15 W; adequate for all functions.

B. Total Harmonic Distortion: Less than 5 percent at rated output power with load equivalent to one station connected to output terminals.

C. Minimum Signal-to-Noise Ratio: 50 dB, at rated output.

D. Frequency Response: Within plus or minus 3 dB from 70 to 10,000 Hz.

E. Output Regulation: Maintains output level within 2 dB from full to no load.

F. Input Sensitivity: Matched to input circuit and to provide full-rated output with sound-pressure level of less than 10 dynes/sq. cm impinging on microphones in administrative console, speaker microphones, or handset transmitters.

G. Amplifier Protection: Prevents damage from shorted or open output.

2.11 PAGING AMPLIFIER

A. Input Voltage: 120-V ac, 60 Hz.

B. Frequency Response: Within plus or minus 3 dB from 60 to 10,000 Hz.

C. Minimum Signal-to-Noise Ratio: 60 dB, at rated output.

D. Total Harmonic Distortion: Less than 3 percent at rated output power from 70 to 12,000 Hz.

E. Output Regulation: Less than 2 dB from full to no load.

F. Controls: On-off, input levels, and low-cut filter.

G. Input Sensitivity: Matched to input circuit and to provide full-rated output with sound-pressure level of less than 10 dynes/sq. cm impinging on speaker microphones or handset transmitters.

H. Amplifier Protection: Prevents damage from shorted or open output.

2.12 CONE-TYPE LOUDSPEAKERS/SPEAKER MICROPHONES

A. Minimum Axial Sensitivity: 91 dB at one meter, with 1-W input.

B. Frequency Response: Within plus or minus 3 dB from 70 to 15,000 Hz.

C. Minimum Dispersion Angle: 100 degrees.

D. Line Transformer: Maximum insertion loss of 0.5 dB, power rating equal to speaker's, and at least four level taps.

E. Enclosures: Steel housings or back boxes, acoustically dampened, with front face of at least 0.0478-inch steel and whole assembly rust proofed and factory primed; complete with mounting assembly and suitable for surface ceiling, flush ceiling, pendant or wall mounting; with relief of back pressure.

F. Baffle: For flush speakers, minimum thickness of 0.032-inch aluminum with textured white finish.

G. Vandal-Proof, High-Strength Baffle: For flush and surface-mounted speakers, self-aging cast aluminum with tensile strength of 44,000 psi, 0.025-inch minimum thickness; countersunk heat-treated alloy mounting screws; and textured white epoxy finish.

H. Size: 8 inches with 1-inch voice coil and minimum 5-oz. ceramic magnet.

## 2.13 HORN-TYPE LOUDSPEAKERS/SPEAKER MICROPHONES

A. Speakers shall be all-metal, weatherproof construction; complete with universal mounting brackets.

B. Frequency Response: Within plus or minus 3 dB from 275 to 14,000 Hz.

C. Minimum Power Rating of Driver: 15 W, continuous.

D. Minimum Dispersion Angle: 110 degrees.

E. Line Transformer: Maximum insertion loss of 0.5 dB, power rating equal to speaker's, and at least four level taps.

## 2.14 IP ADDRESSABLE MODULES

A. Modules utilized for the operation of the intercommunication and paging functions.

1. POE 802.3af compliant.
2. Support DHCP.
3. RJ45 connectivity.

B. Speaker Modules:

1. Interface with speaker and multiple call switches.
2. Capable of providing privacy function for speaker/microphone when activated.
3. Rated for installation within air plenum spaces.

## 2.15 CONDUCTORS AND CABLES

(edit) Retain this article unless cabling is specified in Section 271500 "Communications Horizontal Cabling."

A. Conductors: Jacketed, twisted pair and twisted multipair, untinned solid copper. Sizes as recommended by system manufacturer, but no smaller than No. 22 AWG.

B. Insulation: Thermoplastic, not less than 1/32 inch thick.

C. Shielding: For speaker-microphone leads and elsewhere where recommended by manufacturer; No. 34 AWG, tinned, soft-copper strands formed into a braid or equivalent foil.

1. Minimum Shielding Coverage on Conductors: 60 percent.

D. Plenum Cable: Listed and labeled for plenum installation.

## 2.16 RACEWAYS

(edit) Retain one of three "Educational Intercommunication and Program System Raceways and Boxes" paragraphs below. Coordinate selection with "Wiring Methods" Article and with Section 270528 "Pathways for Communications Systems" Retain first paragraph to allow Contractor to choose any material specified in Section 270528 "Pathways for Communications Systems."

A. Educational Intercommunication and Program System Raceways and Boxes: Comply with requirements in Section 270528 "Pathways for Communications Systems."

B. Educational Intercommunication and Program System Raceways and Boxes: Comply with requirements for electrical branch circuits specified in Section 270528 "Pathways for Communications Systems."

C. Educational Intercommunication and Program System Raceways and Boxes:

1. Raceways: EMT, Optical-fiber/communication raceways and fittings, Metal wireways, Nonmetal wireways, Surface metal raceways, Surface nonmetal raceways.
2. Boxes:
   a. Galvanized steel.

3. Faceplates:

   a. brushed stainless steel with Torx or security screws for all exposed fasteners.

4. Outlet boxes shall be not less than 2 inches wide, 3 inches high, and 2-1/2 inches deep.

D. Flexible metal conduit is prohibited.

## PART 3 - EXECUTION

### 3.1 WIRING METHODS

A. Wiring Method: Install cables in raceways and cable trays except within consoles, cabinets, desks, and counters, and except in accessible ceiling spaces and in gypsum board partitions where unenclosed wiring method may be used. Conceal raceway and cables except in unfinished spaces.

1. Install plenum cable in environmental air spaces, including plenum ceilings.
2. Comply with requirements for raceways and boxes specified in Section 270528 "Pathways for Communications Systems."

B. Wiring Method: Conceal conductors and cables in accessible ceilings, walls, and floors if not concealed shall be in raceway as noted above..

C. Wiring within Enclosures: Bundle, lace, and train cables to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.

### 3.2 INSTALLATION OF RACEWAYS

A. Comply with requirements in Section 270528 "Pathways for Communications Systems" for installation of conduits and wireways.

B. Install manufactured conduit sweeps and long-radius elbows whenever possible.

### 3.3 INSTALLATION OF CABLES

A. Comply with NECA 1.

B. General Requirements:

1. Terminate conductors; no cable shall contain unterminated elements. Make terminations only at outlets and terminals.
2. Splices, Taps, and Terminations: Arrange on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures. Cables may not be spliced.
3. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
4. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.
5. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
6. Cold-Weather Installation: Bring cable to room temperature before dereeling. Heat lamps shall not be used.

C. Open-Cable Installation:

1. Install cabling with horizontal and vertical cable guides in telecommunication spaces with terminating hardware and interconnection equipment.
2. Suspend cable not in a wireway or pathway a minimum of 8 inches above ceiling by cable supports not more than 60 inches apart.
3. Cable shall not be run through structural members or be in contact with pipes, ducts, or other potentially damaging items.

D. Separation of Wires: Separate speaker-microphone, line-level, speaker-level, and power wiring runs. Install in separate raceways or, where exposed or in same enclosure, separate conductors at least 12 inches apart for speaker microphones and adjacent parallel power and telephone wiring. Separate other intercommunication equipment conductors as recommended by equipment manufacturer.

## 3.4 INSTALLATION

A. Match input and output impedances and signal levels at signal interfaces. Provide matching networks where required.

B. Identification of Conductors and Cables: Color-code conductors and apply wire and cable marking tape to designate wires and cables so they identify media in coordination with system wiring diagrams.

C. Weatherproof Equipment: For units that are mounted outdoors, in damp locations, or where exposed to weather, install consistent with requirements of weatherproof rating.

D. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

E. Mounting of Stations: Surface mount at 54 inches above finished floor to center of station unless otherwise indicated.

## 3.5 GROUNDING

A. Ground cable shields and equipment to eliminate shock hazard and to minimize ground loops, common-mode returns, noise pickup, cross talk, and other impairments.

B. Signal Ground Terminal: Locate at main equipment cabinet. Isolate from power system and equipment grounding.

C. Install grounding electrodes as specified in Section 270526 "Grounding and Bonding for Communications Systems."

## 3.6 SYSTEM PROGRAMMING

A. Programming: Fully brief Owner on available programming options. Record Owner's decisions and set up initial system program. Prepare a written record of decisions, implementation methodology, and final results.

## 3.7 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

B. Perform tests and inspections with the assistance of a factory-authorized service representative:

C. Tests and Inspections:

1. Schedule tests with at least seven days' advance notice of test performance.
2. After installing educational intercommunications and program systems and after electrical circuitry has been energized, test for compliance with requirements.
3. Operational Test: Test originating station-to-station, all-call, and page messages at each intercommunication station. Verify proper routing and volume levels and that system is free of noise and distortion. Test each available message path from each station on system.
4. Frequency Response Test: Determine frequency response of two transmission paths, including all-call and paging, by transmitting and recording audio tones. Minimum acceptable performance is within 3 dB from 150 to 2500 Hz.
5. Signal-to-Noise Ratio Test: Measure signal-to-noise ratio of complete system at normal gain settings as follows:

a. Disconnect speaker microphone and replace it in the circuit with a signal generator using a 1000-Hz signal. Measure signal-to-noise ratio at paging speakers.
b. Repeat test for three speaker microphones, and one administrative console microphone, and for each separately controlled zone of paging loudspeakers.
c. Minimum acceptable ratio is 45 dB.

6. Distortion Test: Measure distortion at normal gain settings and rated power. Feed signals at frequencies of 150, 200, 400, 1000, and 2500 Hz into each intercom, paging, and all-call amplifier. For each frequency, measure distortion in the paging and all-call amplifier outputs. Maximum acceptable distortion at any frequency is 5 percent total harmonics.
7.
8. Power Output Test: Measure electrical power output of each paging amplifier at normal gain settings of 150, 1000, and 2500 Hz. Maximum variation in power output at these frequencies is plus or minus 3 dB.
9. Signal Ground Test: Measure and report ground resistance at system signal ground. Comply with testing requirements in Section 270526 "Grounding and Bonding for Communications Systems."

D. Inspection: Verify that units and controls are properly labeled and interconnecting wires and terminals are identified. Prepare a list of final tap settings of paging and independent room speaker-line matching transformers.

E. Educational intercommunications and program systems will be considered defective if they do not pass tests and inspections.

F. Prepare test and inspection reports.

## 3.8 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service and initial system programming.

1. Verify that electrical wiring installation complies with manufacturer's submittal and installation requirements.
2. Complete installation and startup checks according to manufacturer's written instructions.

## 3.9 WARRANTY

A. The manufacturer and installation contractor shall guarantee the system, equipment and all its components for a minimum of one (1) year from date of final acceptance of the system as documented by the Architect / Engineer. This guarantee shall cover the replacement of all parts and labor to replace the same made necessary by normal usage and wear.

B. Upon completion of the installation of the system, the contractor shall provide to the Architect / Engineer and Owner a signed written statement, on company letterhead, substantially in form as follows: "The undersigned, having engaged as the Intercom paging system contractor for the “PROJECT NAME” building project confirms that the system was installed in accordance with the wiring diagrams, instructions and directions provided by the manufacturer."

C. Contractor shall repair, adjust, and/or replace, whichever the Owner and or Architect / Engineer determines to be in its best interests, any defective equipment, materials, or workmanship, as well as such parts of the work damaged or destroyed by such defect, during warranty period, at the contractor's sole cost and expense.

D. In the event that any of the equipment specified, supplied, and/or installed as part of the work should fail to produce capacities or meet design specification as published or warranted by the manufacturer of the equipment involved or as specified in this document, the contractor shall, in conjunction with the equipment manufacturer, remove and replace such equipment with equipment that will meet requirements without additional cost to the Owner.

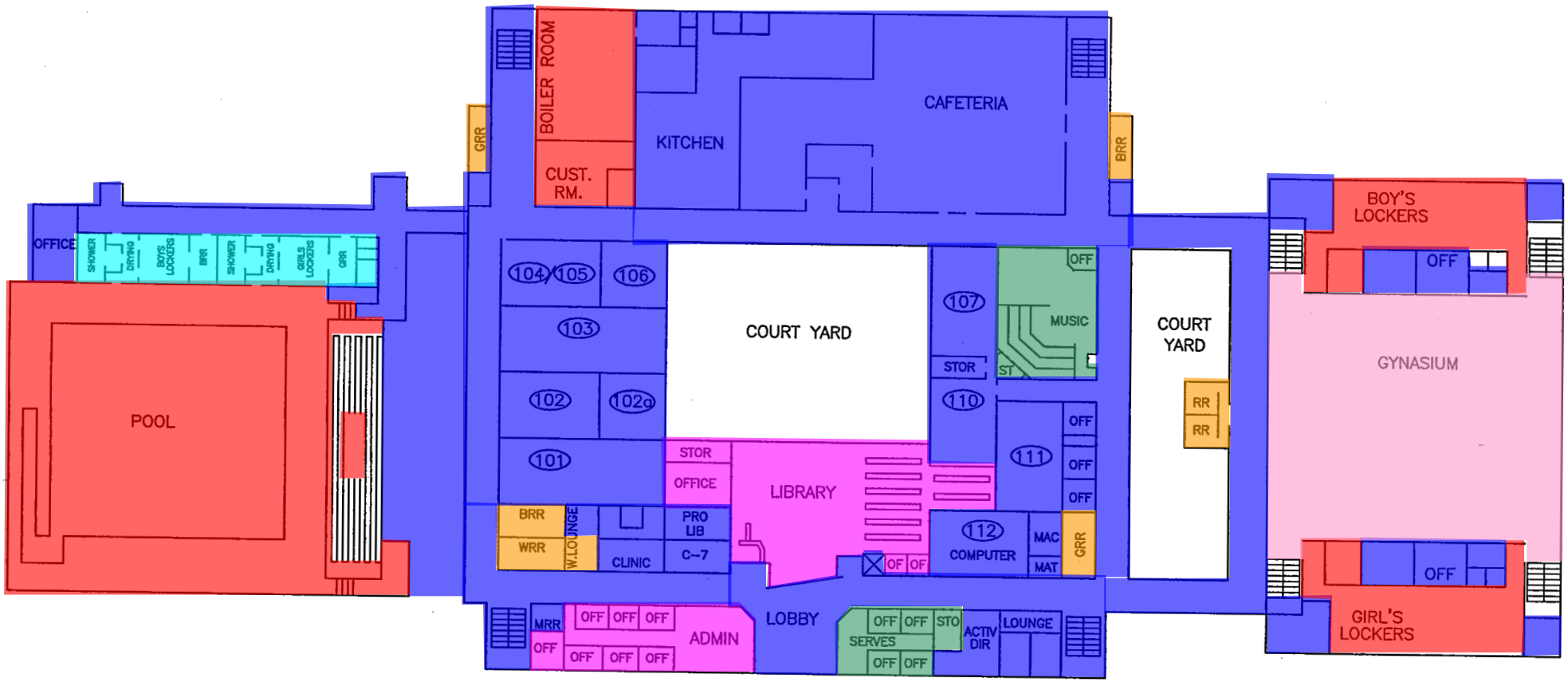
## 3.10 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain the educational intercommunications and program systems.

1. Train Owner's maintenance personnel on programming equipment for starting up and shutting down, troubleshooting, servicing, and maintaining the system and equipment.

END OF SECTION 275123.50

Attachment B



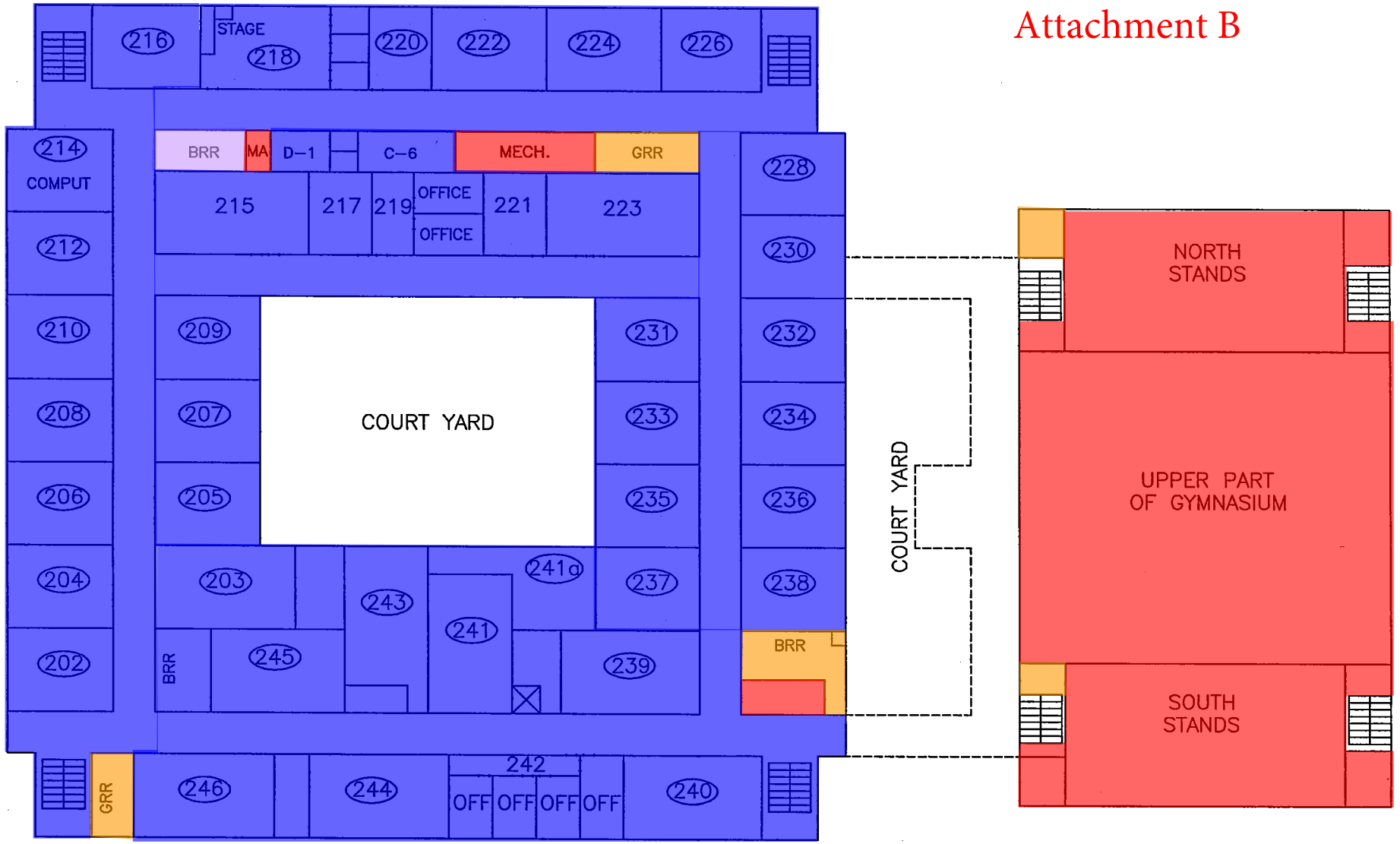

BRIDGER

I FLOOR

NO SCALE

CRT- Carpet Tiles
CRP- Rolled Carpet
VCT- Vinyl Tile 12" Tile
VT9- 9" Tile
LVT- Wood Grain Tile
CON- Concrete
LIN- Linoleum
EPX- Epoxy
CER- Ceramic Tile
WGF- Wood Gym Floor
SGF- Synthetic Gym Floor
RUB- Rubber Mat Flooring

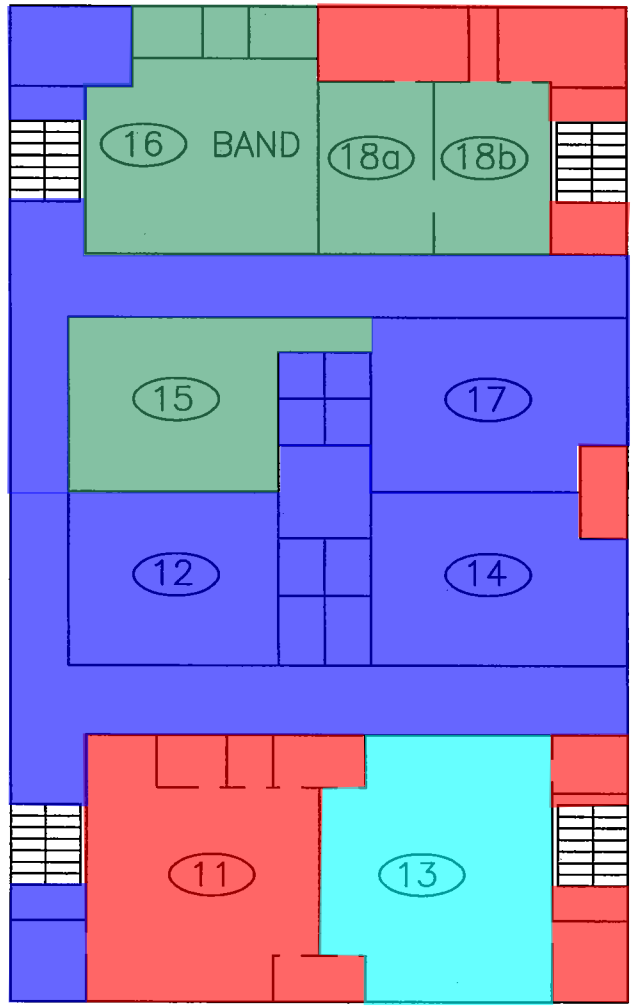
Attachment B




BRIDGER 2 FLOOR

NO SCALE

Attachment B




# BRIDGER

## BASEMENT

## BELOW GYM