



**REQUEST FOR COMPETITIVE SEALED PROPOSALS  
PUBLIC ADDRESS SYSTEMS REPLACEMENT**

**RFP #24-03-20**

**JARRELL INDEPENDENT SCHOOL DISTRICT**

**2023 Bond**

**Public Address Systems Replacement at  
Igo Elementary School, Jarrell Elementary School, and Jarrell  
Middle School**

**Bid Advertisements: March 20 and March 27, 2024**

**Pre-Proposal Conference: March 28, 2024, 3:00PM CST**

**Deadline for questions: Monday, April 1, 2024, 3:00PM CST**

**Responses due: Thursday, April 4, 2024, 3:00PM CST**

**REQUEST FOR COMPETITIVE SEALED PROPOSALS**  
**Jarrell Independent School District**  
**Public Address Systems Replacement**

**TABLE OF CONTENTS**

	<u>Page</u>
Proposer Selection Schedule .....	3
Project Description .....	5
Selection Process .....	11
Proposal Questionnaire .....	12
Criteria for Selection .....	15
General Scope Provisions.....	16
Appendix A - Felony Conviction Notice .....	18
Appendix B - Proposer Evaluation Form.....	19
Appendix C - Fee Proposal. ....	20
Appendix D – Conflict of Interest Questionnaire .....	21
Appendix E - Non-Collusion Affidavit.....	24
Appendix F - Debarment and Suspension Certification.....	25
Appendix G - Certificate of Non-Collusion Statement.....	26
Appendix H - W-9 Form and JISD New Vendor Form .....	27
Appendix I – 2023 Bond Wage Rates.....	29
Attachments Incorporated by Reference – Plans and Specifications	
Prepared by:	
Crux Technology + Security Consultants	
6421 Camp Bowie Blvd, Ste 400, Fort Worth, TX 76116	
800.685.6440	
Plans Dated: 03/14/24	
Igo Elementary School – Public Address System Replacement (16 pages)	
Jarrell Elementary School – Public Address System Replacement (2 pages)	
Jarrell MS– Public Address System Replacement (6 pages)	
Specifications	
Section 27 5116 – Public Address Systems (15 Pages)	

## Jarrell Independent School District Public Address Systems Replacement

The Jarrell Independent School District (“District” or “Jarrell ISD” or “JISD” is seeking to hire a firm under this Request for Competitive Sealed Proposal (“CSP”) for Public Address Systems Replacement at three (3) existing campuses Igo Elementary School, Jarrell Elementary School, and Jarrell Middle School in Jarrell, Texas as part of the 2023 Bond (hereinafter referred to as “Project”).

### **PROPOSER SELECTION SCHEDULE**

1. **Pre-Bid Meeting (Non-Mandatory)**: March 28, 2024, 3:00PM CST
  - a. **Location**: JISD Administration Office - 108 E. Avenue F, Jarrell, TX 76537 (large conference room).
  - b. **Virtual**: Option available via Zoom link and/or meeting ID below  
<https://us02web.zoom.us/j/85730422772?pwd=KzdSNGFSTWN3THILZUIISXNveXBjQT09>  
Meeting ID: 857 3042 2772; Passcode: 568142
  - c. **Tours**: Site visits at each campus available to all Proposers as follows:
    - i. 3:40 - 4:20 PM JES (last bell at ES is 3:00 PM) - 1615 County Road 313
    - ii. 4:30 - 5:10 PM IES - 1601 County Road 314
    - iii. 5:20 - 6:00 PM JMS (last bell at MS is 3:45 PM) - 101 E Avenue F
    - iv. **Note**: *Other tours to campuses will not be available so as to not impact school operations.*
2. **Questions Deadline**: Monday, April 1, 2024, 3:00PM CST
  - a. **Send Questions to: JISD Bond Program Manager – Sledge Engineering via email: [kelly@sledge.biz](mailto:kelly@sledge.biz)**
3. **Submission Deadline: Thursday, April 4, 2024, 3:00PM CST**
  - a. **Five (5) Hardcopies must be submitted at the JISD Administration Office at the date and time listed above (list on Envelope “RFP #24-03-20 PA Systems Replacement”). Proposals to be addressed to:**

Dr. Toni Hicks, Superintendent  
Jarrell Independent School District  
108 E Avenue F (or PO Box 9 if mailed), Jarrell, TX 76537  
512.746.2518
  - b. **NOTE: Proposals shall also be submitted electronically by 4:00 PM in PDF file** via email attachment or via Dropbox or similar file share link (if file size is greater than 20 MB) to Jarrell ISD c/o Kelly Dorman, Sledge Engineering: [kelly@sledge.biz](mailto:kelly@sledge.biz)  
**Hardcopies will not be received by Sledge Engineering.** Proposer can omit any confidential information from the PDF that is provided in the hardcopy.
  - **Possible Interviews**: Not anticipated (*note: JISD reserves the right to short-list and interview up to 3 firms. Schedule will be adjusted if this is needed.*)
  - **Proposer Considered by Board for Award**: Wednesday, April 17, 2024
  - **Contract Executed**: April 24, 2024 (*estimated*)
  - **Notice to Proceed**: May 1, 2024 (*estimated*)
  - **Substantial Completion with Testing/Acceptance**: August 1, 2024
  - **First Day of School**: August 13, 2024 (*estimated – school calendar has yet to be finalized by JISD*)

Note: The District may alter the schedule if it is determined that a schedule alteration would better allow the District to select the firm or firms that provide the best value to the District.

Submitters should use “**RFP #24-03-20 PA Systems Replacement**” on their package submission so that the District can clearly separate out the responses to this proposal from other deliveries not related to this competitive procurement. By submission of the firm’s response or proposal, submitters agree that all submitted materials will become the property of the Jarrell ISD and that all responses and any and all costs related to any part of this proposal are submitted voluntarily and without charge or any cost to the District. Submitter agrees by submission of a response or proposal, there shall be no liability to the District, its Trustees, officers, employees, or agents related to the submission of this proposal.

If Jarrell ISD believes that clarification is necessary or advisable, a clarifying addendum will be distributed to all prospective contractors. Jarrell ISD will not be bound by any oral or other informal explanation of the requirements of the documents.

# Jarrell Independent School District Public Address Systems Replacement

## PROJECT DESCRIPTION

The Jarrell Independent School District intends to replace the existing Public Address Systems at three (3) campuses including Igo Elementary School, Jarrell Elementary School, and Jarrell Middle School. Work shall be funded via the 2023 Bond (safety budget). Existing PA Systems will be replaced with new Valcom system. Valcom PA System was recently installed at the new Double Creek Elementary School (DCES) in August 2023. Other campuses are to be retrofitted to match the Valcom standard. Panic buttons are added to the campuses included in this scope to conform with Alyssa’s Law.

Plans and Specifications are incorporated:

Prepared by:

Crux Technology + Security Consultants  
6421 Camp Bowie Blvd, Ste 400, Fort Worth, TX 76116  
800.685.6440

Plans Dated: 03/14/24

Igo Elementary School – Public Address System Replacement (16 pages)  
Jarrell Elementary School – Public Address System Replacement (2 pages)  
Jarrell MS– Public Address System Replacement (6 pages)

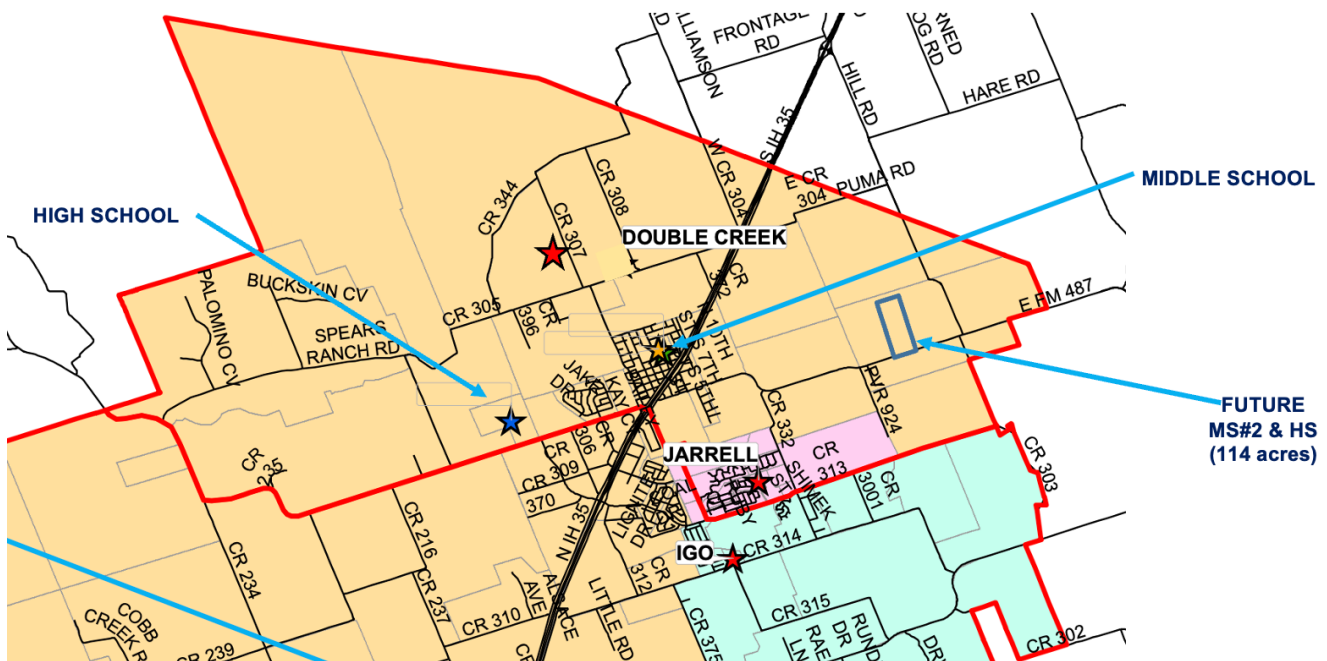
Specifications

Section 27 5116 – Public Address Systems (15 Pages)

Note: *The plans/specs shall govern over any inadvertent discrepancies listed in this Request for Competitive Sealed Proposals.*

The Project Location Map follows:

**Figure 1 – Project Location Map** (Red Stars represent Elementary Schools)



Additional information for each project follows:

1. **Igo Elementary School (IES)**

- a) School Address is 1601 County Road 314, Jarrell, TX
- b) Existing PA System: Extron System
- c) New PA System: Valcom
- d) Approximate building size is 120,000 SF (square feet)
- e) Capacity is 800 students (main building)
- f) ***Project includes the on-site portables (6 portables for a total of 12 classrooms plus 1 group restroom portable) – Aerial Map shown below:***

**Figure 2 – Igo ES Site Plan**



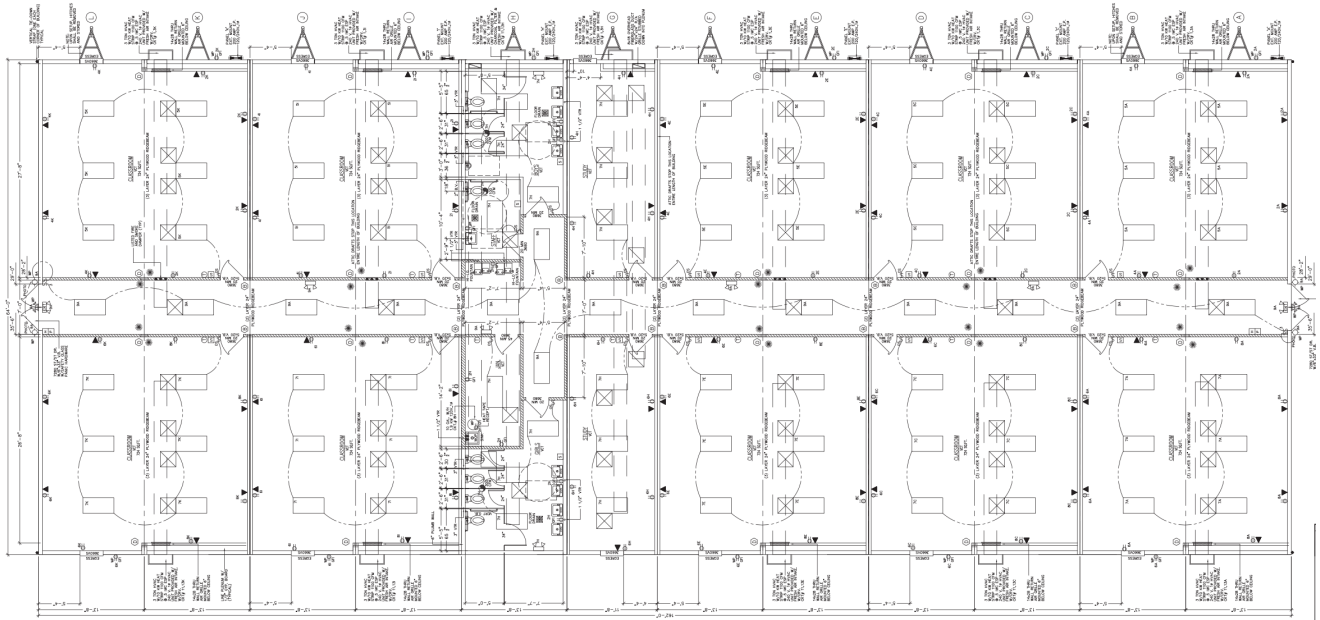
2. **Jarrell Elementary School (JES)**

- a) School Address is 1615 County Road 313, Jarrell, TX
- b) Existing PA System: Dukane System
- c) New PA System: Valcom
- d) Approximate building size is 100,000 SF (square feet)
- e) Capacity is 600 students (main building)
- f) ***Project includes the on-site portables (1 large portable with 10 full size classrooms, 2 half-size classrooms plus group restrooms)*** – Aerial Map and Floorplan shown below:

**Figure 3 – JES Site Plan**



**Figure 4 – JES Portable Floorplan**

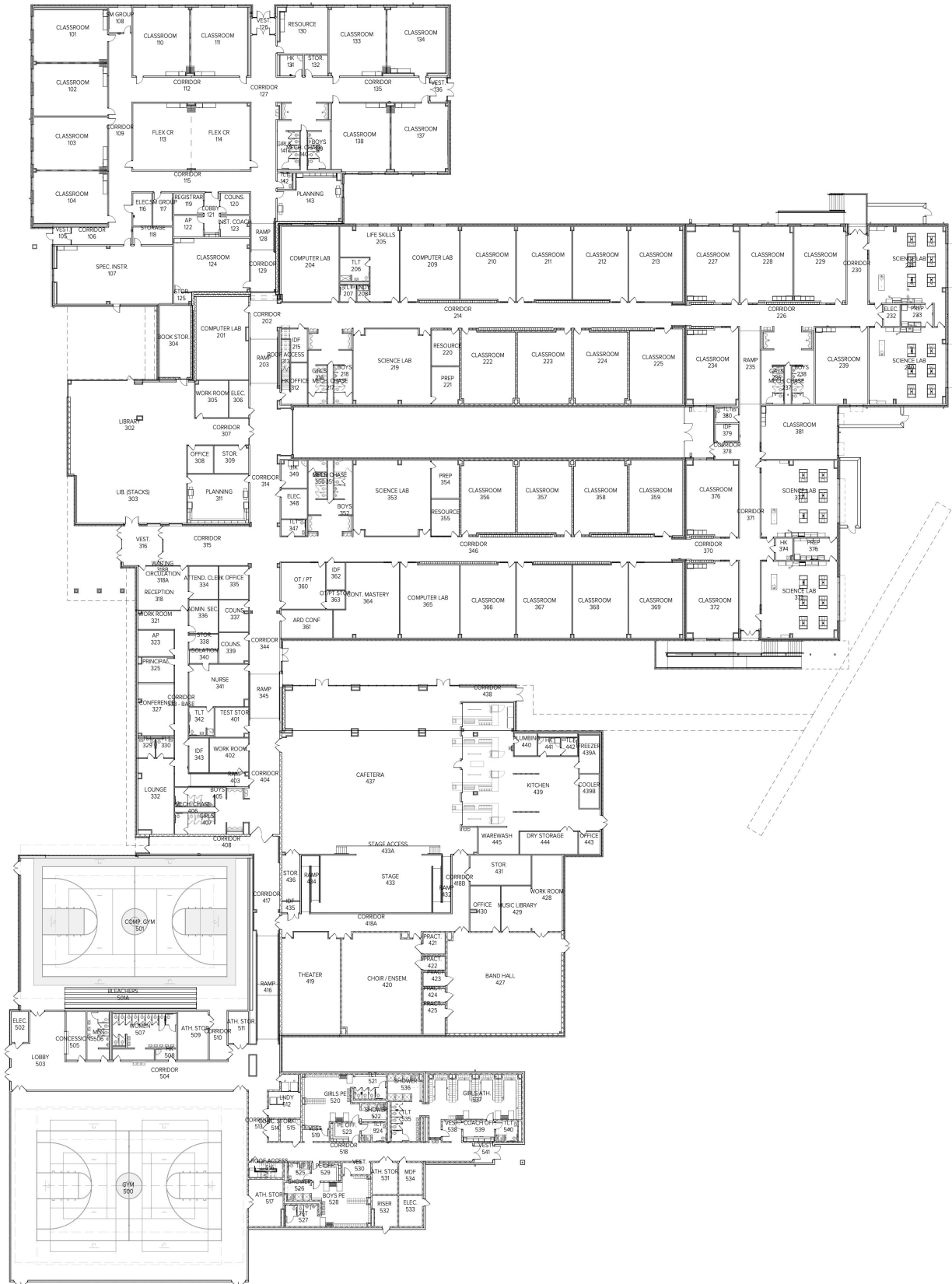


3. **Jarrell Middle School (JMS)**

- a) School Address is Address is 101 E Avenue F, Jarrell, TX
- b) Existing PA System: Extron System
- c) New PA System: Valcom
- d) Approximate building size is 150,000 SF (square feet)
- e) Capacity is 1,000 students (main building)
- f) Scope includes the original building, 2017 Bond and 2021Bond additions for complete system for the campus. The combined floorplan is provided below:



**Figure 5 – JMS Existing Floorplan (Through 2021 Bond Expansion)**



**Waiver by Responding Proposer (or “Respondent”): BY SUBMITTING A RESPONSE, THE RESPONDENT AGREES TO AND DOES HEREBY WAIVE ANY AND ALL CLAIMS IT HAS OR MAY HAVE AGAINST THE JARRELL INDEPENDENT SCHOOL DISTRICT, AND ITS TRUSTEES, EMPLOYEES, OR AGENTS ARISING OUT OF OR IN CONNECTION WITH (1) THE ADMINISTRATION, EVALUATION, OR RECOMMENDATION OF ANY RESPONSE; (2) ANY REQUIREMENTS UNDER THE SOLICITATION, THE CSP, OR RELATED DOCUMENTS; (3) THE REJECTION OF ANY RESPONSE OR ANY PART OF ANY RESPONSE; (4) WAIVER BY THE JARRELL INDEPENDENT SCHOOL DISTRICT OF ANY TECHNICALITIES IN THE CSP PACKAGE OR ANY RESPONSE; (5) WAIVER OR CHANGE IN ANY NON-MATERIAL PROVISION OF THE CSP SOLICITATION PACKAGE OR MATERIALS THAT DO NOT ADVERSELY AND SPECIFICALLY AFFECT THE PREVIOUSLY SUBMITTED RESPONSES; AND/OR (6) THE AWARD OF A CONTRACT, IF ANY.**

By submitting a proposal, each proposer agrees to exhaust its administrative remedies under District’s (Jarrell ISD) District Policy before seeking judicial relief of any type in connection with any matter related to this solicitation or the award of any contract. **NO CONTRACT AWARDED REFERABLE TO ANY OF THESE PROJECTS WILL INCLUDE A PROVISION FOR BINDING ARBITRATION.**

The District reserves the right to reject any or all responses, to waive any irregularities and/or technicalities in proposals received, or award a part but not all of the work involved in the Project. The District, in its sole discretion, will determine whether any or all of the proposals are responsive and reserves the right to make a determination as to whether any one or more Respondents are qualified.

The submission of a response to this CSP is an offer by the Respondent to contract only and does not constitute a contract. There will be no contractual obligations on the part of the District to any Respondent, nor will any Respondent have any property interest or other right in a contract unless and until all terms of the resulting contract in a form substantially similar to the contract issued as part of this CSP have been agreed upon by the District, including, without limitation, the cost for the services; all provisions of the contract have been negotiated to the satisfaction of the District; the contract is unconditionally signed by the District and the selected Proposer; the contract is delivered by all parties; and all conditions to be fulfilled by the Respondent prior to contracting have either been so fulfilled by the Respondent or waived in writing by the District.

Restricted and Prohibited Communications:

**The District shall implement a “Code of Silence” to enforce its commitment to ethical contracting standards and improve accountability and public confidence.** It is important to avoid both the appearance of conflicts and actual conflicts of interest. During the period between the date the District issues this CSP and the execution of the contract between Jarrell ISD and the Proposer who is awarded a contract, if any, Respondents shall restrict all contact with the District and direct all questions regarding this CSP, the Proposer’s response, the interviews (if any), the solicitation process, or any other matter regarding the solicitation, including questions regarding terms and conditions, only to the District’s representative(s) as named in this CSP. Do not contact members of the Board of Trustees or other employees of the Jarrell Independent School District. Contact with any of these individuals after issuance of the CSP and before selection of a Proposer is made, may result in disqualification of the Respondent’s response.

# Jarrell Independent School District Public Address Systems Replacement

## SELECTION PROCESS

1. The construction for this Project will be delivered under Competitive Sealed Proposal method as set forth in Texas Government Code Chapter 2269, Subchapter D. Any reference to “Request for Proposal” or “RFP” in this document is intended to represent Competitive Sealed Proposal (CSP).
2. The District will receive all of the responses to this CSP as outlined in the Proposer Selection Schedule, publicly open, and read aloud the names of the offers submitting a proposal in response to this CSP. **All responses must include all forms listed in all the Appendices.**
3. In accordance with the schedule published in this CSP, the District will evaluate and rank each submission in relation to the criteria set forth in the CSP.
4. An evaluation committee appointed by the Administration will review the timely submitted responses and prepare a short list of three (3) firms that may be interviewed or be asked to make presentations to the evaluation committee but reserves the right to request additional interview with a committee of the Board of Trustees or the full Board of Trustees if JISD desires. The evaluation committee will make recommendations to the District’s Board of Trustees as to the ranking of the firms. The evaluation committee will consist of Jarrell ISD administrators and the District’s Bond Program Manager representative for a total of five (5) Committee Members.
5. Submissions will be evaluated and ranked by the evaluations committee. The ranking will be based upon the criteria stated in this CSP and as set forth on the Evaluation Form as indicated in **Appendix B**. Only the final combined scoring will be subject to public information.
6. The fees submitted by the Respondent on the form in **Appendix C** will be a part of the consideration for selection.
7. The final selection the firm for the Project will be based on an evaluation of criteria set forth in this CSP to determine the best value to the District. The District reserves the right to waive any informality and to reject or accept any or all responses or parts of any and all responses.

# Jarrell Independent School District Public Address Systems Replacement

## PROPOSAL QUESTIONNAIRE

Reference is hereby made to the Attached **Specification Section 27 5116 – Public Address Systems** and the minimum requirements listed for Proposers in “Section 1.08 – Project Experience and Performance Requirements” and “Section 1.11 – Bid”. The following Proposal Questionnaire is intended to capture these requirements and as well other information the District deems vital to the proper evaluation of Proposers.

As part of your response, you must provide the following information in the sequence and format prescribed by this questionnaire. *Supplemental materials providing additional information may be attached, but the information requested below is to be provided in this format.*

### 1. Firm Information and Organization:

- 1.1 Name of firm:  
Address of principal office:  
Phone:  
Form of Business Organization (Corporation, Partnership, Individual, Joint Venture):  
Year founded:  
Primary individual to contact:  
Work phone of primary individual:  
Cell phone of primary individual:  
Email for primary individual:
- 1.2 How many years has your organization been in business of construction in its current capacity?
- 1.3 How many years has your organization been in business under its present name?  
Under what other or former names has your organization operated?
- 1.4 Provide a list of proposed personnel who would be assigned to the Project if selected and that person’s resume and qualifications for performing services under a contract for this Project if selected. State the primary work assignment and the percentage of time key personnel will devote to the Project.
- 1.5 List licenses and trade categories in which your organization is legally qualified to do business and indicate registrations or license numbers, if applicable.
- 1.6 List jurisdictions in which your organization’s organizational documents and trade name are filed.

**2. References:**

2.1 Provide three (3) references. Identify the project(s), the representative of the project owner and the representative of the architect or consultant as applicable (provide name, telephone number and email of points of contact for each) who the District may contact as references regarding your organization's services. References should include owners of education projects of comparable scope to the Project. The District reserves the right to determine the necessity or advisability of calling or emailing references.

**3. Experience:**

3.1 Has your organization ever failed to complete any work awarded to it? Describe.

3.2 Has your firm ever terminated a contract or been terminated by the Owner? Describe.

3.3 List any subcontractors included in scope of work for complete installation (name, point of contact, phone, and email)

3.4 Identify and describe five (5) of the most recent projects your firm has undertaken for providing Public Address Systems Replacement services that are MOST RELATED TO SCHOOL DISTRICT PROJECTS. List the projects in order of priority, with the most relevant project listed first. Provide the following information for each project listed:

- Project name, location, and description
- Construction cost (with comparison to the budget and to the Contract Sum/GMP)
- Total value of all change orders, if any
- Type of PA System installed
- Type of construction (new, renovation or expansion)
- Completion date
- Owner and architect/consultant, if any (include contact information for both)

3.5 List number of projects where Valcom PA System was installed by your firm.

3.6 Describe any construction services provided to **Jarrell ISD** in the past.

**4. Financial Capacity:**

4.1 Provide total revenues for the previous two (2) fiscal years.

4.2 Provide name, address, and phone number for insurer reference.

4.3 Surety: Name of bonding company, name and address of agent, if applicable. State whether the Respondent will be able to deliver payment and performance bonds in accordance with Texas Government Code §2269 and Chapter 2253.

4.5 Within the past 7 years has your organization, any officer or Principal of your organization, or any predecessor filed for bankruptcy? (if yes, please detail)

**5. Cost and Fees:**

- 5.1 Provide bid/quote as listed in **Appendix C**. *Note: Acknowledge the requirement that the proposed price includes a manufacturer representative (Valcom) attendance at the on-site Owner training.*
- 5.2 Provide supplement information to demonstrate complete understanding of turnkey scope for complete installation. (examples: quote sheet or descriptive lists of work)

**6. Description of Services, Schedule and Contract:**

- 6.1 Provide evidence firm has the ability to perform services described in the Attachments (Plans and Specifications)
- 6.2 Provide Construction Schedule demonstrating how the work will be completed. *Note: Any work on school days will be limited to after hours and weekends.*
- 6.3 Provide sample Owner/Contractor Contract, Letter of Agreement, or similar reference proposed for use for means of contracting.

## Jarrell Independent School District Public Address Systems Replacement

### CRITERIA FOR SELECTION

Jarrell ISD will utilize the evaluation form attached as **Appendix B** to evaluate Respondents and will consider the following criteria in selecting the firm or firms to which a contract may be awarded under this CSP:

1. Organization - 10%
2. References - 5%
3. Experience – 10%
4. Financial Capacity – 5%
5. Cost and Fees – 50%
6. Description of Services, Schedule and Contract – 20%

The District also shall consider and apply any existing laws or rules including any criteria related to historically underutilized businesses and the use of women, minority, small, or disadvantaged businesses, if applicable.

## Jarrell Independent School District Public Address Systems Replacement

### GENERAL SCOPE PROVISIONS

Proposer shall coordinate delivery of equipment with Owner and manufacturer. Any deviations in the following requirements shall be outlined by the Proposer.

1. **PROTECTION:** Protection of adjacent areas and completed work shall be the sole responsibility of the installer contractor. Any damage to existing construction or property shall be repaired at this proposal contractor's expense.
2. **HOISTING:** Contractor is responsible for all necessary hoisting required to unload materials from delivery trucks, transport materials to installation locations and hoist materials in place for installation for all items associated with the scope of work included in their proposal. Proposer shall recommend hoisting requirements.
3. **MATERIALS STORED ON-SITE:** For all materials stored on-site, Contractor shall be responsible for the unloading, transporting and stacking of materials in locations agreed upon by the Owner. Each Contractor shall move the stored materials to the installation locations at no additional cost. Proposer shall provide instructions for storing of materials.
4. **DESIGN:** The Equipment Manufacturer shall furnish all design and engineering required for the equipment.
5. **INSTALLATION:** The manufacturer shall furnish installation instructions for all material and equipment necessary to install the equipment complete and in accordance with the proposal documents. All details for the installation shall be included in the submittal for the system(s).
6. **TESTING AND OPERATIONAL INSTRUCTIONS:** The equipment manufacture shall include requirement for testing and furnishing written certification of the system(s). The contractor shall assist as required for the testing and operation of the equipment installed. The Proposal shall include all operational procedures and instructions for the Owner's personnel in the use and maintenance of the equipment.
7. **PAYMENT:** Proposer shall look exclusively for payment by Owner and shall provided itemized Pay Application (monthly) for tracking purposes.
8. **PRODUCTS:** The Proposer, in its Proposal, shall certify that products and workmanship proposed for use comply with requirements of the standard of Association, Trade or Federal Standards, except when more rigid requirements are required by applicable codes.
9. **BID SECURITY:** Waived for this CSP.
10. **LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE SCOPE WITHIN CONTRACT TIME:** Time is of the essence as timely completion of this scope is critical to safe operations. Liquated damages for this project shall be \$250/day.
11. **FOB DESTINATION:** Proposal prices are FOB destination. All freight/delivery charges are to be included in proposal prices for equipment not specifically listed to be provided by the Owner. No additional freight/delivery will be paid on invoice.



12. **VENUE:** This Solicitation and any resulting award(s) shall be interpreted within the laws of the State of Texas. Venue for any legal action filed relative to the Proposal or any resulting contract shall be in Williamson County, Texas.
13. **UNENFORCEABLE PROVISIONS:** In the event that any one or more of the provisions contained in this Solicitation (or resulting Contract) shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable, such provisions shall not affect any other provisions hereof, and this Solicitation (or any resulting Contract) shall be construed as if the invalid, illegal or unenforceable provision(s) had never been contained herein.
14. **MSDS SHEETS:** Successful Proposer(s) will be required to submit Material Safety Data Sheets for applicable item(s).
15. **AUTHORIZED SIGNATURES:** Proposals must be signed by an individual authorized to contractually bind the firm submitting the proposal.
16. **PROPOSER AFFIRMATION:** By signing this Proposal, the undersigned Proposer affirms that its company, corporation, firm, partnership, or individual has not prepared this Proposal in collusion with any other Proposer and that the contents of this proposal as to prices, terms, or conditions have not been communicated by the undersigned or by an employee or agent to any other person or firm engaged in this type of business prior to the receipt of Proposals.
17. **SALES TAXES:** Purchases made against this invitation are for Owner use and are exempt from State Sales Tax and Federal Excise Tax. Do not include these taxes in your proposal.
18. **PREVAILING WAGE RATES:** The provisions to the payment of prevailing wage rates and provisions regarding equal employment practices apply to this invitation and any resulting orders or contracts. Refer to “2023 Bond Prevailing Wage Rates” included with this CSP (Appendix I).
19. **OSHA:** The provisions of OSHA standards apply to this invitation and to any resulting contract(s) and compliance and safety is the sole responsibility of the Contractor.
20. **INSURANCE REQUIREMENTS:** Note Insurance Requirements that apply to this Invitation and any resulting award: If Proposer is to receive an award, the certificate must be submitted to the Owner prior to commencement of work on Owner property or within five (5) days of verbal or written request by the Owner (whichever is earlier). The certificate must be prepared correctly and submitted to the Owner.
21. **ADDENDA AND INTERPRETATIONS:** Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the contract documents which, if issued, will be sent by email to all who are known not later than one day prior to the date fixed for the opening of proposals. Failure of any Proposer to receive any such addendum or interpretation shall not relieve such Proposer from any obligation under this Proposal as submitted. All addenda so issued shall become part of the contract documents.

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: \_\_\_\_\_

**APPENDIX A  
FELONY CONVICTION NOTICE**

**State of Texas Legislative Senate Bill No. 1, Section 44.034, Notification of Criminal History, Subsection (a) states, “a person or business entity that enters into a contract with a school district must give advance notice to the district if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony.”**

**Subsection (b) states, “a school district may terminate a contract with a person or business entity if the district determines that the person or business entity failed to give notice as required by Subsection (a) or misrepresented the conduct resulting in the conviction. The district must compensate the person or business entity for services performed before the termination of the contract.”**

**THIS NOTICE IS NOT REQUIRED OF A PUBLICLY-HELD CORPORATION**

I, the undersigned agent for the firm names below, certify that the information concerning notification of felony convictions has been reviewed by me and the following information furnished is true to the best of my knowledge.

**PROPOSER’S NAME** \_\_\_\_\_

**AUTHORIZED COMPANY OFFICIAL’S NAME (PRINTED):** \_\_\_\_\_

A. My firm is a publicly-help corporation; therefore, this reporting requirement is not applicable.

**Signature of Company Official:** \_\_\_\_\_ **Date** \_\_\_\_\_

B. My firm is not owned nor operated by anyone who has been convicted of a felony:

**Signature of Company Official:** \_\_\_\_\_ **Date** \_\_\_\_\_

C. My firm is owned or operated by the following individual(s) who has/have been convicted of a felony:

Name of Felon(s):  
\_\_\_\_\_

Details of Conviction(s):  
\_\_\_\_\_  
\_\_\_\_\_

**Signature of Company Official:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Jarrell Independent School District  
Public Address Systems Replacement**

**APPENDIX B  
PROPOSER EVALUATION FORM**

**RATING SCALE: Excellent: 5 Above Average: 4 Average: 3 Below Average: 2 Poor: 1**

Criteria	Weight	Company Name							
1. Organization	10%								
2. References	5%								
3. Experience	10%								
4. Financial Capacity	5%								
5. Cost / Fees	50%								
6. Description of Services, Schedule and Contract	20%								
<b>RANK</b>	100% Max								

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX C  
FEE PROPOSALS**

Fee Proposal based on Following Schedule:

Scheduled Start: May 1, 2024  
Completion Date: August 1, 2024

	<u>Bid Price</u>
1. Igo Elementary School	\$ _____
2. Jarrell Elementary School	\$ _____
3. Jarrell Middle School	\$ _____
<b>TOTAL BID PRICE</b>	<b>\$ _____</b>

*Responder acknowledges the requirement that the proposed price includes the firm’s representatives and a manufacturer’s representative (Valcom) attendance at the on-site Owner training.*

Name of Organization/Firm: \_\_\_\_\_

Signature of Authorized Representative: \_\_\_\_\_

Date \_\_\_\_\_

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX D  
CONFLICT OF INTEREST QUESTIONNAIRE**

(ATTACHED FORM – 2 Pages)

# CONFLICT OF INTEREST QUESTIONNAIRE

# FORM CIQ

## For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

### OFFICE USE ONLY

Date Received

**1** Name of vendor who has a business relationship with local governmental entity.

**2**  Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

**3** Name of local government officer about whom the information is being disclosed.

\_\_\_\_\_  
Name of Officer

**4** Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

Yes  No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

Yes  No

**5** Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

**6**  Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

**7**

\_\_\_\_\_  
Signature of vendor doing business with the governmental entity

\_\_\_\_\_  
Date

## **CONFLICT OF INTEREST QUESTIONNAIRE**

### **For vendor doing business with local governmental entity**

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

**Local Government Code § 176.001(1-a):** "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

**Local Government Code § 176.003(a)(2)(A) and (B):**

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

\*\*\*

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

**Local Government Code § 176.006(a) and (a-1)**

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

- (1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);
- (2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or
- (3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

- (A) begins discussions or negotiations to enter into a contract with the local governmental entity; or
- (B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

- (A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);
- (B) that the vendor has given one or more gifts described by Subsection (a); or
- (C) of a family relationship with a local government officer.

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX E  
NON-COLLUSION AFFIDAVIT**

**NON-COLLUSION AFFIDAVIT**

STATE OF TEXAS                   §  
COUNTY OF WILLIAMSON       §

By the signature below, the signatory for the firm responding to the Request for Competitive Sealed Proposals certifies that neither he or she nor the firm, corporation, partnership or institution represented by the signatory or anyone acting for the firm submitting a response for this Project has violated the antitrust laws of this State, codified at Section 15.01, *et seq.*, Texas Business and Commerce Code, or the Federal antitrust laws, nor communicated directly or indirectly the proposal made to any competitor or any other person engaged in the same line of business, nor has the signatory or anyone acting for the firm, corporation or institution submitting a proposal committed any other act of collusion related to the development and submission of this proposal.

Signature:

Printed Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Date: \_\_\_\_\_

SUBSCRIBED and sworn to before me the undersigned authority by \_\_\_\_\_ the \_\_\_\_\_ of, \_\_\_\_\_ on behalf of said Respondent.

\_\_\_\_\_  
Notary Public in and for the  
State of Texas  
  
My commission expires: \_\_\_\_\_



**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX F  
DEBARMENT AND SUSPENSION CERTIFICATION**

This certification is required by the Federal Regulations implementing Executive Order 12549, Debarment and Suspension, 45 CFR Part 93, Government-wide Debarment and Suspension, for the Department of Agriculture (7 CFR Part 3017), Department of Labor (29 CFR Part 98), Department of Education (34 CFR Parts 85, 668, 682), Department of Health and Human Services (45 CFR Part 76).

The undersigned certifies, to the best of his or her knowledge and belief, that both it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency;
2. Have not within a three-year period preceding this contract been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction, violation of federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicated for or otherwise criminally or civilly charged by a government entity with commission of any of the offense enumerated in Paragraph (2) of this certification; and,
4. Have not within a three-year period preceding this contract had one or more public transactions terminated for cause or default.

Where the prospective recipient of federal assistance funds is unable to certify to any of the statements in this certification, such prospective recipient shall attach an explanation to this certification form.

Name of Organization/Firm: \_\_\_\_\_

Signature of Authorized Representative: \_\_\_\_\_

Date \_\_\_\_\_

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX G  
CERTIFICATION OF NON-COLLUSION STATEMENT**

Responder certifies under penalty of perjury that its response to this procurement solicitation is in all respects bona fide, fair, and made without collusion or fraud with any person, joint venture, partnership, corporation or other business or legal entity.

Does Responder agree? YES \_\_\_\_\_ Initials of Authorized Representative of Responder

Responder agrees to comply with all federal, state, and local laws, rules, regulations and ordinances, as applicable. It is further acknowledged that Responder certifies compliance with all provisions, laws, acts, regulations, etc. as specifically noted above.

Signature of Authorized Representative: \_\_\_\_\_

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX H**  
W-9 FORM (SEE ATTACHED FORM)

and JISD New Vendor Form (BELOW)



**Jarrell ISD**  
**New Vendor Information Form**

Vendor Name \_\_\_\_\_

Corporate Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Mailing Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone# \_\_\_\_\_ Cell \_\_\_\_\_

Principal Contact \_\_\_\_\_

Email address \_\_\_\_\_

Taxpayer ID Number (Attached W-9) \_\_\_\_\_

Years in Business \_\_\_\_\_

Office Use:

Date Received \_\_\_\_\_ Phone Number Verified \_\_\_\_\_

Entered in Staff Member Submitted by:

## Request for Taxpayer Identification Number and Certification

**Give Form to the  
requester. Do not  
send to the IRS.**

▶ Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Print or type.  
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
2 Business name/disregarded entity name, if different from above	
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.  <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate  <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____ <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is <b>not</b> disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.  <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):  Exempt payee code (if any) _____  Exemption from FATCA reporting code (if any) _____  <small>(Applies to accounts maintained outside the U.S.)</small>
5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
6 City, state, and ZIP code	
7 List account number(s) here (optional)	

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

<b>Social security number</b>												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table>												
<b>or</b>												
<b>Employer identification number</b>												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table>												

### Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

**Sign Here**

Signature of  
U.S. person ▶

Date ▶

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

## Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.*

**Jarrell Independent School District  
Public Address Systems Replacement**

Company Name: _____
---------------------

**APPENDIX I**  
2023 Bond Wage Rates

(ATTACHED FORM – 2 Pages)

## Jarrell ISD Minimum Prevailing Wage Rates

### Construction Type: Building

Classification	\$/HR	Work Activities
Abestos Worker/Heat & Frost Insulator (Duct, Pipe and Mechanical System Insulation)	\$28.10	Insulator for any MEP System
Boilermaker	\$29.47	Fabrication of boilers from steel plate and sections
Carpenter (Excludes acoustical ceiling installation, drywall hanging, Form Work, and Metal Stud Installation)	\$26.00	Roof blocking, interior blocking, temporary doors, hanging doors, hardware, finish carpentry, and cabinet installation, surveying instrument operator. This classification also covers the following: installation of interior plastic laminate panels, overhead doors and shutters, folding partitions, louvers, tack/marker boards, toilet partitions, toilet accessories, wire mesh partitions, blinds, and other similar items not mentioned elsewhere.
Electrician (excludes sound & communication systems)	\$32.00	Installation of conduit. Connection/termination of lighting, panels, wiring and other electrical devices for electrical systems > 48volts.
Electrician (low voltage wiring only)	\$32.00	Installation of conduit and pathways for low voltage systems <= 48 volts.
Elevator Mechanic	\$47.28	
Power Equipment Op (Cranes)	\$34.85	Crane, crane truck, etc.
Ironworker (Ornamental)	\$26.76	Handrails, guardrails, ornamental steel gates (not fencing)
Ironworker (Structural)	\$25.60	Structural steel, decking, composite deck stud installer
Pipefitter (including HVAC pipe installation)	\$34.15	HVAC Hydronic piping, condensate piping, refrigerant piping, excluding hanger installation
Sprinkler Fitter (Fire Sprinkler)	\$34.60	Fire sprinkler piping installation, excluding hangers
Sheetmetal Worker (excludes HVAC Duct Installation)	\$28.35	Roofing sheetmetal (coping cap, expansion joints, reglets, etc.), sheetmetal flashing associated with waterproofing
Sheetmetal Worker (HVAC Duct Installation only)	\$28.35	Installation of hangers, ductwork and connecting duct to units
Bricklayer	\$20.16	Brick, CMU, Pavers, Masonry retaining walls, Masonry planters
Carpenter (acoustical ceiling installation only)	\$14.00	Acoustical (grid) ceiling installation
Carpenter (form work only)	\$15.93	Formwork for concrete, masonry and other systems. Erection and dismantling of scaffolding
Cement Mason/Concrete Finisher	\$16.50	Concrete place & finish. Installation of stucco, EIFS, interior plaster and like systems.
Drywall Finisher/Taper	\$16.96	
Drywall Hanger and Metal Stud Installer	\$17.41	Installation of metal studs, drywall, and sheathing
Electrical Installer (Sound and Communication Systems) (Excludes Wiring)	\$12.50	Installation of equipment, devices, terminations, programing etc. for the following systems: Public Address, Data, phones, fire alarm, PA, HVAC controls, security, cameras, audio visual, and like systems.
Floor Layer: Carpet	\$21.88	Installation of carpet, VCT, terrazzo, epoxy and other flooring systems not specifically mentioned elsewhere
Glazier	\$12.83	Installation of all windows, glass & doors that are part of window type systems. Also includes perimeter sealants around window and window/door systems.
HVAC Mechanic (HVAC Unit Installation Only)	\$24.46	Physical preparation for and setting of units. Start up of units. Test and balance of water and air systems.
Ironworker, Reinforcing	\$12.27	
Laborer: Common or General	\$13.22	Landscaping, manual earthwork and compaction, installation of vapor barrier under slabs, wrecking formwork or other temporary structures, rodman, saw cutting and coring of concrete, installation of temporary or permanent erosion controls, pulling electrical wiring, transporting and hoisting materials (by hand or non-motorized equipment) to their final place of installation. All other work activities not identified shall fall under this classification of Laborer: Common or General.
Laborer: Mason Tender - Brick	\$12.17	
Laborer: Mason Tender - Cement/Concrete	\$11.85	
Laborer: Pipelayer	\$12.45	Transporting and putting piping in its final position.

Classification	\$/HR	Work Activities
Laborer: Roof Tearoff	\$11.28	
Operator: Backhoe/Excavator/Trackhoe	\$19.43	
Operator: Bobcat/Skid Steer/Skid Loader	\$13.00	
Operator: Bulldozer	\$14.00	
Operator: Drill	\$14.50	
Operator: Forklift	\$16.40	
Operator: Grader/Blade	\$19.30	
Operator: Loader	\$14.00	
Operator: Mechanic	\$18.75	
Operator: Paver (Asphalt, Aggregate & Concrete)	\$16.03	
Operator: Roller	\$11.25	
Painter (Brush & Roller) Excludes Drywall Finishing/Taping	\$18.76	Painter for all types of painting, installation of wall coverings and wall paper
Plumber (excludes HVAC pipe installation)	\$24.24	Installation of piping, supports, and fixtures
Rofer	\$12.00	Installation of roofing insulation, flashings and membranes, metal roof panels, metal siding, metal wall/soffit panels and composite metal wall/facia/soffit panels. Installation of furring channels and/or Z's for all systems listed above.
Tile Finisher	\$11.32	Grouting tile and polishing concrete
Tile Setter	\$16.35	
Truck Driver: Dump Truck	\$12.39	
Truck Driver: Flat Bed	\$19.65	Use the heavy highway wage
Truck Driver: Semi-Trailer	\$12.50	Use the heavy highway wage
Truck Driver: Water Truck	\$12.00	
Waterproofer	\$16.30	Installation of flashings associated with wall assemblies. Installation of above and below grade waterproofing products. Installation of sealants and caulking. Installation of insulation on floors, ceilings and walls. Installation of fire proofing and fire stopping.

NOTE: This wage scale applies to journeymen, licensed, or similarly accredited tradesmen. Any apprentices, trainees and/or helpers shall be paid at no less than 60% of the wage listed for journeymen, licensed, or similarly accredited tradesmen.

NOTE: For work activities requiring a journeyman, licensed, or similarly accredited tradesman there shall be no more than six apprentices, trainees, helpers or common/general laboreres for each journeyman, licensed, or similarly accredited tradesman on that crew.

Wage rates listed above are based on Davis Bacon Wages for Williamson County General Decision Number TX20230275 dated 06/16/2023

**Jarrell Independent School District  
Public Address Systems Replacement**

**Attachments Incorporated by Reference – Plans and Specifications**

Prepared by:

Crux Technology + Security Consultants  
6421 Camp Bowie Blvd, Ste 400, Fort Worth, TX 76116  
800.685.6440

Plans Dated: 03/14/24

Igo Elementary School – Public Address System Replacement (16 pages)  
Jarrell Elementary School – Public Address System Replacement (2 pages)  
Jarrell MS– Public Address System Replacement (6 pages)

Specifications

Section 27 5116 – Public Address Systems (15 Pages)

\*\*\* END \*\*\*



**SECTION 27 5116  
PUBLIC ADDRESS SYSTEMS**

**PART 1- GENERAL**

**1.01 SCOPE**

- A. At each campus Contractor shall install a modern IP based headend that will replace antiquated, and non-functioning equipment. New analog audio amplifiers for common areas, corridors and exterior paging speakers shall be installed within the nearest IDF or MDF. Existing non-functioning analog speakers shall be replaced according to the initial systems test report provided by the Contractor prior to demolition of equipment and approval of pricing.
- B. The Contractor shall complete a site visit prior to bid to verify quantities and conditions for existing clocks, corridor speakers, exterior speakers, and common area speakers.
- C. The scope listed above shall pertain to the following Jarrell ISD existing campuses.
  - 1. Jarrell ISD Elementary School
  - 2. Jarrell ISD IGO Elementary School
  - 3. Jarrell ISD Middle School

**1.02 SUMMARY**

- A. Documents: All Owner bid and performance requirements are included as part of this section as though bound herein.
- B. Contractor responsible for coordinating with Owner's Representative for access to all project areas.
- C. The Contractor shall complete an initial system test of all existing systems. A report shall be provided to the Owner and the Owner's Representative for review prior to the inception of the demolition phase.
- D. The Contractor shall provide all materials, equipment, labor and all other incidental materials and appliances necessary, as described herein and in the drawings, to provide complete turn-key and functional systems, regardless of any materials and/or equipment not listed or described in this specification and/or supplementary drawings.
- E. Contractor shall provide system optimization services provided by a factory authorized representative and shall complete an internal system commissioning prior to. A commissioning plan shall be submitted in writing to the Owner and or Owner's representative for approval. Notify the Owner and or Owner's representative two weeks prior to the start of commissioning to allow for Owner representation to be present during all testing and commissioning. Final testing and commissioning shall be completed by the Owner's representative.
- F. Provide and install complete and Public Address Systems per specifications listed herein that is free from all hums, buzzes and defects.
- G. General elements of the work shall consist of but not limited to following major items:
  - 1. All equipment shall be installed per the manufacturer's installation instructions.
  - 2. Any deviation from the manufacturer's installation instructions shall be requested prior to the work being done.
  - 3. Any unapproved deviations will be corrected at the installer's sole expense.
  - 4. Procure all permits and licenses required to complete this installation.
  - 5. Attend job construction and progress meetings.
  - 6. Provide all materials and essential ancillary equipment required to make a properly operating system as defined in the related drawings and specifications.
  - 7. Provide cabling according to the correct application and environment(s).
  - 8. Verify conditions and dimensions at the job site prior to installation.
  - 9. Submittal preparation and processing.
  - 10. Perform installation according to project documents.
  - 11. Perform initial testing, programming, and adjustments with written reports.

12. Provide labor and materials to complete final commissioning services.
13. Demonstrate system for final adjustments and approval by the Architect and/or Owner.
14. Preparation of Operational and Maintenance manuals and Project Record (as-built) documents.
15. Providing training for Owner.
16. Providing warranty service.
17. Remove all job specific created debris to approved collection points.

### 1.03 REFERENCES

- A. Specifications, Standards and Codes: All work shall be in accordance with the current editions of the following:
1. AVIXA Rack Building for Audiovisual Systems 2019.
  2. ANSI T1.404 (DS3) and CATV Applications.
  3. ANSI S4.48-1992
  4. ANSI X3T9.5 TPPMD.
  5. American Society of Testing and Materials (ASTM).
  6. TIA (Telecommunications Industries Association) building telecommunication wiring standards
  7. Building Industry Consulting Service International (BICSI) Telecommunications Distribution Methods Manual.
  8. Federal Communications Systems (FCC).
  9. Institute of Electrical and Electronics Engineers (IEEE).
  10. National Electrical Code (NEC) (Latest revision and pertinent addendums).
  11. National Electrical Manufacturer's Association (NEMA).
  12. National Fire Protection Association (NFPA) Publications (Latest revisions and pertinent addendums).
  13. "Basic Principles for suspended Loudspeaker Systems", Technical Notes Volume 1, Number 19, JBL Professional or latest edition.
  14. "Handbook for Riggers" 1977 Revised Edition, Newberry, W.G., Calgary, Alberta Canada.
  15. Underwriters Laboratory (UL)
  16. Americans with Disabilities Act (ADA)
  17. In the event of a conflict between documents referenced herein and the contents of this specification, the contents of this specification shall be considered the superseding document with the exception of the ADA, NFPA and NEC publications.

### 1.04 IT COORDINATION

- A. Where connection between components or control features are accomplished over the Owner's LAN, Contractor shall coordinate with the Owners IT department for IP addresses, VLAN configuration, firewall access, and other issues pertaining to successful integration.

### 1.05 GENERAL REQUIREMENTS

- A. This section covers the general requirements for the installation of the Public Address System by the Contractor.
1. In the installation of this work, the Contractor shall comply in every way with the requirements of Owner's standards, local and state laws and ordinances, the National Board of Fire Underwriters, and the National Electrical Code. If, in the opinion of the Contractor, there is anything in the plans or specifications that will not strictly comply with the above laws, ordinances, and rules, the matter shall be referred to the attention of Owner's representatives for a decision before proceeding with that part of the work. No change in the plans or in the Specifications shall be made without full consent in writing by the Owner's representative's engineer.
  2. The Contractor shall obtain the Owner's permission before proceeding with any work necessitating cutting into or through any part of building structures such as girders, beams, concrete or tile floors, partition ceilings.

3. The Contractor shall be responsible for and repair all damage to building due to carelessness of workers, and exercise reasonable care to avoid any damage to Owner's property. The Contractor will report to the Owner's representatives any damage to the building which may exist or may occur during the occupancy of the quarters.
4. Contractor shall provide components, wire, connectors, materials, parts, equipment, and labor necessary for the complete installation of the system, in full accordance with the recommendations of the equipment manufacturers and the requirements, specifications and all applicable codes.
5. The Contractor shall be responsible for installation of proper grounding and bonding.
6. The Contractor shall take necessary steps to ensure that the required firefighting apparatus is accessible always. Flammable materials shall be kept in suitable places outside the building.
7. The Contractor shall install the materials in accordance with the manufacturer's specifications.
8. Equipment shall be held firmly in place with manufacturer's recommendation and/or EIA standard types of mounting hardware. All equipment shall be installed to provide reasonable safety for the operator.
9. The Contractor shall promptly correct all defects for which the Contractor is responsible.
10. The Contractor shall insure that all records and reports, City relations, engineering, metering, inspections, testing, quality or service standards and safety measures comply with standards applicable for the State where the work is being performed.
11. The Contractor shall coordinate all work with the Owner's assignee or as will be designated at a future date.
12. The Contractor shall remove all excess material and debris and return to its original state of cleanliness. The Contractor shall maintain a work area free of debris, trash, empty cable reels, scrap wire, etc., and dispose of such items daily.
13. Upon completion of installation and prior to acceptance, all equipment shall be thoroughly cleaned and made free from extraneous bits of solder, wire, etc. by the Contractor. The Contractor shall cleanup work area and remove ALL waste and trash. Debris resulting from the installation shall be removed from all areas and disposed of by the Contractor.
14. All work shall be done in a thorough and conscientious manner according to industry standards and shall be subject to inspection and acceptance.
15. The Contractor shall be certain that all installation work areas are secure and made safe in accordance with Occupational Safety and Health Administration (OSHA) regulations.
16. An appropriate installation schedule shall be developed by the Contractor and will be subject to approval by the Owner's representatives. The construction schedule should include at least one installation supervisor, or lead technician, for on-site management of the project.
17. Prior to starting the installation, the assigned installation supervisor, or lead technician, shall participate in a walk-through of the project location with Owner's designated staff to review the installation documentation, verify that all construction necessary for the installation has been completed, and verify all installation methods and cable routes.
18. The Contractor shall be responsible for completing a standardized report form addressing the weekly progress of the installation schedule.
19. It shall be the responsibility of the installation Contractor to furnish any special installation equipment or tools necessary to properly complete the installation.
20. The Contractor shall not roll or store cable reels without an appropriate underlay.
21. The Contractor shall not place any distribution cabling alongside power lines, or share the same conduit, channel, or sleeve with electrical apparatus.
22. The Contractor shall insure that the maximum pulling tensions of the specified distribution cables are not exceeded at any time during the placement facilities. Failure to follow the appropriate guidelines may require the Contractor to provide additional material and labor necessary to properly rectify the situation. This shall also apply to all damages sustained to the cables by the installation Contractor during the implementation.
23. Materials shall be consistent throughout the building. Where two or more units of the same class of equipment are required, these units shall be the product of a single manufacturer and shall be the same product with the same material, model, and manufacturer number.

24. The wiring, materials, and equipment furnished for this request shall be essentially the standard product of the manufacturer.
25. All wiring, materials, and equipment must be listed and labeled by a nationally recognized testing laboratory.
26. All wiring, materials, and equipment must be suitable for the environment they are to be permanently installed in.
27. All equipment proposed by the Contractor must be new and unused. Equipment refers to all hardware, software, equipment, cabling, materials, and incidentals etc.

#### **1.06 SUBMITTALS**

A. Successful Contractor will submit a single electronic PDF copy of the submittal package within 20 days of written notification to proceed or other written documentation from the Architect or General Contractor. Documents will be organized into the following sections:

B. General

1. Partial submittals shall not be acceptable without prior approval by the Consultant or Owner's Representative.
2. The Contractor shall not be relieved from any contract-required responsibility by the Owner's approval of submittals.
3. Nothing in the specification shall relieve respondents of system package design responsibility, including, but not limited to, all equipment furnished under this contract. The successful respondent is, in all cases, solely responsible for the performance of the delivered system, and for furnishing complete system documentation for every part of the system.
4. No portion of the work shall commence, or equipment ordered until the Owner has approved the submittals.
5. All work to be performed in accordance with approved submittals.
6. Provide submittals in accordance with Owner's performance requirements and Owner's approved construction schedule.
7. Submittals shall not be combined with additional scope awarded or other sections. Separate submittals shall be required.
8. No portion of the submittal package may be excluded without written permission by the Architect.

C. Submittal Requirements

1. Section 1 – Cover Sheet and Table of Contents
  - a. Cover sheet containing the Company Name and/or logo, Title of submittal package, client name, and Contractor work address with a point of contact (POC) and phone number and name of submittal preparer.
  - b. Table of Contents (TOC)
  - c. Listing, in order, of all following submittal Sections.
2. Section 2 – Product Data
  - a. Manufacturer's catalog information showing dimensions, colors, and configurations.
  - b. Submittals will include all items called for in PART 2 – PRODUCTS of this document and the manufacturers cut sheets containing make and model numbers for each item listed in the specifications and the bill of materials only. No lengthy installation or operation manuals will be accepted.
  - c. The product data shall be divided by system(s) and in the order presented in this specification document.
  - d. In cases of multiple product numbers on a single cut sheet, the Contractor will identify the proper part number with an arrow, check mark or highlight.
3. Section 3 – Pre-Qualification Certificate
  - a. Contractor will submit the following documents with project proposal:
    - 1) A letter of approval from the manufacturer indicating completion of pre-qualification requirements.
    - 2) Training certificates for design, engineering, and installation of the proposed products.

4. Section 4 – Warranty Documentation

- a. The installation warranty will be for one year from substantial completion of the project. Substantial Completion is the point of the completion of training.
- b. Complete documentation regarding the manufacturer's warranty will be submitted as part of the proposal. This will include, but is not limited to, a sample of the warranty that would be provided to the Owner at substantial completion.

5. Section 5 – Record Drawings

- a. Contractor shall provide record drawings for the submittal package that will be used throughout the inspection process and into substantial completion / final acceptance. Drawings will contain the Contractor's own title block on the edge of the drawing and will include the company name, address, phone number and date of the final drawings. Use of any part of the Architect title block is not acceptable at any time.
- b. The drawings shall include the following information:
  - 1) All shown audio-video drop locations shall be labeled and shown in accordance with the construction floor plans and reflective ceiling plans.
  - 2) Audio-video block diagrams, or functionals, for all systems. Reproduction of Audio-Video Consultant diagrams, or functionals, shall not be permitted.
  - 3) Provide the audio-visual equipment rack elevation details demonstrating the locations of the equipment, power raceways and thermal management.
  - 4) All overhead rigging and installation details.
  - 5) Required support backing details with dimensions.
  - 6) Final conduit and cable pathways for coordination with E.C.

6. Section 6 – Project Schedule

- a. Contractor shall provide a work schedule detailing the points in which tasks are to begin and end, major milestones are to be completed as well as predecessors that are required for task to begin or be completed.

7. Any and all changes to the scope of work during the project shall be included in the drawings upon completion of system(s) installation and will be used as part of the substantial completion process. Reference the section on close out documentation for additional information on the substantial completion process.

### 1.07 QUALITY ASSURANCE

- A. The Owner's representative will make regular progress inspections. The Contractor shall make their job supervisor available to assist during these visits.
- B. The Contractor shall thoroughly familiarize themselves with the complete construction documents, to have visited all sites affecting the proposed work, studied bid package information and all necessary details of the complete set of drawings and specifications and to have included in the proposal an amount to cover all work.
- C. The Contractor shall keep a complete set of drawings, specification, reviewed submittals, and progress markups on the job site always. These documents shall be made available during Owner's representative site progress visits. Changes made during installation shall be noted in the project markup set.
- D. Submission of bids shall be deemed evidence of Contractor's knowledge, review, and examination of the construction documents.
- E. In the event of a conflict between documents referenced herein and the contents of this specification, the contents of this specification shall be considered the superseding document except for the NFPA publications, which shall have precedence.

### 1.08 PROJECT EXPERIENCE AND PERFORMANCE REQUIREMENTS

- A. The Contractor must be an experienced Public Address Systems Contractor, that is primarily engaged in the business of A/V system integration.
- B. The contractor must show proof that Public Address Systems and/or audio-visual systems integration is the primary function of the company.

- C. The Contractor shall show proof, as part of the bid, that it has been in the Public Address Systems installation business for a period of not less than 3 years and has successfully, completed projects of similar size and scope.
- D. The Contractor will provide proof that it supports a well-trained maintenance force in the area local to the project.
- E. Provide a competent supervisor and supporting technical personnel that is acceptable to the Owner's Representative, Owner, and Consultant during installation. Notify the Owner's representative in writing prior to any project supervisor replacement.
- F. The Contractor must maintain a fully staffed installation and service facility equipped with appropriate test equipment for repair of systems such as those specified herein.
- G. The Contractor shall be, or have direct relations through their subcontractors, an approved manufacturer's representative for all products they furnish and install.
- H. References:
  - 1. The Contractor shall submit the names, addresses and telephone numbers of the operating personnel who can be contacted regarding previous installed systems.
  - 2. Submitting incomplete or inaccurate reference information can be a reason to disqualify bidding Contractor.

#### **1.09 COOPERATION AND COORDINATION**

- A. Cooperate and coordinate as required with the Owner and Campus Staff.
- B. Provide all information as required or requested by the Owner, Architect, or Consultant for the project to be completed to the satisfaction of the Owner.
- C. Notify Owner's Representative in a timely manner of system design or installation conflicts, which affect the intended use, or performance of the system.
- D. Attend job construction and progress meetings that the Owner, or Owner's Representative deems necessary.

#### **1.10 QUALIFICATIONS**

- A. Manufacturer
  - 1. The manufacturer will have a minimum of ten (10) years' experience in the manufacture of sound system products.
  - 2. Maintain a 24-hour toll free telephone assistance line or online presence for customer and installer support.
- B. Contractor
  - 1. The Contractor selected to provide the installation of this system will be certified by the manufacturing company in all aspects of design, installation and testing of the products described herein.
  - 2. The Contractor will utilize the authorized manufacturer components in provisioning this Project.
  - 3. Contractor will have a minimum of three (3) years of recent experience with the proposed manufacturers' products.
  - 4. Contractor will have a minimum of five (5) years' experience with the design, installation and project management of local sound systems.
  - 5. Contractor will comply with all federal, state and local statutes regarding qualifications of firms.
  - 6. The Contractor will be experienced in all aspects of this work and will be required to demonstrate direct experience on recent systems of similar type and size.
  - 7. The Contractor will have personnel who are adequately trained in the usage of such tools and equipment.
  - 8. Contractor must provide On Site Supervision and Project Management by person(s).
  - 9. The Contractor must have previously established offices located within 75 miles of the project location as the starting point.

10. The Owner reserves the right to reject bid of any bidder who has previously failed to perform properly, or complete on time, contracts of a similar nature.

#### **1.11 BID**

- A. Contractor will be required to provide the following documents with the bid response.
  1. Training certificates for design, engineering and installation of the proposed product types.
  2. The contractor must show proof that Public Address System integration is the primary function of the company.
  3. Contractor will provide a list of all current installations that will be ongoing during this project, and the manpower requirements for each of those installations.
  4. The preferred Contractor will have a minimum of (3) three references. Contractors providing a reference with an invalid phone number will be considered as an incomplete response and may be disqualified.
  5. Contractor will provide a sample of the warranty that would be provided to the Owner when the installation is complete and documentation of the support procedure for warranty issues.
  6. Contractor will submit a resume of qualification with the Contractor's bid proposal indicating the following:
    - a. A technical resume of experience for the Contractor's Project Manager and on-site installation supervisor (Project Foreman) who will be assigned to this project. The project manager should have a minimum of 5 years' experience on projects of similar size and design. The Project Foreman will have a minimum of 3 years related project experience working crews of 4 or more personnel.
    - b. A list of technical product training attended by the Contractor's personnel that will install the system.
    - c. Any sub-Contractor who will assist this section Contractor in performance of this work, will have the same training and certification as the Contractor. The use of Sub-contractors is not prohibited for this project.

#### **1.12 DELIVERY STORAGE AND HANDLING**

- A. Deliver, Storage and Protection
  1. Contractor shall verify all site conditions are suitable for delivery of product.
  2. Deliver products in manufacturer's original, unopened, undamaged containers with labels intact.
  3. Contractor shall provide all equipment and materials necessary for the delivery of materials safely and securely on site.

#### **1.13 PROJECT CONDITIONS**

- A. Project Environmental Requirements.
- B. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.

### **PART 2- PRODUCTS**

#### **2.01 PRODUCT SPECIFICATIONS**

- A. Hardware: Contractor shall supply equipment, accessories, cables, and connectors necessary for system to operate according to stated functional requirements, whether said products are listed.
- B. Software: Contractor shall utilize Manufacturer's official current version of configuration software.
- C. Control Interfaces: Shall be labeled or configured with graphical user interface as appropriate.
- D. Power Supplies: As required, Contractor shall provide necessary power supplies for amplifiers requiring DC voltage to power Ethernet card when forced in standby mode.
- E. Uninterruptible Power Supplies (UPS): Contractor shall provide a minimum of one UPS per audio-visual equipment rack for all pre-power amplifier equipment, whether specified or shown. Signal processing equipment and a minimal amount of audio amplifiers shall be connected to the UPS to allow for the Owner to announce emergency instructions of the audio-video system if desired.

## 2.02 GENERAL

- A. Provide a complete solution for unifying all campus public address system devices with an easy-to-use software interface. Use specialized server software, hardware components, and a data network for bells, public address announcements, and intercom communications throughout campus. The user interface of the system shall be an intuitive, easy-to-use, Web-based application that allows office personnel to easily manage bell schedules, make pre-recorded or live announcement to various zones, and conduct intercom communications with individual locations.
- B. Manufacturers:
1. VALCOM, Inc Roanoke VA USA
- C. IP6000 COMMUNICATION SYSTEM
1. The Applications Server, Model VE6025, when used in a Class Connection IP6000 IP School Communications System shall provide scheduling, clock control and on demand distribution of WAV formatted audio to simultaneous groups of speakers per event. The server shall feature simple browser-based interface to facilitate easy manipulation of custom audio files for use as class change tones or emergency notification. Schedules shall be capable of automated initiation based upon day of the week, calendar date up to one year in advance and shall feature manual control capability. The 1U server shall utilize web browser access for setup of schedules, and real-time control. The server shall be capable of simultaneously operating multiple schedules, events per schedule and simultaneously occurring events. The schedules shall feature one-second event resolution. Events shall be capable of controlling paging, relays, and/or streaming audio. The server shall allow cascading events from a single time trigger. Schedules shall be presented to the user in a calendar view showing school year and months with tabs for other options. The server shall provide for default screen view after login and permissions per user. The Application Server shall provide on demand access of pre-loaded audio files via web browser or contact closure. Additionally, the Applications Server shall provide for "Quick Page" on demand triggers for easy origination of unscheduled events and shall import and convert audio files from many .wav formats with both an option to enhance audio files during import and an option to record page audio to a file. Events shall feature programmable pre/post page delays and volume control per event. The server shall control VE8001AR/VE8002AR/VE8004ARs to provide streaming audio to page group(s) and shall use VE8048 inputs to execute events from the Playlist. Controlling VE8048 relays from events shall be inherent. The server shall communicate with VIP-102B setup tool for setup and dial code and group information. Users shall have the ability to enter names for displaying dial codes, page groups, inputs, events, and schedules.
- D. Shall seamlessly integrate to any VoIP/SIP or legacy phone system via SIP, FXO or Loop Start Trunk.
- E. Contractor shall provide (1) VE8014AR at the MDF and connect (1) port to the existing telephone systems trunk port. System shall be able to add analog access talk paths with 4 (four) ports.
1. FXS station port access shall be via CC Model #VE8014BR (four ports).
- F. Enhanced Network Station Port Model VE801XAR will provide a single 10/100 Ethernet port and one to four FXS station ports. The Enhanced Network Station Port Model VE801XAR will provide all circuitry and software to convert network data to audio output and analog telephone control signals. The Enhanced Network Station Port Model VE801X will provide all circuitry and software to convert input audio and analog telephone events to zone page audio and control information suitable for transmission to other Class Connection IP Solutions products. The Enhanced Network Station Model VE801XAR shall be powered by an 802.3af PoE Ethernet switch port.
- G. Contractor shall provide a one or more Networked Page Zone Extenders at the MDF and each IDF. The purpose of this Networked Page Zone Extender is to provide streaming audio out to common area speakers (analog speakers). Connect the building's common area speakers to the Networked Page Zone Extender channels are required. The Networked Page Zone Extenders shall provide a single 10/100 Ethernet port, audio input/output circuits and N.O. relay contact outputs. The unit shall be SIP compatible. The Networked Page Zone Extender shall provide all circuitry and software to convert network data to zone page audio output. The Networked Page



Zone Extender shall also provide all circuitry and software to convert input audio to zone page audio and control information suitable for transmission to other Class Connection IP Solutions products over a data network. The Networked Page Zone Extender shall be powered via an 802.3af PoE Ethernet switch port.

- 1.Low level audio connection shall be via Model #VE8004BR (four ports)

#### H. EQUIPMENT SHELF

- 1.Provide 1 RMU rack shelf, single sided as required.
- 2.Rack shelf shall be Valcom Model #VP-9202

#### I. CLASSROOM SPEAKER CLOCK COMBO (S1-01)

- 1.Required Class Connection IP talkback speakers, clock and display combo shall be VL520BK-F.

#### J. LARGE SPEAKER CLOCK COMBO (S1-02)

- 1.Provide protective wire cage for Gymnasium.
- 2.Acceptable Manufacturer: Valcom
- 3.Acceptable Model: VE1225S

#### K. COMMON AREAS AND CORRIDORS

- 1.Existing audio amplifiers shall be tested with existing speakers prior to demolition. Provide a complete test report to the Owner.
- 2.New audio amplifiers required for common areas and corridors shall be located within the nearest IDF. Coordinate with Owner's IT department for access and device placement.
- 3.Contractor to confirm with Owner all paging zone requirements.
- 4.Speakers that have been found defective shall be replaced with the following models. Pricing shall be approved prior to purchase and installation.
  - a. The one-way wall mount speaker type (S1) for Common Areas and Corridors shall be Model # V-1920C with # VB-S11 square surface mounted mount metal backbox.
  - b. The one-way 2' x 2' lay in tile speaker type (S1) shall be Model # V-9022A-2 for Common Areas and Corridors.

#### L. BUILDING EXTERIOR (S1)

- 1.Required Class Connection One Way Horns for the building exterior shall be:
  - a. The one-way flex horn Model # V-9830-W with enclosure and square cover.

#### M. INTERIOR CLOCKS / DIGITAL SIGNAGE

- 1.Required Valcom IP Clocks shall be 4" digital displays in red.
- 2.Contractor to provide the following models:
  - a. Single sided VIP-D440A
  - b. Double sided VIP-D440ADS
- 3.Controlled and Set-Up via a software interface.
- 4.Powered Over Ethernet
- 5.Accurate via updates from a network time server

#### N. POWER SUPPLIES

- 1.Provide and install power supplies as required within the nearest IDF/MDF.
- 2.Power supplies shall be Valcom Model # V-C6124P

#### O. PUSH-TO-TALK MICROPHONE

- 1.Shall be installed at the reception desk.
- 2.Provide and install Valcom Model #VE8092.

#### P. TALK BACK GATEWAY

- 1.Acceptable Manufacturer: Valcom
- 2.Acceptable Model: VE1225S

#### Q. 2X2 CEILING TILE TALK-BACK SPEAKER (S1)

- 1.For use in spaces with ceiling tile speakers that require 2-way communication.
- 2.Acceptable Manufacturer: Valcom

3. Acceptable Model: V-9062

R. PUSH TO TALK (PTT)

1. Acceptable Manufacturer: Valcom
2. Acceptable Model: VE2972A

S. PANIC BUTTON (PB)

1. Acceptable Manufacturer: Valcom
2. Acceptable Model: V-2976

## 2.03 WIRE AND CABLE

A. Minimum Specifications

1. All wire and cable shall be UL approved, meet all national, state and local codes, and manufacturers recommendations for connected components for its intended application.
2. Plenum Insulation shall be rated for a minimum of 300 volts and satisfy the Underwriters Laboratories (UL) listed fire rated cable insulation requirements in plenum areas.
3. Cable runs shall be continuous runs. Mid-span cable splicing is not acceptable.
4. Any pulling compound or lubricant used in cable installation shall not deteriorate the conductor or the insulation.
5. All cabling shall have machine generated labels self-laminating or wrap around. Handwritten labels shall not be accepted.
6. Under carpet wiring and flat wiring shall not be used.
7. Manufacturers recommended cabling supersedes wire specified below.
8. Contractor responsible for verifying all plenum rated spaces prior to installation. Provide Plenum rated cable as required.
9. Contractor to verify and provide cabling that is applicable to its installed environment.
10. All Pre-Amplifier audio cable shall be balanced unless otherwise noted.
11. NO NYLON CABLE TIES.

B. HDBaseT AND AV/IP CABLES

1. CAT6 or better
2. Ensure that the cables pairs remain twisted together for canceling out Electromagnetic Interference (EMI) from the external sources are not exposed even partially, as it results in EMI issues.
3. Use cables that are resistive to bend loss if excessive bending of cables cannot be prevented due to installation constraints.
4. Avoid mounting the cabling components in places that block accessibility to other equipment (such as a power strip or fans) in and out of the racks.
5. Avoid
  - a. Applying extra twists.
  - b. Pulling or stretching beyond the specified pulling load rate.
  - c. Bending it beyond the specified bend radius, and not beyond 90°.
  - d. Creating tension in the suspension runs.
  - e. Stapling or applying pressure with the cable ties.
6. Avoid exposing cables to areas of condensation and direct sunlight.
7. Remove the abandoned cables, as they restrict the airflow, and contribute to the possible increase in the operational temperatures, which can affect the durability of the system.
8. The NEC (NFPA 70), Article 800.133 (2005 NEC) indicates the separation requirements. This section of the NEC specifies the following: Communication wires and cables shall be separated at least 50 mm (2 inches) from conductors of any electric, power, Class 1, non-power limited fire alarm, or medium-power network-powered broadband communication circuits. However, there are multiple exceptions to this generic rule, so refer to the NEC (NPFA 70) standard for more information.

C. ACCEPTABLE MANUFACTURERS

1. Belden
2. West Penn

3. Crestron
4. Extron
5. Liberty

#### D. JACKS, CONNECTORS AND WALLPLATES

1. All custom A/V panels shall be minimum 1/8" brushed aluminum with engraved paint filled legends unless otherwise noted.
2. All AV connectors shall be Neutrik or Switchcraft brand (non-crimp) or approved alternative.
3. All HDBaseT and AV/IP connectors shall be Leviton or approved alternative.

#### E. OTHER REQUIREMENTS

1. All materials and equipment proposed by the Contractor shall be new and unused. Equipment refers to all hardware, cabling, materials and incidentals, etc.
2. All equipment shall be installed per the manufacturer's instructions.
3. All boxes should be stored until substantial completion.
4. System shall be complete and free from all hums, buzzes and defects.
5. Any alternates must be approved by the system designer prior to bid.

### PART 3- EXECUTION

#### 3.01 INSTALLATION

- A. This Section includes installation requirements of the Integrated Audio-Video. If you have any questions regarding the intent or application of any feature, submit these questions to the principal contact for this project, as indicated in Division 00. This section covers the general requirements for the installation of the equipment by the Contractor.
1. All work shall be done in a thorough and conscientious manner according to industry standards and shall be subject to inspection and acceptance.
  2. The Contractor shall be certain that all installation work areas are secure and made safe in accordance with Occupational Safety and Health Administration (OSHA) regulations.
  3. An appropriate construction schedule shall be developed by the Contractor and will be subject to approval by the Owner's representatives. The construction schedule shall include at least one installation supervisor, or lead technician, for on-site management of the project.
  4. Prior to starting the installation, the assigned installation supervisor, or lead technician, shall participate in a "walk-through" of the project location with the Owner's representatives to review the installation documentation, verify that all construction necessary for the installation has been completed, and verify all installation methods and cable routes.
  5. The Contractor shall be responsible for completing a standardized report form addressing the weekly progress of the installation schedule.
  6. The Contractor shall maintain conductor polarity identification at the main equipment room, backbone, and horizontal connections in accordance with industry practices.
  7. The Contractor shall provide any necessary screws, anchors, clamps, tie wraps, distribution rings, miscellaneous grounding and support hardware, etc., necessary to facilitate the installation of the system.
  8. The Contractor shall be responsible for labeling all cable, distribution frames, and outlet locations, according to industry standards.
  9. It shall be the responsibility of the installation Contractor to furnish any special installation equipment or tools necessary to properly complete the installation.
  10. The Contractor shall not roll or store cable reels without an appropriate underlay.
  11. The Contractor shall not place any distribution cabling alongside power lines, or share the same conduit, channel or sleeve with electrical apparatus.
  12. The Contractor shall insure that the maximum pulling tensions of the specified distribution cables are not exceeded at any time during the placement facilities. Failure to follow the appropriate guidelines may require the Contractor to provide additional material and labor necessary to properly rectify the situation. This shall also apply to any and all damages sustained to the cables by the installation Contractor during the implementation.

13. The Contractor shall plug conduits where cabling has been installed by the installation Contractor in the equipment rooms, backbone and other cable entrance locations with re-enterrable duct seal of flame-retardant putty.
14. Materials shall be consistent throughout the building. Where two or more units of the same class of equipment are required, these units shall be the product of a single manufacturer and shall be the same product with the same material, model, and manufacturer number.
15. Wiring, materials, and equipment will be delivered and stored in a clean dry space. They will be properly packaged in factory fabricated type containers and protected from damaging fumes, construction debris and traffic until job completion.
16. The wiring, materials, and equipment furnished for this request shall be essentially the standard product of the manufacturer.
17. All installation techniques and fixtures shall result in ease of maintenance and ready access to all components for testing measurements. All external screws, nuts, and locking washers shall be stainless steel. No self-tapping screws shall be used unless specifically approved by the Owner's representatives. All parts shall be made of corrosion resistant material, such as plastic, anodized aluminum or brass. All materials used in installation shall be resistant to fungus growth and moisture deterioration. An inert dielectric material shall separate dissimilar metals apt to corrode through electrolysis under the environmental operating conditions specified.
18. The Contractor will submit for approval, a detailed description of the procedures and equipment included for the complete operational installation.

#### B. Wiring Plan Requirements

1. Distribution of the cabling will be accomplished through cable trays, conduit raceways, ducts, core-holes, extended columns, false half columns and plenums. Cabling shall be run at right angles from cable trays. Horizontal cable segments will be placed in cable trays and with cable exits/entrances supported by distribution rings or J-hooks. Cable may not rest on ceiling tile, be supported on existing ducting, tied or supported by fire alarm, security or electrical infrastructure nor interlaced with existing cable.
2. The Contractor shall be responsible for providing an approved ground at all equipment locations. The Contractor shall also be responsible for ensuring ground continuity by properly bonding all appropriate cabling, closures, cabinets, service boxes, and frameworks. All grounds shall consist of minimum 6 AWG copper wire or larger as required by code and shall be supplied from an approved building ground and bonded to the main electrical ground.
3. Observe proper circuit and loudspeaker wiring polarity. Properly and clearly label connections and wires as to function and polarity. No cables will be wired with polarity reversal between connectors, at either end. Take care when wiring microphone cables to ensure that constant polarity is maintained.

#### C. Cable Management

1. Maintain segregation of cables. AC power cables or speaker cables should not be run parallel within close proximity to signal wires (within 2"), unless the wires are twisted.
2. Bend radius for twisted-pair cables is standardized at 12" (3" diameter).
3. Bundle cables within the guidelines of 2005 National Electrical Code (NEC) in Article 310.15(B)(2).

#### D. Rack Dressing

1. All Racks require Lacer Bars or Strips to provide clean cable management within the rack.
2. All racks require the cable segregation of AC cables, Speaker Cables, low impedance balanced cabling and twisted pair cables.
3. All AV Racks should be assembled and tested at the Contractor's facility and transported to the job site when possible.
4. No Cable Ties; Velcro only.

#### E. Identification, Labeling and Documentation

1. The Contractor shall label all termination devices, panels, enclosures and equipment rooms. The Contractor will mark each unit with permanently attached, self-laminating markings that will not impair the equipment or present a hazard to maintenance personnel.
2. Place wire identification numbers on each end of all conductors. Install markers to be readable from left to right or top to bottom. Wire numbers shall be computer printed. Handwritten labels are not acceptable.
3. Mark all spare conductors and coiled neatly located at the bottom of the equipment rack.

### 3.02 TESTING REQUIREMENTS

- A. The Contractor shall perform sample tests in the presence of the Owner’s representatives. Performing the testing procedures specified herein assures that the equipment and interconnection meets the performance characteristics specified. If testing indicates that the performance characteristics are not met, the test shall be declared a failure. The communication equipment and interconnection cabling shall be modified and/or repaired accordingly. The failed test and any other test that may be affected by the modification and/or repair shall be rerun. After all components have been installed, the integrity of the equipment and interconnection cabling shall be verified.
- B. If system test fails because of any component(s) in the system, the failed component(s) shall be corrected or substituted with other components and the tests shall be repeated. If a component has been modified because of the system test failure, a report shall be prepared and delivered to Owner’s representatives prior to retesting. The Contractor shall prepare and submit all test procedures and data forms for the post installation and system test to the Owner’s representatives.
- C. The test report shall contain the description of all tests performed, the results obtained, and any required adjustments or modifications necessary because of testing and installation. This report shall reflect the as-built communication equipment and interconnection cabling. An authorized representative of the Contractor shall sign the test report. At least three copies of the test report shall be sent to the Owner’s representatives.

#### 1. Sample test report

ITEM	ROOM/AREA	INPUT / OUTPUT	SOURCE	TEST RESULT	RECOMMENDED CORRECTIVE ACTION
1	Cafeteria Stage	AV-01 HDMI IN	Tech Laptop	No image displayed.	Verify HDBaseT connectivity on 12/25/19.

- D. The test procedures shall have the Owner’s representative’s approval before the tests.
- E. Contractor shall demonstrate to the Owner’s representatives that the equipment operates as specified and that the tests meet performance requirements.
- F. The Contractor shall ensure that the equipment is in first-class working condition and free of short circuits, ground loops, parasitic oscillations, excessive hum, RF interference, or instability of any form.
- G. The Contractor shall test each operational component and adjust for equal sound levels at a given volume setting and replace defective items.
- H. Contractor shall ensure that all loudspeaker and distributed audio systems described herein are balanced and optimized for maximum quality sound and coverage of listening areas.

### 3.03 TRAINING

- A. System training shall be provided for the operator/user and technical staff.
  1. Operator/user training shall be held at Owner’s convenience and to the Owner’s satisfaction.
  2. Technical operation and maintenance training shall be held at Owner’s convenience and to the Owner’s satisfaction.
  3. The Contractor shall provide documentation demonstrating the Owner and/or Owner’s Representatives understand the operation and maintenance of the system.
- B. Complete operation and maintenance manuals and preliminary as-built drawings shall be delivered to the Owner one week prior to training sessions.
- C. Operator/user training shall minimally consist of:

1. Provide printed reference material for each trainee that documents and explains in layman's terms:
    - a. System block diagram
    - b. Normal day-to-day operation
    - c. Operator selectable features
  2. Provide a hands-on training with Q & A session
- D. Technical Operations and Maintenance training shall consist of:
1. The technical explanation shall be sufficiently thorough that staff personnel shall be able to make any programming changes required, analyze malfunctions and make equipment substitutions or bypasses necessary to maintain system operation except for the malfunctioning equipment or circuits.
  2. Provide printed reference material for each trainee that documents and explains in technical terms:
    - a. System block diagram with technical features
    - b. Technical operation, adjustments and programming
    - c. System features and programming
    - d. Review of as-built drawings.
  3. Provide a hands-on training with Q & A session.
- E. Contractor will provide a complete and comprehensive list of the maintenance schedule for all installed and/or provided equipment. The list shall be provided in both printed and Adobe Acrobat formats.

### **3.04 ACCEPTANCE OF SYSTEMS**

- A. Specifications set forth for construction of the system have been devised to insure system compatibility and performance. Compliance to these specifications will be determined during periodic observances of construction. Repeated failure to comply with the specification will be considered before the initial acceptance phase of the plant commences.
- B. Prior to Contractor performed final testing, deliver preliminary as-build documents to Owner for use in conducting testing observation.
- C. Project Record Documentation
1. Upon completion of final engineering and incorporation of the Architect review comments, Contractor will provide to the Architect for its records the following close out documentation:
    - a. Record or As Build Drawings which shall include but not limited to:
      - 1) Functional block diagrams for each Integrated Audio-Video System. Reproduction of Audio-Video Consultant functional block diagrams shall not be accepted.
      - 2) All Integrated Audio-Video or Audio-Visual junction box locations
      - 3) Audio Visual equipment rack locations
      - 4) Rack elevations
        - (a) Rack elevations shall show all components as installed under this contract.
        - (b) Contractor will label each component describing the component. (Examples: Cafeteria Amplifier or Gymnasium DSP etc).
      - 5) Floor plan drawings with device locations and associated assigned item number.
      - 6) Mounting detail for equipment and hardware.
      - 7) Schedule of all devices with associated panel termination, zoning, power circuits, etc.
      - 8) Corrected product submittal information
    - b. A complete inventory list of installed products shall include:
      - 1) Manufacture Name
      - 2) Model Number
      - 3) Serial Number
      - 4) Room number and/or description of installed location
    - c. Operation and Maintenance Manuals shall include

- 1) Include detailed procedures for system operation that begin with startup procedures and continue through system shut down referenced in section 3.3 Training.
  - 2) List of manufacture recommended maintenance and intervals with manufacture support contact information.
- D. Drawings will contain the Contractors own title block on the edge of the drawing and will include the company name, address, phone number and date of the final drawings.
1. Use of any part of the Architect title block is not acceptable at any time.
- E. Drawing documentation will be in the following format:
1. Two (2) electronic copies, one per flash drive shall be provided.
    - a. Drawings will be in both CAD (DWG) and PDF format and the Contractor will include all files on each drive.
    - b. File transfer is acceptable.
  2. Drawings shall be provided to the architect two weeks prior to the final testing and commissioning of the system. Coordinate with the Owner during the pre-construction meeting for low voltage Contractors to schedule this delivery date.
  3. The drawings will be reviewed on site with the architect and the Owner prior to the final acceptance process. Drawings rejected for any reason will delay the final acceptance process until resolved.
- F. Testing Results
1. In addition to the project record drawings, the Contractor shall provide the testing information for all audio-visual cabling.
    - a. Test results shall be provided to the architect two weeks prior to expected final acceptance of the system(s). Coordinate with the Owner during the pre-construction meeting for low voltage Contractors to schedule this delivery date.
    - b. The drawings will be reviewed on site with the architect and the Owner prior to the final acceptance process. Test results rejected for any reason will delay the final acceptance process until resolved.
- G. Once accepted by the architect and Owner all documentation / program code becomes the property of the Owner
- H. Within ten days receipt of the final acceptance notice, the Owner's representatives shall schedule and perform the final inspection. When the work is found acceptable under the contract documents and the contract is fully performed, declare substantial completion of the project.

### **3.05 WARRANTY**

- A. The Contractor shall warrant and guarantee all work against defects in material, equipment or workmanship for one (1) year from the date of substantial completion of the entire project.
- B. Upon receipt of written notice, Contractor shall remedy defects within thirty (30) days or the Owner shall correct the defects and the Contractor, or its surety shall be liable for expenses.

END OF SECTION

Igo Elementary School



AC - ACCESS CONTROL  
 AFF - ABOVE FINISHED FLOOR  
 AHJ - AUTHORITY HAVING JURISDICTION  
 AV - AUDIO AND VIDEO  
 BICSI - BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL  
 C - CONDUIT  
 CD - CONSTRUCTION DOCUMENTS  
 CCTV - CLOSED CIRCUIT TELEVISION  
 CO - CONDUIT ONLY (EMPTY CONDUIT WITH MULE TAPE)  
 CP - CONTROL PANEL  
 CU - COPPER  
 DR - DOOR RELEASE  
 EC - ELECTRICAL CONTRACTOR  
 EF - ENTRANCE FACILITY  
 EL - EMERGENCY LOCK DOWN  
 EP - ENTRANCE POINT  
 EPT - ELECTRONIC POWER TRANSFER  
 ESS - ELECTRONIC SAFETY AND SECURITY  
 FBO - FURNISHED BY OTHERS  
 FCC - FEDERAL COMMUNICATIONS COMMISSION  
 GND - GROUND  
 HC - HORIZONTAL CROSS-CONNECT  
 HR - HOME RUN  
 HVAC - HEATING, VENTILATION, AND AIR CONDITIONING  
 IBO - INSTALLED BY OTHERS  
 IDF - INTERMEDIATE DISTRIBUTION FRAME  
 IEEE - THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
 ISP - INTERNET SERVICE PROVIDER  
 JB - JUNCTION BOX  
 LV - LOW VOLTAGE  
 MB - MARKER BOARD  
 MC - MAIN CROSS-CONNECT  
 MDF - MAIN DISTRIBUTION FRAME  
 MH - MANHOLE  
 MIC - MICROPHONE  
 MMF - MULTI-MODE FIBER  
 MD - MOTION DETECTOR  
 MPOE - MAIN POINT OF ENTRY  
 NEC - NATIONAL ELECTRICAL CODE  
 NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION  
 NIC - NOT IN CONTRACT  
 NTS - NOT TO SCALE  
 OC - ON CENTER  
 PB - PULL BOX  
 PM - PROJECTOR MOUNT  
 PNL - PANEL  
 POC - POINT OF CONTACT  
 POE - POWER OVER ETHERNET  
 POS - POINT OF SALE  
 PP - PATCH PANEL  
 RCP - REFLECTED CEILING PLAN  
 RFI - REQUEST FOR INFORMATION  
 RFP - REQUEST FOR PROPOSAL  
 RMU - RACK MOUNT UNIT  
 SMF - SINGLE MODE FIBER  
 SMR - SURFACE MOUNTED RACEWAY  
 SW - SWITCH  
 TE - TELECOMMUNICATIONS ENCLOSURE  
 TIA - TELECOMMUNICATIONS INDUSTRY ASSOCIATION  
 TMGB - TELECOMMUNICATIONS MAIN GROUNDING BUSBAR  
 TYP - TYPICAL  
 UG - UNDERGROUND  
 UL - UNDERWRITERS LABORATORIES INC  
 UNO - UNLESS NOTED OTHERWISE  
 UPS - UNINTERRUPTIBLE POWER SUPPLY  
 USB - UNIVERSAL SERIAL BUS  
 VC - VOLUME CONTROL  
 VP - VIDEO PROJECTOR  
 WAP - WIRELESS ACCESS POINT  
 WP - WEATHER PROOF

**PROJECT ACRONYMS**

01. ANY DIMENSIONS SHOWN ON THESE DRAWINGS ARE INTENDED TO PROVIDE A GENERAL LOCATION AS REQUESTED BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS PRIOR TO ROUGH-IN AND IMMEDIATELY REPORT ANY CONFLICTS WITH THE OUTLET PLACEMENT TO THE GENERAL CONTRACTOR.

02. ALL CABLE BUNDLES WILL BE SUPPORTED EVERY 48"-60" OC WITH A J-HOOK OR OTHER APPROVED PATHWAY DEVICE. REFERENCE SPECIFICATIONS AND DETAILS FOR ADDITIONAL CABLING PATHWAY INSTALLATION REQUIREMENTS. CONTRACTOR WHO VIOLATES THESE REQUIREMENTS SHALL BE REQUIRED TO REPLACE THE AFFECTED CABLE PLANT AT THEIR EXPENSE.

03. PLASTIC TIE WRAPS ARE NOT PERMITTED AT ANY TIME ON THIS INSTALLATION. ALL CABLE ROUGH-IN AND DRESS-OUT WILL BE WITH VELCRO ONLY. ALL CABLES BUNDLED WITH PLASTIC TIE WRAPS SHALL BE IMMEDIATELY REPLACED AT THE CONTRACTOR'S EXPENSE.

04. DO NOT INSTALL ANY CABLES IN ANY CONDUIT SLEEVE, STUB UP, OR WALL CAP WITHOUT A PROTECTIVE BUSHING. CABLES PULLED INTO UNPROTECTED CONDUITS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. DO NOT INSTALL ANY CABLING INTO ANY CONDUIT THAT HAS NOT BEEN CONFIRMED TO BE BLOWN CLEAR. COORDINATE WITH ELECTRICAL PRIOR TO ROUGH IN OF ANY CABLING.

05. ANY CABLING FOUND PAINTED DURING THE CONSTRUCTION PROCESS WILL BE REPLACED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND PAINTER TO AVOID CONFLICTS.

06. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REFERENCE BOTH THE PROJECT DRAWINGS AND THE PROJECT SPECIFICATIONS. TOGETHER THEY FORM THE COMPLETE CONTRACT DOCUMENTS. PLEASE REFERENCE THE PROJECT SPECIFICATIONS FOR ALL MATERIALS, EQUIPMENT AND COMPONENTS NOT INDICATED ON THE DRAWING SET.

07. CONTRACTOR SHALL COORDINATE ALL FINAL CAMERA LOCATIONS, HEIGHTS AND CAMERA VIEWING ANGLES WITH OWNER/OWNER'S REPRESENTATIVE. FAILURE TO COORDINATE ALL FINAL CAMERA LOCATIONS, HEIGHTS AND VIEW ANGLES MAY REQUIRE RELOCATION OF CONDUITS, CABLE AND CAMERA LOCATIONS AT CONTRACTOR'S EXPENSE.

08. CONTRACTOR SHALL COORDINATE TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL LOCATIONS SO THAT DATA AND POWER ARE AT THE SAME HEIGHT AND SPACED 18"-24" APART UNLESS SPECIFIED OTHERWISE. REFERENCE TECHNOLOGY AND MEP SHEETS FOR COORDINATION.

09. ALL CABLING INSTALLED IN AREAS WITH EXPOSED CEILINGS SHALL BE INSTALLED IN A PROPERLY SIZED CONDUIT PATHWAY. CONDUIT PATHWAYS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE CONDUIT SHALL BE PAINTED TO MATCH CEILING COLOR AS DIRECTED BY THE CONTRACT DOCUMENTS.

10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS FOR ALL DEMOLITION AREAS.

11. CONTRACTOR SHALL DOCUMENT ALL EXISTING TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL DEVICES AND LOCATIONS PRIOR TO DEMOLITION OF CEILINGS AND SPACES. PROVIDE TEMPORARY SUPPORT IN ALL DEMOLITION AREAS FOR DEVICES; RE-INSTALL ALL EXISTING DEVICES IN NEW CEILINGS.

12. CONTRACTOR SHALL DOCUMENT ALL EXISTING CEILING TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL LABELING ON EXISTING CEILING GRID. PROVIDE NEW LABELING PER SPECIFICATIONS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR STOPPING ALL TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL CONDUIT PENETRATIONS FROM WATER OR RODENT INGRESS IN ALL BUILDINGS UPON COMPLETION OF THE PROJECT.

**GENERAL PROJECT NOTES**

EXISTING DATA OUTLET LOCATION(S) FOR REFERENCE ONLY.

**DATA SYMBOLS LEGEND**

**S** SINGLE SIDED CLOCK LOCATION. CONTRACTOR SHALL PROVIDE CABLING AND IP PUBLIC ADDRESS SYSTEM DEVICE. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE SIDED CLOCK AS PER SPECIFICATIONS. ALL CLOCKS ARE MOUNTED AT 8'-0" AFF UNLESS NOTED OTHERWISE.

**D** DOUBLE SIDED CLOCK LOCATION. CONTRACTOR SHALL PROVIDE CABLING AND IP PUBLIC ADDRESS SYSTEM DEVICE. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE SIDED CLOCK AS PER SPECIFICATIONS. ALL CLOCKS ARE MOUNTED AT 8'-0" AFF UNLESS NOTED OTHERWISE.

**IC** INTERCOM CABINET LOCATION.

**IP** EXISTING INTERCOM AUDIO INPUT PLATE LOCATED UNDER RECEPTION DESK. CONTRACTOR TO CONNECT TO NEW PUBLIC ADDRESS SYSTEM AS AUXILIARY AUDIO INPUT.

**PA** ADMINISTRATIVE INTERCOM PHONE LOCATION. CONTRACTOR TO PROVIDE PROGRAMMING FOR NEW PUBLIC ADDRESS SYSTEM.

**PB** PANIC BUTTON LOCATION. CONTRACTOR SHALL PROVIDE AND INSTALL LATCHING CABLE DUCT COLORED TO MATCH EXISTING RECEPTACLES FOR ALL CINDER BLOCK WALLS, OR RING AND STRING FOR ALL GYP WALL LOCATIONS, FROM NEAREST ACCESSIBLE CEILING SPACE TO BACK BOX INSTALLED AT 48" AFF. CONTRACTOR SHALL PROVIDE AND INSTALL INTERCOM PANIC BUTTON.

**PTT** APPROXIMATE LOCATION OF NEW INTERCOM PUSH-TO-TALK BUTTON LOCATION. VERIFY ON SITE TO BE NEAR OR ADJACENT TO ROOM LIGHTING CONTROLS. CONTRACTOR SHALL PROVIDE AND INSTALL LATCHING CABLE DUCT COLORED TO MATCH EXISTING RECEPTACLES FOR ALL CINDER BLOCK WALLS, OR RING AND STRING FOR ALL GYP WALL LOCATIONS, FROM NEAREST ACCESSIBLE CEILING SPACE TO BACK BOX INSTALLED AT 48" AFF. CONTRACTOR SHALL PROVIDE AND INSTALL INTERCOM PUSH-TO-TALK BUTTON.

**ST XX** APPROXIMATE LOCATION OF NEW SURFACE MOUNTED IP PUBLIC ADDRESS SYSTEM DEVICE. VERIFY WITH SPECIFICATIONS FOR MODEL NUMBERS THAT MATCH THE DESIGNATION REPLACING THE "XX" SHOWN HERE. INTERIOR DEVICE SHALL BE INSTALLED AT 8'-0" AFF AND EXTERIOR DEVICE SHALL BE INSTALLED AT 12'-0" UNO. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING EQUIPMENT. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT THAT ARE EXPECTED TO REMAIN AND BE RECONNECTED TO THE NEW PUBLIC ADDRESS SYSTEM.

**S1** APPROXIMATE LOCATION OF EXISTING CEILING MOUNTED INTERCOM SPEAKER. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING EQUIPMENT. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT THAT ARE EXPECTED TO REMAIN AND BE RECONNECTED TO THE NEW PUBLIC ADDRESS SYSTEM.

**INTERCOM SYMBOLS LEGEND**

**AVI XX** EXISTING AUDIO AND/OR VIDEO OUTLET ON WALL FOR REFERENCE ONLY.

**S2** LOCAL SOUND SYSTEM SPEAKERS IN CEILING. CONTRACTOR SHALL BE CERTAIN THAT NEW PUBLIC ADDRESS SYSTEM PROVIDE PAGE MUTE FUNCTIONALITY. TEST EACH SYSTEM PRIOR TO FINAL OBSERVATION.

**AUDIO VISUAL SYMBOLS LEGEND**

RESPONSIBILITY SCHEDULE							
THIS SCHEDULE IS FOR REFERENCE AND DOES NOT INCLUDE ALL PROJECT COMPONENTS. IT SHALL BE USED IN CONJUNCTION WITH THE PROJECT DRAWINGS AND PROJECT SPECIFICATIONS.							
SECTION	DESCRIPTION	DESIGNED BY:	FURNISHED BY:		INSTALLED BY:		NOTES
27 5116	PUBLIC ADDRESS SYSTEM	FIRM RESPONSIBLE FOR DESIGN	CONTRACTOR	OWNER	CONTRACTOR	OWNER	
	MANUFACTURER COMMISSIONING AND SIGN OFF	CRUX	X		X		CONTRACTOR MUST ENGAGE MANUFACTURER FOR SIGN OFF OF EACH PROJECT (SCHOOL) SEPARATELY.
	CABLING	CRUX	X		X		
	IP CLOCKS	CRUX	X		X		
	CLASSROOM CLOCK / SPEAKER	CRUX	X		X		
	PANIC BUTTON	CRUX	X		X		
	PUSH TO TALK	CRUX	X		X		
	AUDIO AMPLIFIERS	CRUX	X		X		
	ZONE CONTROLLERS	CRUX	X		X		
	ANALOG SPEAKERS	CRUX	X		X		NEW ANALOG SPEAKERS WILL ONLY BE REQUIRED FOR THE REPLACEMENT OF DEFECTIVE EQUIPMENT FOUND DURING THE PRE-INSTALLATION TEST. OWNER APPROVAL REQUIRED.

Revision:      Date:      Description:

IGO ELEMENTARY SCHOOL  
 PUBLIC ADDRESS SYSTEM REPLACEMENT  
 FOR  
 JARRELL I.S.D.  
 JARRELL, TEXAS

Project:

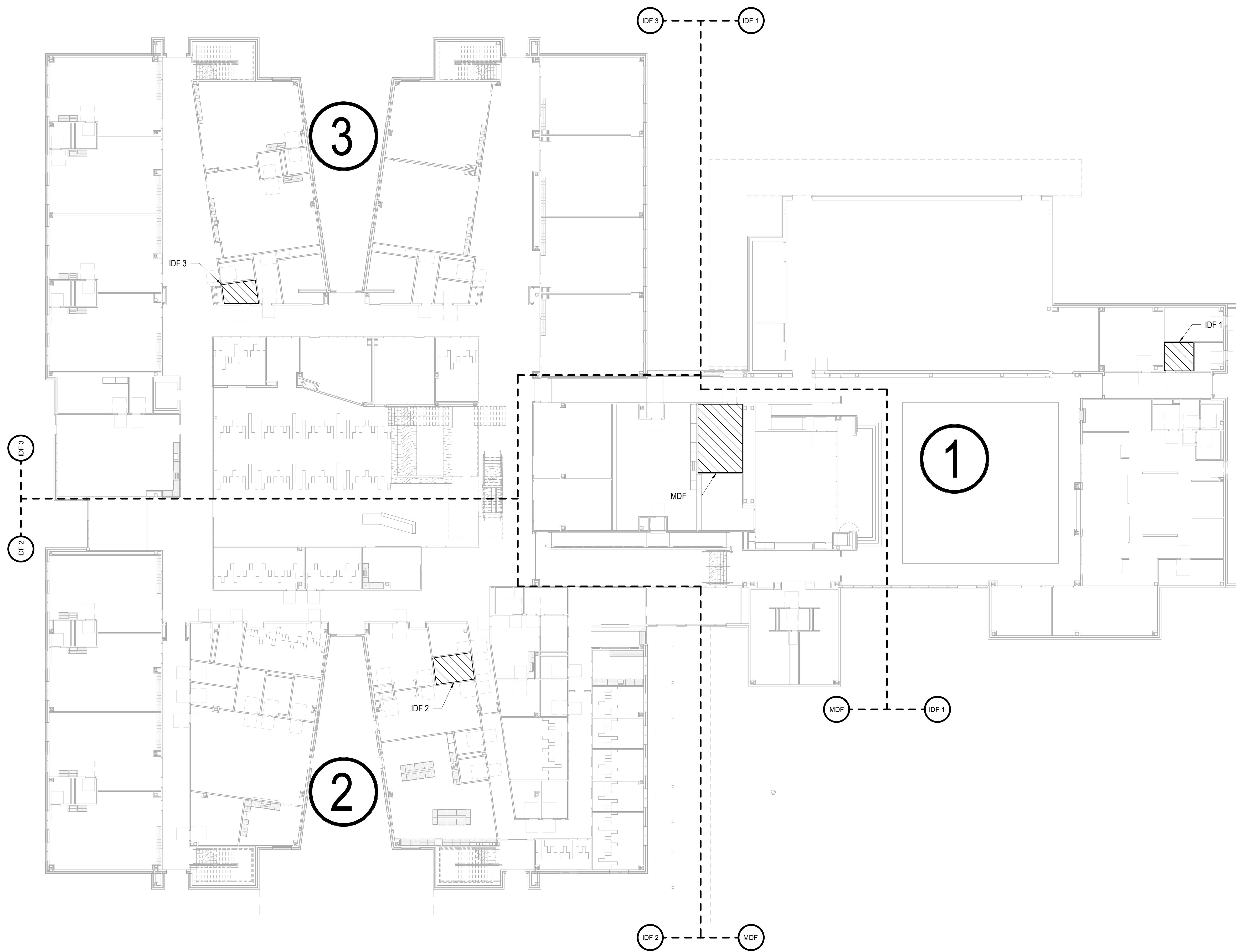


GENERAL NOTES AND SYMBOLS

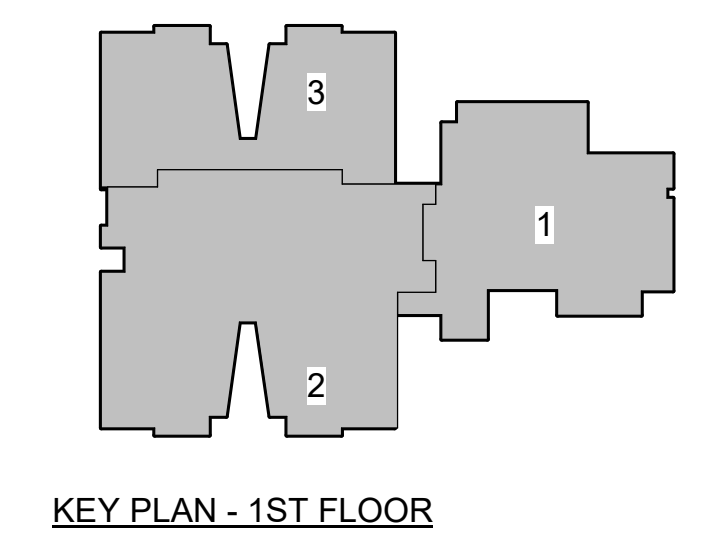
Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	<b>TG1.1</b>
Designed By: MB	
Date: 03/14/24	of

**STANDARD TECHNOLOGY LEGEND**  
 NOT ALL SYMBOLS AND NOTES MAY BE USED

C:\Users\mbooke\Documents\Jarrell ISD\_IDS\_TECH\_123\_01\_mbooke@cruxsolutions.com.rvt



1 MASTER PLAN - FIRST FLOOR  
 T1.1 1/16" = 1'-0"



Description

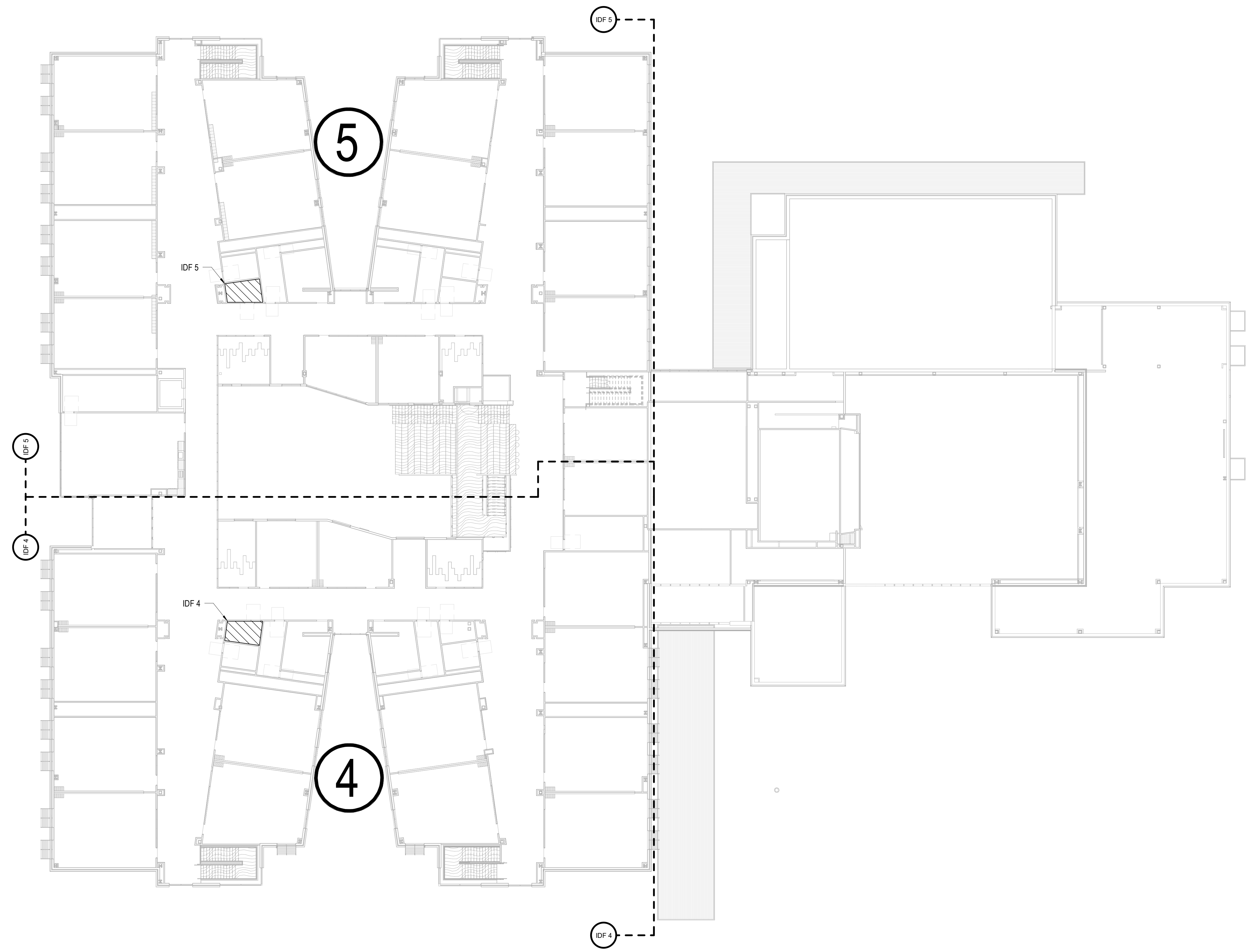
Revision: Date:

Project:  
 IGO ELEMENTARY SCHOOL  
 PUBLIC ADDRESS SYSTEM REPLACEMENT  
 FOR  
 JARRELL I.S.D.  
 JARRELL, TEXAS

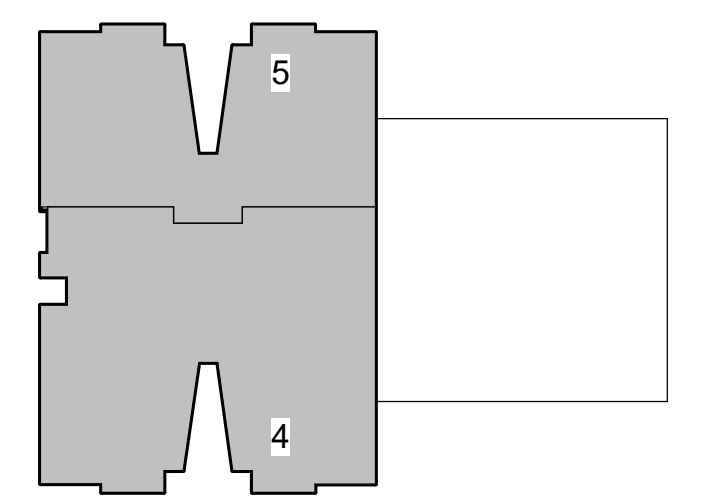


MASTER PLAN - FIRST FLOOR

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	T1.1
Designed By:	
Date: 03/14/24	of



1 MASTER PLAN - SECOND FLOOR  
 T1.2 1/16" = 1'-0"



KEY PLAN - 2ND FLOOR

Description

Revision: Date:

Project:  
 IGO ELEMENTARY SCHOOL  
 PUBLIC ADDRESS SYSTEM REPLACEMENT  
 FOR  
 JARRELL I.S.D.  
 JARRELL, TEXAS



MASTER PLAN - SECOND FLOOR

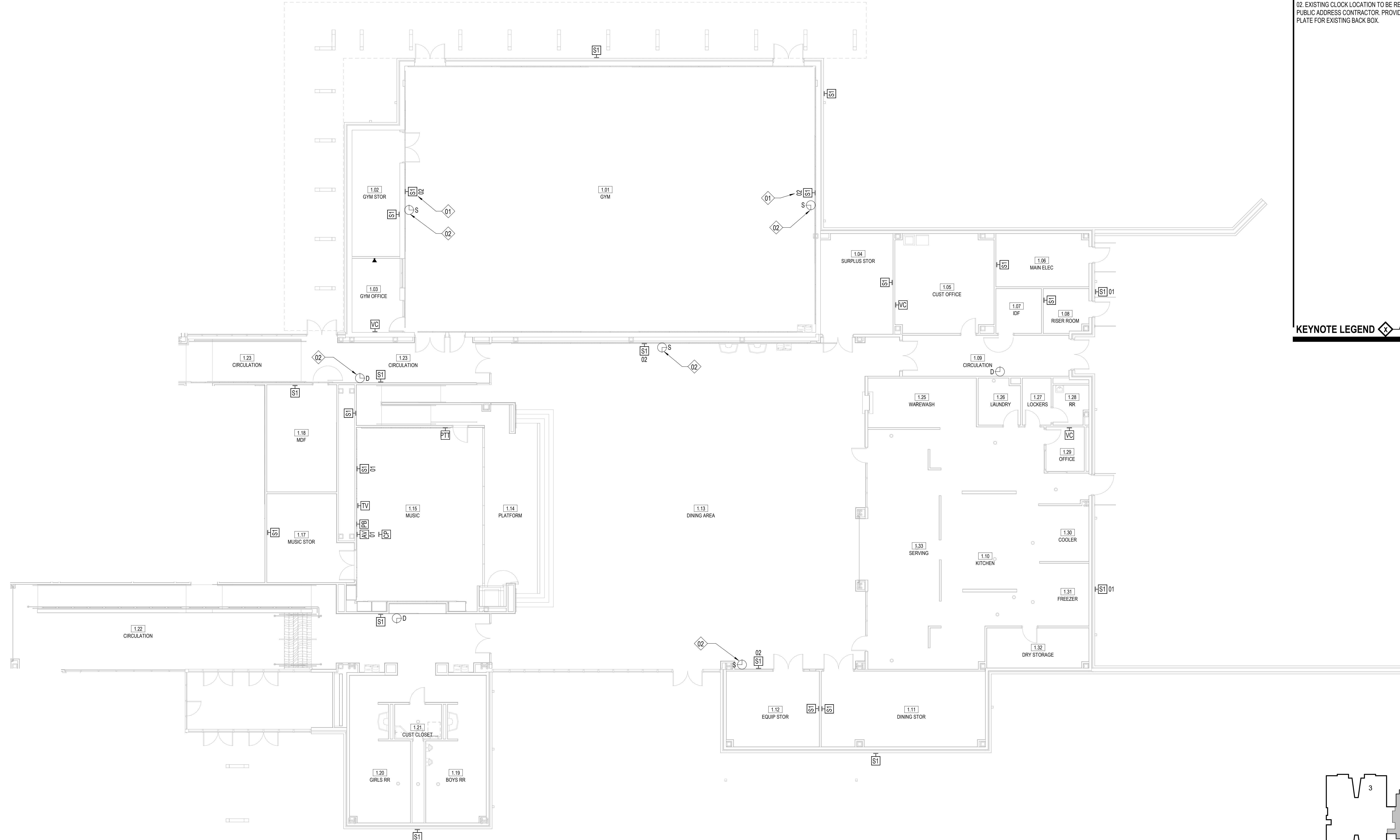
VOLUME  
 Job No. D-JAR-1001-03  
 Drawn By: JF  
 Designer: NTS  
 Date: 03/14/24  
 Sheet No. FC  
 T1.2  
 of

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
03. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
04. AV SHOWN FOR REFERENCE ONLY.
05. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

**SHEET NOTES**

01. NEW INTERIOR PAGING SPEAKER / CLOCK INSTALLED AT 10'-0" AFF. PROVIDE PROTECTIVE WIRE CAGE.
02. EXISTING CLOCK LOCATION TO BE REMOVED BY PUBLIC ADDRESS CONTRACTOR. PROVIDE BLANK COVER PLATE FOR EXISTING BACK BOX.

**KEYNOTE LEGEND**



Revision:      Date:      Description

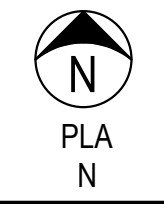
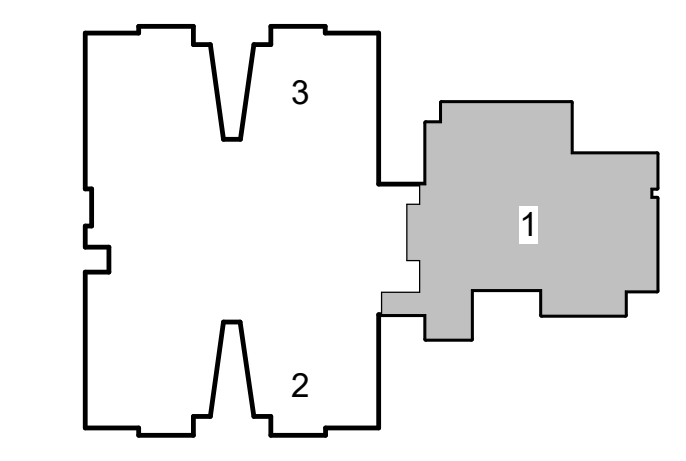
**IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS**

Project:



**FLOOR PLAN - SECTION 1**

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By:	<b>T1.3</b>
Author:	
Designed By:	<b>of</b>
Designer:	
Date: 03/14/24	



PLA  
N

**1 FLOOR PLAN - SECTION 1**  
T1.3 1/8" = 1'-0"

C:\Users\mbrink\Documents\Jarrell ISD\_IDES\_TECH\_1221\_01\_mbrink\cruxsolutions.com.rvt

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
03. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
04. AV SHOWN FOR REFERENCE ONLY.
05. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

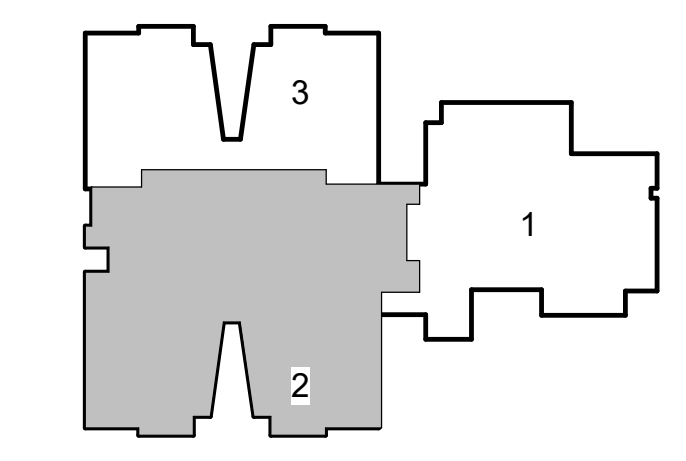
**SHEET NOTES**

01. EXISTING CLOCK LOCATION TO BE REMOVED BY PUBLIC ADDRESS CONTRACTOR. PROVIDE BLANK COVER PLATE FOR EXISTING BACK BOX.
02. EXISTING ANALOG SPEAKER LOCATION TO BE REMOVED BY PUBLIC ADDRESS CONTRACTOR. PROVIDE BLANK COVER PLATE FOR EXISTING BACK BOX.
03. TYPICAL CLASSROOM FLOOR PLAN FOR THE PROJECT. THIS SHALL BE REPLICATED FOR ALL CLASSROOMS THROUGHOUT THE CAMPUS.
04. TYPICAL TEACHER STATION FOR REFERENCE.

**KEYNOTE LEGEND**



**1 FLOOR PLAN - SECTION 2**  
1/8" = 1'-0"



**KEY PLAN - 1ST FLOOR**

Revision:	Date:	Description:

**IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS**

Project:



**FLOOR PLAN - SECTION 2**

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	<b>T1.4</b>
Designed By: Designer	
Date: 03/14/24	of

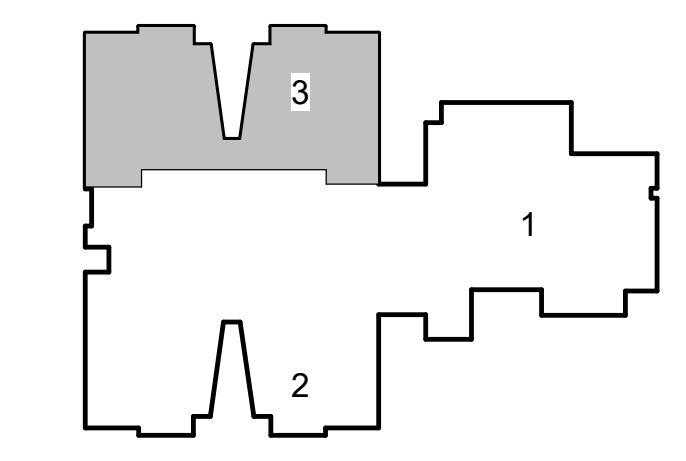
C:\Users\mrbokel\Documents\Jarrell ISD\_IGD\_ES\_TECH\_IGD\_01\_mbaokel@cruxsolutions.com.rvt

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
03. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
04. AV SHOWN FOR REFERENCE ONLY.
05. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

**SHEET NOTES**



1 FLOOR PLAN - SECTION 3  
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR  
NTS

Revision: \_\_\_\_\_ Date: \_\_\_\_\_

IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS

Project:



FLOOR PLAN - SECTION 3

VOLUME	
Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	<b>T1.5</b>
Designed By:	
Date: 03/14/24	of

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
03. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
04. AV SHOWN FOR REFERENCE ONLY.
05. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

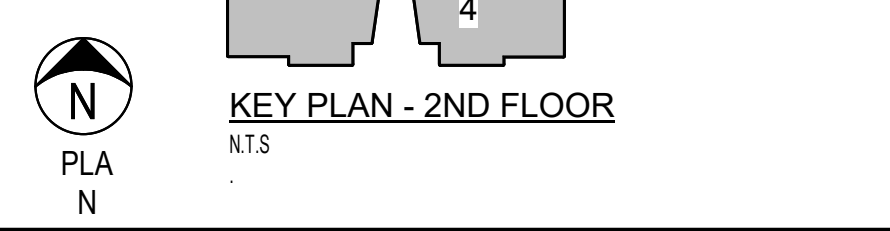
**SHEET NOTES**

01. CONTRACTOR SHALL FURNISH (1) 2-GANG BACK BOX WITH (2) 1" CONDUITS STUBBED INTO THE ACCESSIBLE CEILING PLACED NEXT TO THE TEACHER WORK AREA LOCATION FOR AUDIO-VIDEO INTERFACE TO A WALL MOUNTED PROJECTOR.

**KEYNOTE LEGEND**



1 FLOOR PLAN - SECTION 4  
1/8" = 1'-0"



Revision:	Date:

Project: IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS

FLOOR PLAN - SECTION 4

**CRUX**  
TECHNOLOGY + SECURITY CONSULTING  
6421 Camp Bowie Blvd, Ste 400  
Forth Worth, Texas 76116  
800.655.6448  
www.cruxinc.com

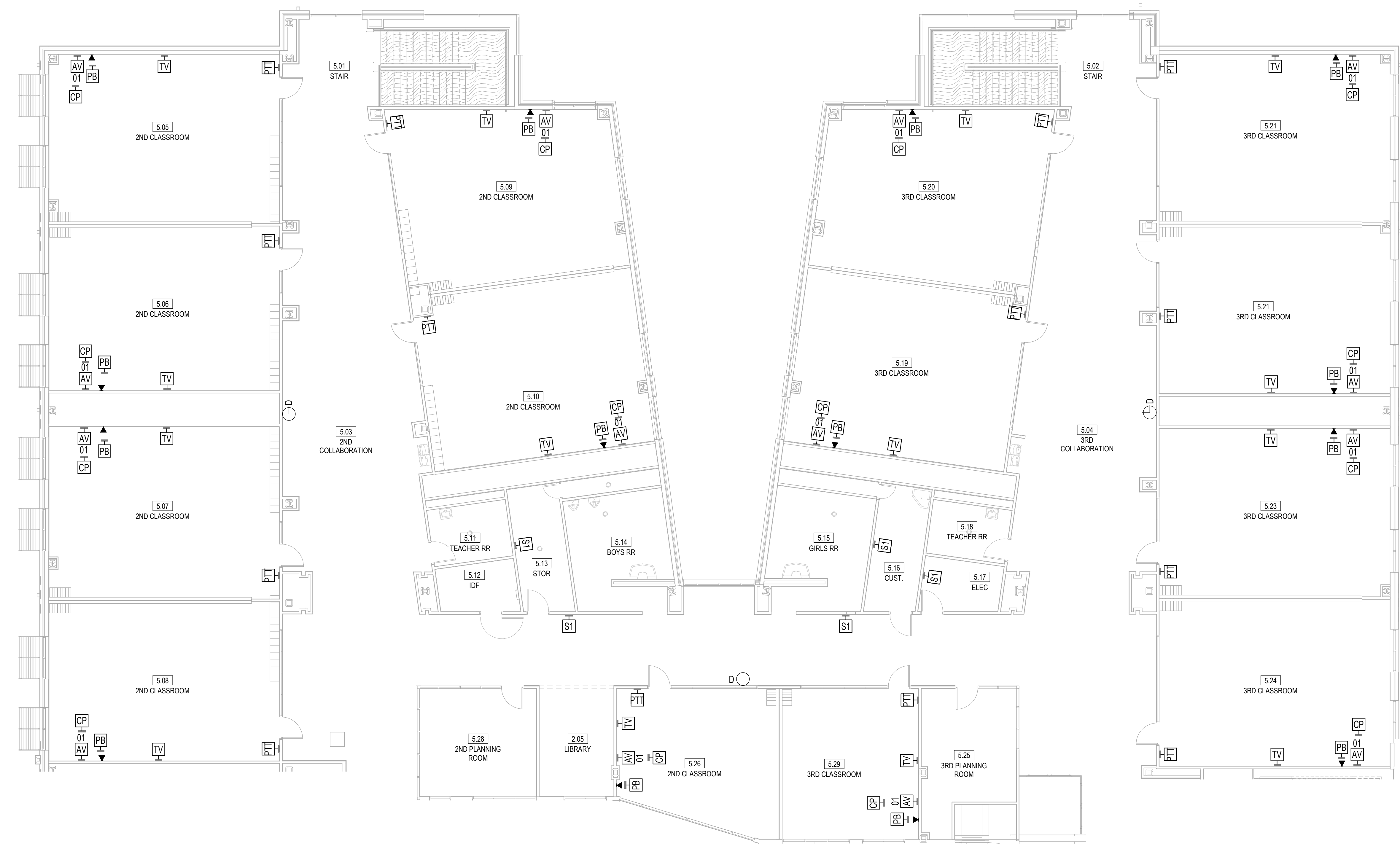
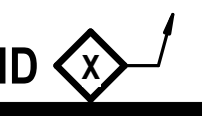
VOLUME  
Job No. D-JAR-1001-03 Sheet No. FC  
Drawn By: JF  
Designed By: NTS  
Date: 03/14/24  
T1.6  
of

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
03. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
04. AV SHOWN FOR REFERENCE ONLY.
05. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

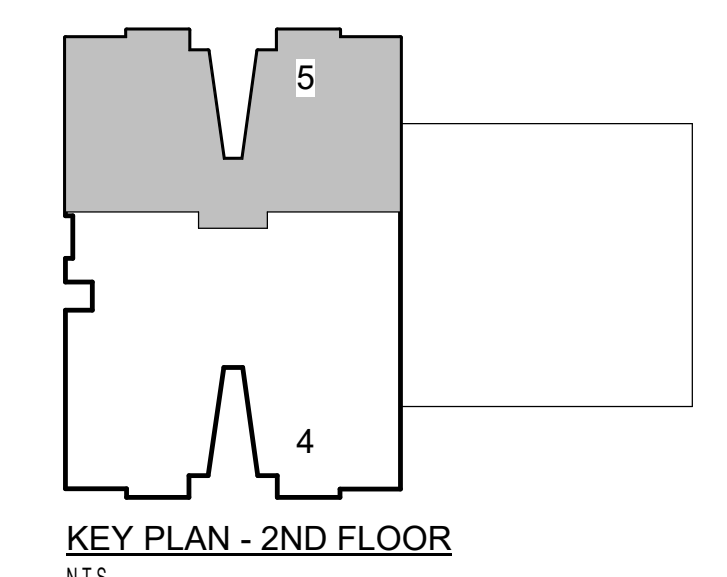
**SHEET NOTES**

01. CONTRACTOR SHALL FURNISH (1) 2-GANG BACK BOX WITH (2) 1" CONDUITS STUBBED INTO THE ACCESSIBLE CEILING PLACED NEXT TO THE TEACHER WORK AREA LOCATION FOR AUDIO-VIDEO INTERFACE TO A WALL MOUNTED PROJECTOR.

**KEYNOTE LEGEND**



1 FLOOR PLAN - SECTION 5  
11.7 1/8" = 1'-0"



Revision: \_\_\_\_\_ Date: \_\_\_\_\_

Project: IGO ELEMENTARY SCHOOL PUBLIC ADDRESS SYSTEM REPLACEMENT FOR JARRELL I.S.D. JARRELL, TEXAS

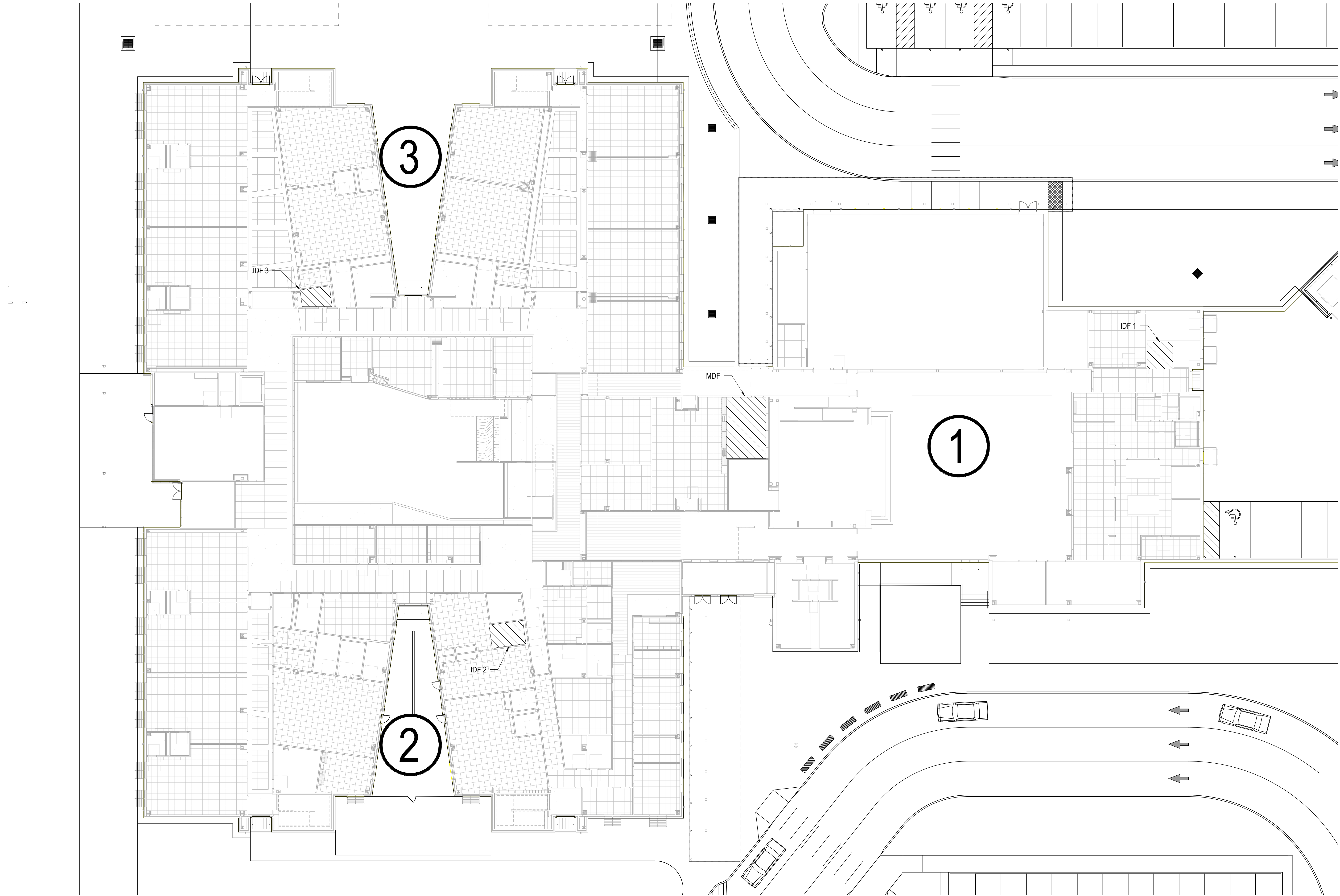
Volume: \_\_\_\_\_



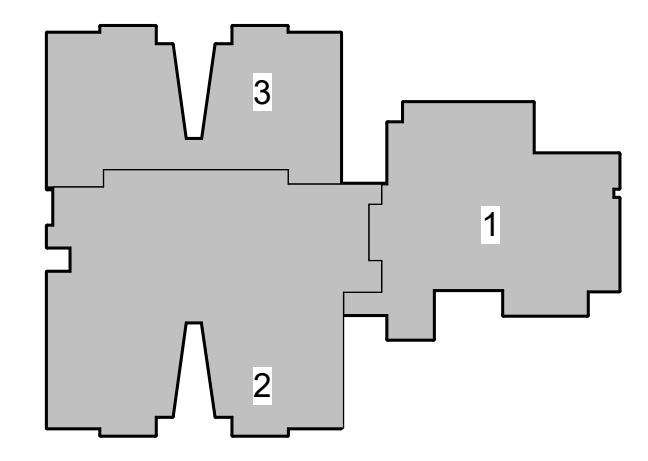
FLOOR PLAN - SECTION 5

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	T1.7
Designed By: NTS	of
Date: 03/14/24	



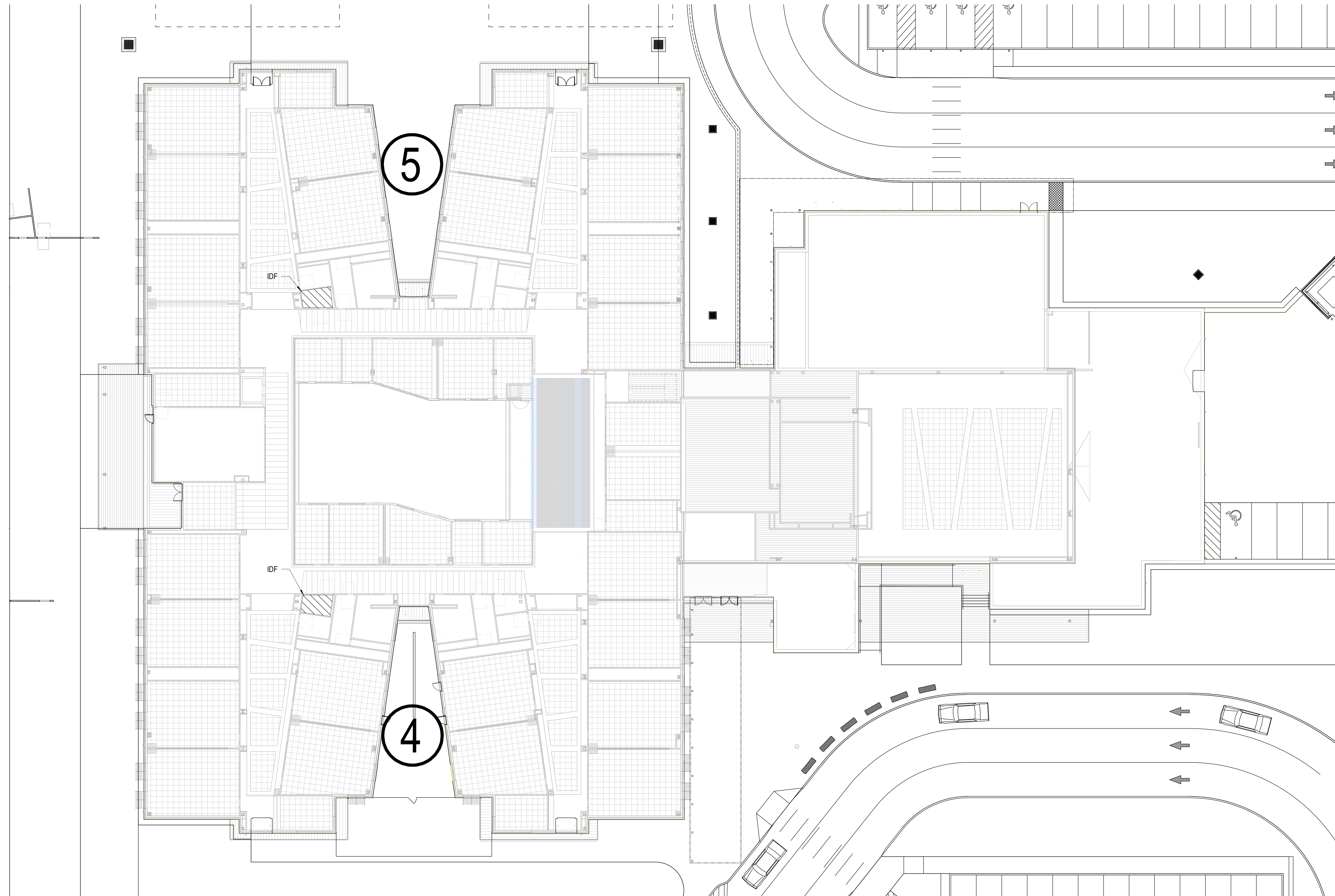


1 MASTER PLAN - FIRST FLOOR - RCP  
 T2.1 1/16" = 1'-0"

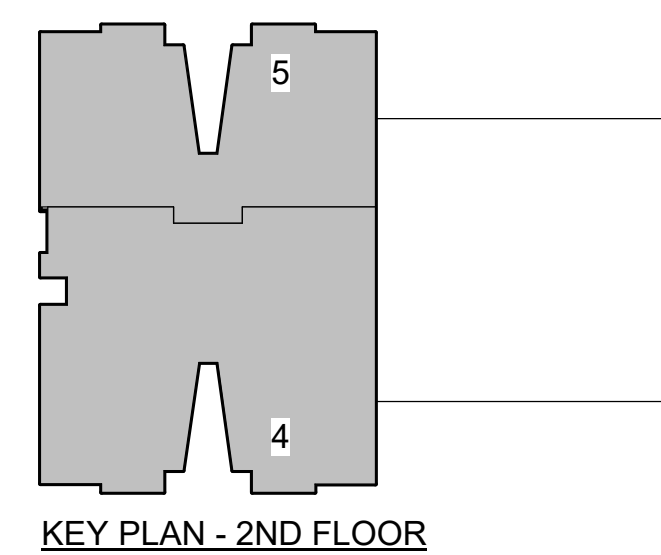


Project: <b>IGO ELEMENTARY SCHOOL          PUBLIC ADDRESS SYSTEM REPLACEMENT          FOR          JARRELL I.S.D.          JARRELL, TEXAS</b>	
Revision:	Date:
Description:	
<b>CRUX</b> <small>TECHNOLOGY + SECURITY CONSULTING          6421 Camp Bowie Blvd, Ste 400          Fort Worth, Texas 76116          800.655.6448          www.cruxinc.com</small>	
<b>MASTER REFLECTED          CEILING PLAN - FIRST          FLOOR</b>	
Job No. D-JAR-1001-03	Sheet No. FC
Author	<b>T2.1</b>
Drawn By:	
Designed By:	of
Date: 03/14/24	
VOLUME of	

C:\Users\mbooka\Documents\Jarrell ISD\_ES\_TECH\_123\_01\_mbooka@cruxsolutions.com.rvt



1 MASTER PLAN - SECOND FLOOR - RCP  
T22 1/16" = 1'-0"



KEY PLAN - 2ND FLOOR  
NTS

Description

Revision:      Date:

Project:  
 IGO ELEMENTARY SCHOOL  
 PUBLIC ADDRESS SYSTEM REPLACEMENT  
 FOR  
 JARRELL I.S.D.  
 JARRELL, TEXAS

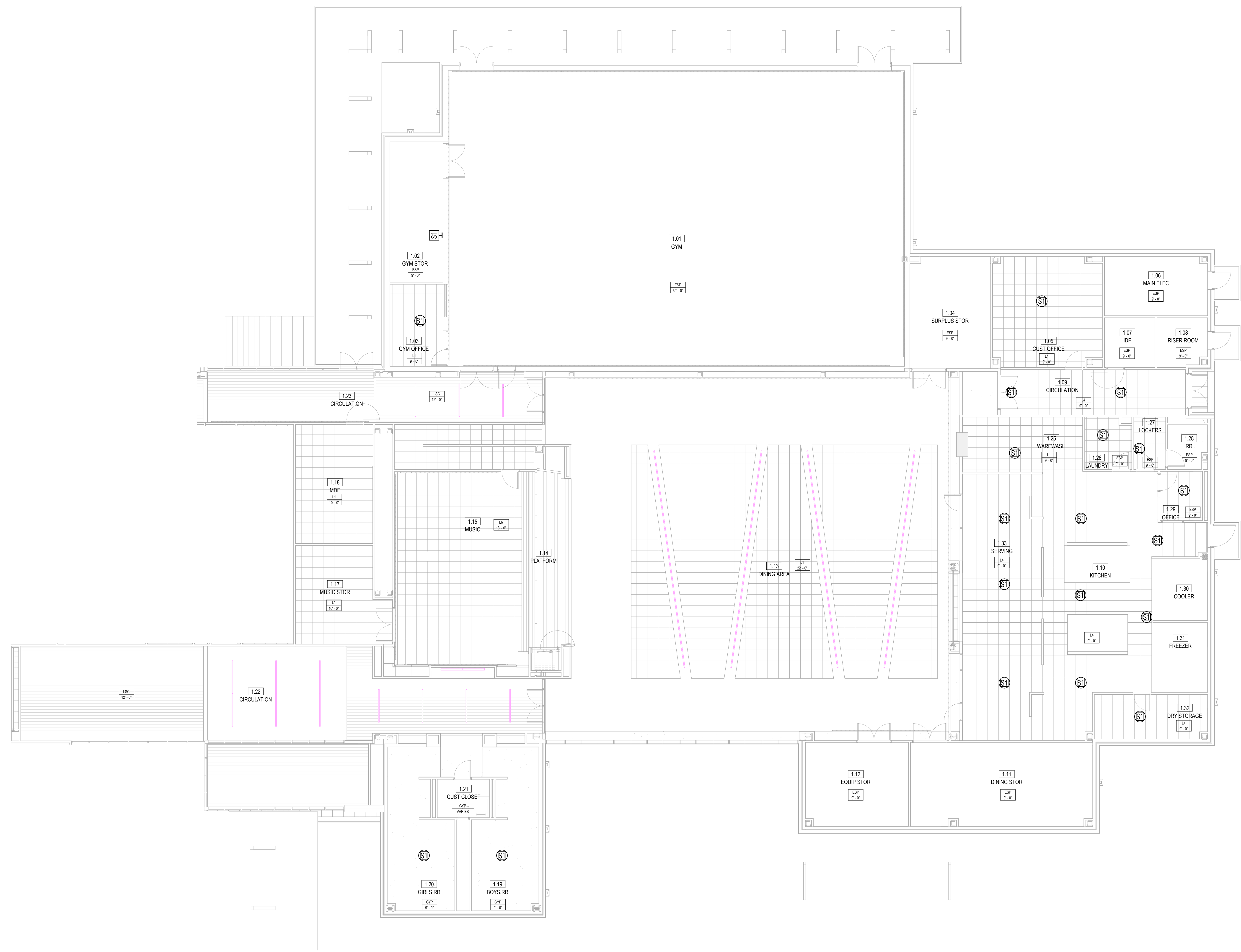
Project:



MASTER REFLECTED  
 CEILING PLAN - SECOND  
 FLOOR

VOLUME  
 Job No. D-JAR-1001-03  
 Drawn By:      Sheet No. FC  
 Author:      T2.2  
 Designed By:      of  
 Date: 03/14/24

C:\Users\mbooka\Documents\Jarrell ISD\_03\_Tech\_123\_01\_mbooka@cruxsolutions.com.rvt



CEILING TYPE	TYPE	HEIGHT
ESF	- EXPOSED DECK AND STRUCTURE (FINISHED)	
ESP	- EXPOSED DECK AND STRUCTURE (PRIMED)	
GYP	- SUSPENDED 5/8" GYPSUM BOARD	
GYP1	- SUSPENDED 5/8" TYPE 'X' GYPSUM BOARD (1-HR. RATED)	
L1	- TYPE I 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (STANDARD CEILING)	
L2	- TYPE II 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ABUSE RESISTANT)	
L3	- TYPE III 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)	
L4	- TYPE IV 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED)	
L6	- TYPE VI 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
L7	- TYPE IX 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
LSC	- LINEAR SUSPENDED CEILING	
MS	- METAL SOFFIT PANELS	

REFERENCE ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING TYPES AND HEIGHTS.

- CEILING TAG LEGEND**  
(NOT ALL CEILING TYPES MAY APPLY)
1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
  2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
  3. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
  4. AV SHOWN FOR REFERENCE ONLY.
  5. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

**SHEET NOTES**

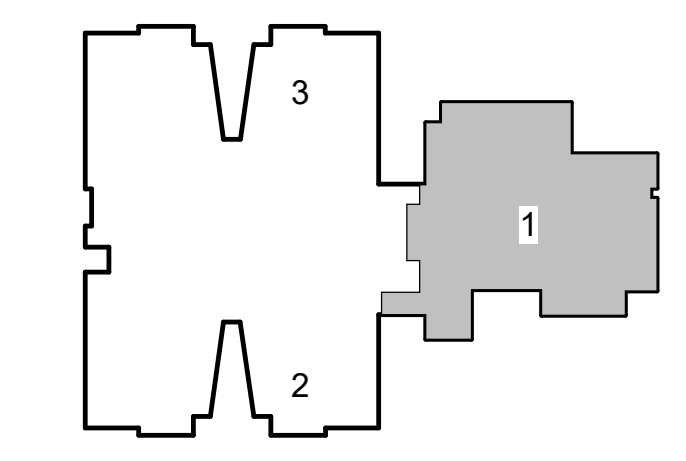
Revision:	Date:	Description:
-----------	-------	--------------

IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS

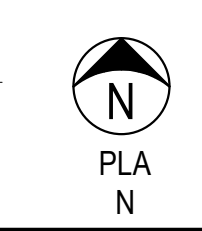
Project:



REFLECTED CEILING PLAN - SECTION 1



1 REFLECTED CEILING PLAN - SECTION 1  
1/8" = 1'-0"



Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	Designed By: MB
Date: 03/14/24	of T2.3

C:\Users\mbooka\Documents\Jarrell ISD\_03\_Tech\_1231\_01\_mbooka\ceilingplans\ceilingplans.rvt



CEILING TYPE	TYPE	HEIGHT
ESF	EXPOSED DECK AND STRUCTURE (FINISHED)	
ESP	EXPOSED DECK AND STRUCTURE (PRIMED)	
GYP	SUSPENDED 5/8" GYPSUM BOARD	
GYP1	SUSPENDED 5/8" TYPE 'X' GYPSUM BOARD (1-HR. RATED)	
L1	TYPE I 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (STANDARD CEILING)	
L2	TYPE II 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ABUSE RESISTANT)	
L3	TYPE III 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)	
L4	TYPE IV 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED)	
L6	TYPE VI 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
L7	TYPE IX 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
LSC	LINEAR SUSPENDED CEILING	
MS	METAL SOFFIT PANELS	

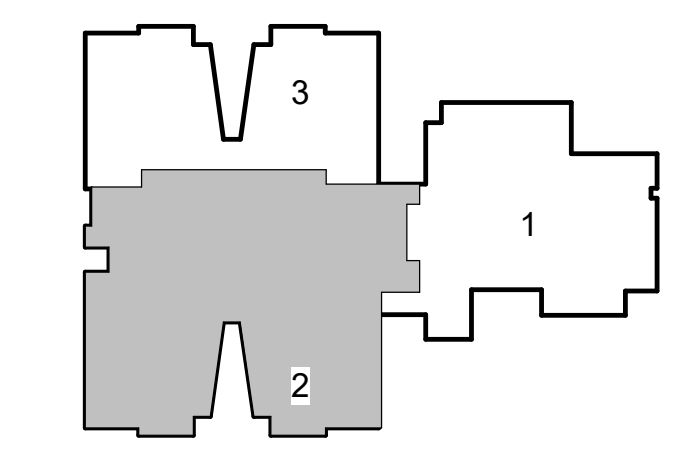
REFERENCE ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING TYPES AND HEIGHTS.

- CEILING TAG LEGEND**  
(NOT ALL CEILING TYPES MAY APPLY)
- REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
  - EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
  - EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
  - AV SHOWN FOR REFERENCE ONLY.
  - TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

**SHEET NOTES**

Revision	Date	Description

1 REFLECTED CEILING PLAN - SECTION 2  
1/8" = 1'-0"



IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS



REFLECTED CEILING PLAN - SECTION 2

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	Designed By: T2.4
Date: 03/14/24	of

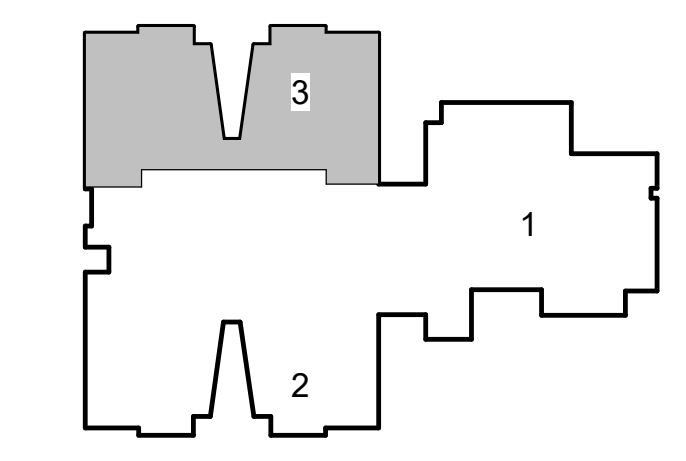
CEILING TYPE	TYPE	HEIGHT
ESF	EXPOSED DECK AND STRUCTURE (FINISHED)	
ESP	EXPOSED DECK AND STRUCTURE (PRIMED)	
GYP	SUSPENDED 5/8" GYPSUM BOARD	
GYP1	SUSPENDED 5/8" TYPE 'X' GYPSUM BOARD (1-HR. RATED)	
L1	TYPE I 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (STANDARD CEILING)	
L2	TYPE II 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ABUSE RESISTANT)	
L3	TYPE III 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)	
L4	TYPE IV 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED)	
L6	TYPE VI 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
L7	TYPE IX 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
LSC	LINEAR SUSPENDED CEILING	
MS	METAL SOFFIT PANELS	

REFERENCE ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING TYPES AND HEIGHTS.

**CEILING TAG LEGEND**  
(NOT ALL CEILING TYPES MAY APPLY)

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
3. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
4. AV SHOWN FOR REFERENCE ONLY.
5. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY

**SHEET NOTES**



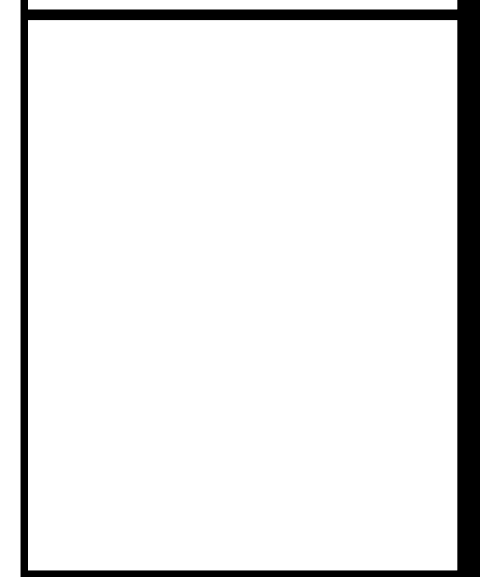
1 REFLECTED CEILING PLAN - SECTION 3  
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR  
NTS

Revision	Date	Description

Project: IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS



REFLECTED CEILING PLAN - SECTION 3	
VOLUME	
Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	of T2.5
Designed By:	of
Date: 03/14/24	

C:\Users\mbooke\Documents\Jarrell ISD\_ES\_Tech\_1231\_01\_mbooke@cruxsolutions.com.rvt



CEILING TYPE	TYPE	HEIGHT
ESF - EXPOSED DECK AND STRUCTURE (FINISHED)		
ESP - EXPOSED DECK AND STRUCTURE (PRIMED)		
GYP - SUSPENDED 5/8" GYPSUM BOARD		
GYP1 - SUSPENDED 5/8" TYPE 'X' GYPSUM BOARD (1-HR. RATED)		
L1 - TYPE I 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (STANDARD CEILING)		
L2 - TYPE II 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ABUSE RESISTANT)		
L3 - TYPE III 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)		
L4 - TYPE IV 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED)		
L6 - TYPE VI 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)		
L7 - TYPE VII 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)		
LSC - LINEAR SUSPENDED CEILING		
MS - METAL SOFFIT PANELS		

REFERENCE ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING TYPES AND HEIGHTS.

- CEILING TAG LEGEND**  
(NOT ALL CEILING TYPES MAY APPLY)
1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
  2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
  3. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
  4. AV SHOWN FOR REFERENCE ONLY.
  5. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.
- SHEET NOTES**

Revision	Date	Description

IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS

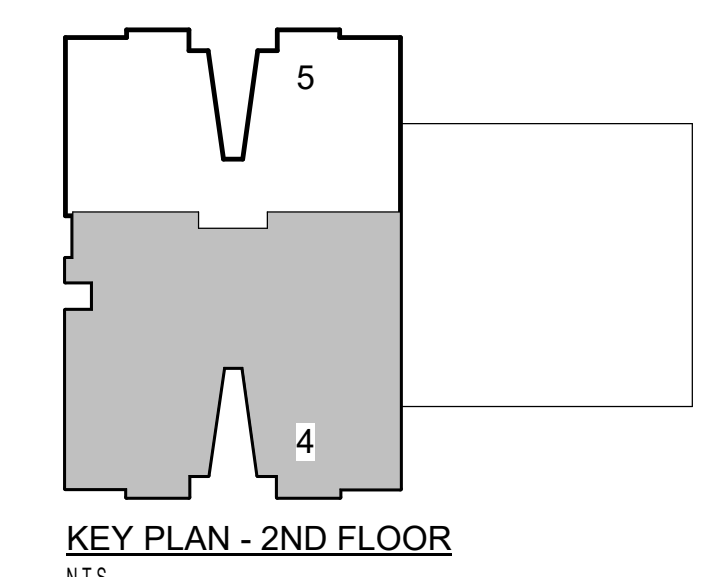
Project:



REFLECTED CEILING PLAN - SECTION 4

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	T2.6
Designed By: NTS	of
Date: 03/14/24	

1 REFLECTED CEILING PLAN - SECTION 4  
T2.6 1/8" = 1'-0"



C:\Users\mbrink\Documents\Jarrell ISD\_ES\_TECH\_123\_01\_mbaoka@cruxsolutions.com.rvt



1 REFLECTED CEILING PLAN - SECTION 5  
1/8" = 1'-0"

CEILING TYPE	TYPE	HEIGHT
ESF	- EXPOSED DECK AND STRUCTURE (FINISHED)	
ESP	- EXPOSED DECK AND STRUCTURE (PRIMED)	
GYP	- SUSPENDED 5/8" GYPSUM BOARD	
GYP1	- SUSPENDED 5/8" TYPE 'X' GYPSUM BOARD (1-HR. RATED)	
L1	- TYPE I 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (STANDARD CEILING)	
L2	- TYPE II 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ABUSE RESISTANT)	
L3	- TYPE III 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)	
L4	- TYPE IV 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED)	
L6	- TYPE VI 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
L7	- TYPE VII 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC ABSORPTIVE)	
LSC	- LINEAR SUSPENDED CEILING	
MS	- METAL SOFFIT PANELS	

REFERENCE ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING TYPES AND HEIGHTS.

**CEILING TAG LEGEND**  
(NOT ALL CEILING TYPES MAY APPLY)

1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.
2. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
3. EXISTING CLOCKS SHOWN SHALL BE REMOVED BY PUBLIC ADDRESS CONTRACTOR AND REPLACED WITH SPECIFIED IP DEVICE.
4. AV SHOWN FOR REFERENCE ONLY.
5. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

**SHEET NOTES**

Revision: \_\_\_\_\_ Date: \_\_\_\_\_ Description: \_\_\_\_\_

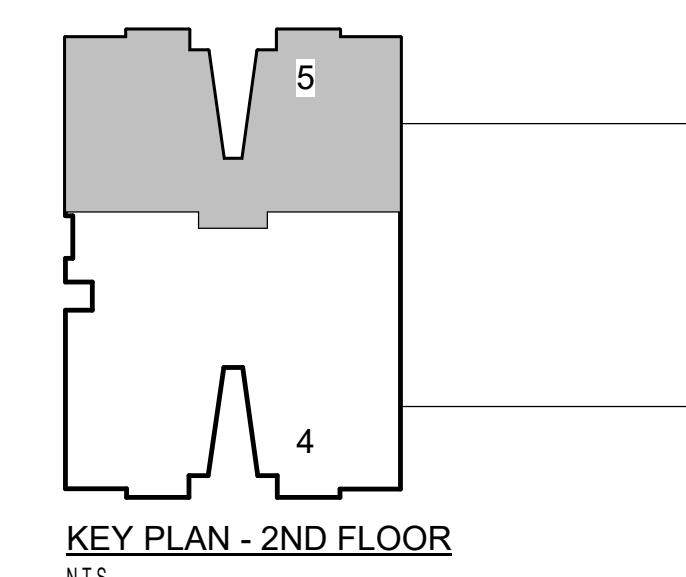
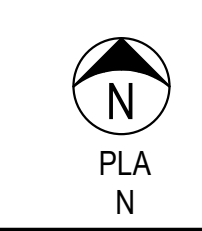
IGO ELEMENTARY SCHOOL  
PUBLIC ADDRESS SYSTEM REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS

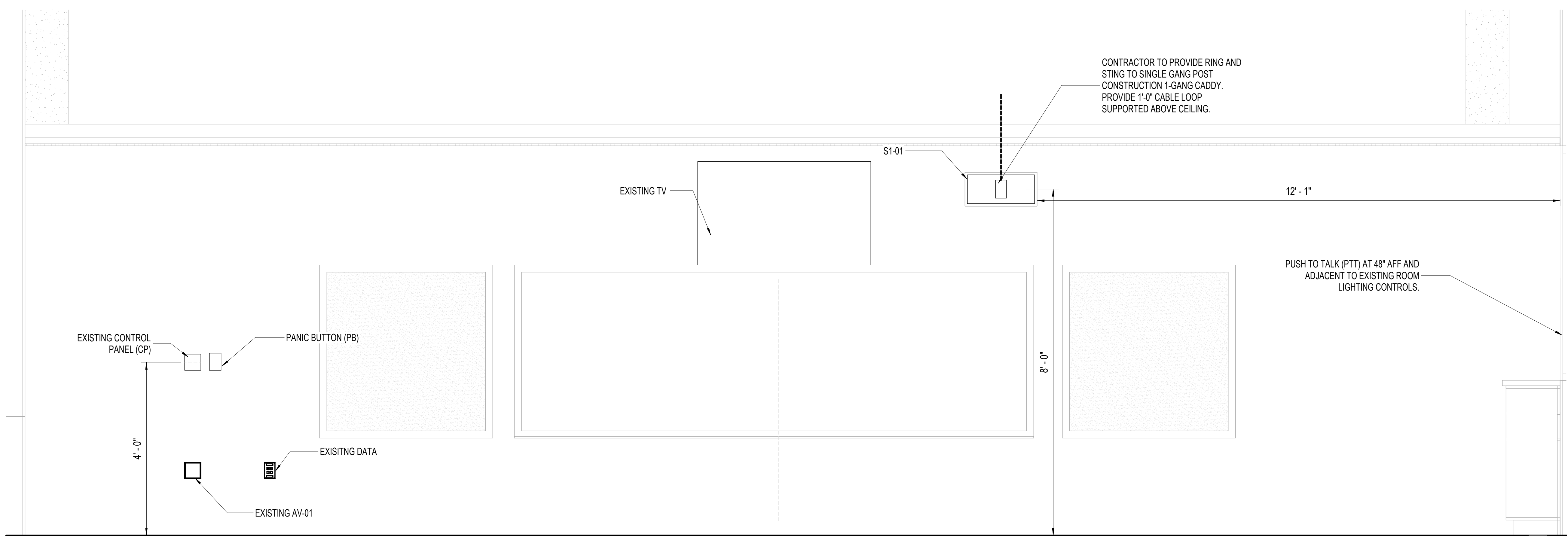
Project:



REFLECTED CEILING PLAN - SECTION 5

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	T2.7
Designed By: Designer	
Date: 03/14/24	of





1 TYPICAL CLASSROOM ELEVATION  
 T3.1 3/4" = 1'-0"

Revision:      Date:      Description

Project:  
 IGO ELEMENTARY SCHOOL  
 PUBLIC ADDRESS SYSTEM REPLACEMENT  
 FOR  
 JARRELL I.S.D.  
 JARRELL, TEXAS



SECTION VIEWS	
VOLUME	
Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: JF	T3.1
Designed By:	
Date: 03/14/24	of



Jarrell Elementary School

- AC - ACCESS CONTROL
- AFF - ABOVE FINISHED FLOOR
- AHJ - AUTHORITY HAVING JURISDICTION
- AV - AUDIO AND VIDEO
- BBC - BACKBONE BONDING CONDUCTOR
- BICSI - BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL
- C - CONDUIT
- CD - CONSTRUCTION DOCUMENTS
- CCTV - CLOSED CIRCUIT TELEVISION
- CO - CONDUIT ONLY (EMPTY CONDUIT WITH MULE TAPE)
- CP - CONTROL PANEL
- CU - COPPER
- DR - DOOR RELEASE
- EC - ELECTRICAL CONTRACTOR
- EF - ENTRANCE FACILITY
- EL - EMERGENCY LOCK DOWN
- EP - ENTRANCE POINT
- EPT - ELECTRONIC POWER TRANSFER
- ESS - ELECTRONIC SAFETY AND SECURITY
- FBO - FURNISHED BY OTHERS
- FCC - FEDERAL COMMUNICATIONS COMMISSION
- GND - GROUND
- HC - HORIZONTAL CROSS-CONNECT
- HR - HOME RUN
- HVAC - HEATING, VENTILATION, AND AIR CONDITIONING
- IBO - INSTALLED BY OTHERS
- IDF - INTERMEDIATE DISTRIBUTION FRAME
- IEEE - THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
- ISP - INTERNET SERVICE PROVIDER
- JB - JUNCTION BOX
- LV - LOW VOLTAGE
- MB - MARKER BOARD
- MC - MAIN CROSS-CONNECT
- MDF - MAIN DISTRIBUTION FRAME
- MH - MANHOLE
- MIC - MICROPHONE
- MMF - MULTI-MODE FIBER
- MD - MOTION DETECTOR
- MPOE - MAIN POINT OF ENTRY
- NEC - NATIONAL ELECTRICAL CODE
- NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- NIC - NOT IN CONTRACT
- NTS - NOT TO SCALE
- OC - ON CENTER
- PB - PULL BOX
- PBB - PRIMARY BONDING BUSBAR
- PM - PROJECTOR MOUNT
- PNL - PANEL
- POC - POINT OF CONTACT
- POE - POWER OVER ETHERNET
- POS - POINT OF SALE
- PP - PATCH PANEL
- RCP - REFLECTED CEILING PLAN
- RFI - REQUEST FOR INFORMATION
- RFP - REQUEST FOR PROPOSAL
- RMU - RACK MOUNT UNIT
- SBB - SECONDARY BONDING BUSBAR
- SMB - SINGLE MODE FIBER
- SMR - SURFACE MOUNTED RACEWAY
- SW - SWITCH
- TBC - TELECOMMUNICATION BONDING CONDUCTOR
- TE - TELECOMMUNICATIONS ENCLOSURE
- TIA - TELECOMMUNICATIONS INDUSTRY ASSOCIATION
- TYP - TYPICAL
- UG - UNDERGROUND
- UL - UNDERWRITERS LABORATORIES INC
- UNO - UNLESS NOTED OTHERWISE
- UPS - UNINTERRUPTIBLE POWER SUPPLY
- USB - UNIVERSAL SERIAL BUS
- VC - VOLUME CONTROL
- VP - VIDEO PROJECTOR
- WAP - WIRELESS ACCESS POINT
- WP - WEATHER PROOF

01. ANY DIMENSIONS SHOWN ON THESE DRAWINGS ARE INTENDED TO PROVIDE A GENERAL LOCATION AS REQUESTED BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS PRIOR TO ROUGH-IN AND IMMEDIATELY REPORT ANY CONFLICTS WITH THE OUTLET PLACEMENT TO THE GENERAL CONTRACTOR.
02. ALL CABLE BUNDLES WILL BE SUPPORTED EVERY 48"-60" OC WITH A J-HOOK OR OTHER APPROVED PATHWAY DEVICE. REFERENCE SPECIFICATIONS AND DETAILS FOR ADDITIONAL CABLING PATHWAY INSTALLATION REQUIREMENTS. CONTRACTOR WHO VIOLATES THESE REQUIREMENTS WILL BE REQUIRED TO REPLACE THE AFFECTED CABLE PLANT AT THEIR EXPENSE.
03. PLASTIC TIE WRAPS ARE NOT PERMITTED AT ANY TIME ON THIS INSTALLATION. ALL CABLE ROUGH-IN AND DRESS-OUT WILL BE WITH VELCRO ONLY. ALL CABLES BUNDLED WITH PLASTIC TIE WRAPS SHALL BE IMMEDIATELY REPLACED AT THE CONTRACTOR'S EXPENSE.
04. DO NOT INSTALL ANY CABLES IN ANY CONDUIT SLEEVE, STUB UP, OR WALL CAP WITHOUT A PROTECTIVE BUSHING. CABLES PULLED INTO UNPROTECTED CONDUITS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. DO NOT INSTALL ANY CABLING INTO ANY CONDUIT THAT HAS NOT BEEN CONFIRMED TO BE BLOWN CLEAR. COORDINATE WITH ELECTRICAL PRIOR TO ROUGH IN OF ANY CABLING.
05. ANY CABLING FOUND PAINTED DURING THE CONSTRUCTION PROCESS WILL BE REPLACED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND PAINTER TO AVOID CONFLICTS.
06. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REFERENCE BOTH THE PROJECT DRAWINGS AND THE PROJECT SPECIFICATIONS. TOGETHER THEY FORM THE COMPLETE CONTRACT DOCUMENTS. PLEASE REFERENCE THE PROJECT SPECIFICATIONS FOR ALL MATERIALS, EQUIPMENT AND COMPONENTS NOT INDICATED ON THE DRAWING SET.
07. CONTRACTOR SHALL COORDINATE ALL FINAL CAMERA LOCATIONS, HEIGHTS AND CAMERA VIEWING ANGLES WITH OWNER/OWNER'S REPRESENTATIVE. FAILURE TO COORDINATE ALL FINAL CAMERA LOCATIONS, HEIGHTS AND VIEW ANGLES MAY REQUIRE RELOCATION OF CONDUITS, CABLE AND CAMERA LOCATIONS AT CONTRACTOR'S EXPENSE.
08. CONTRACTOR SHALL COORDINATE TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL LOCATIONS SO THAT DATA AND POWER ARE AT THE SAME HEIGHT AND SPACED 18" 24" APART UNLESS SPECIFIED OTHERWISE. REFERENCE TECHNOLOGY AND MEP SHEETS FOR COORDINATION.
09. ALL CABLING INSTALLED IN AREAS WITH EXPOSED CEILINGS SHALL BE INSTALLED IN A PROPERLY SIZED CONDUIT PATHWAY. CONDUIT PATHWAYS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE CONDUIT MAY BE PAINTED TO MATCH CEILING COLOR AS DIRECTED BY THE CONTRACT DOCUMENTS.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS FOR ALL DEMOLITION AREAS.
11. CONTRACTOR SHALL DOCUMENT ALL EXISTING TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL DEVICES AND LOCATIONS PRIOR TO DEMOLITION OF CEILINGS AND SPACES. PROVIDE TEMPORARY SUPPORT IN ALL DEMOLITION AREAS FOR DEVICES, RE-INSTALL ALL EXISTING DEVICES IN NEW CEILINGS.
12. CONTRACTOR SHALL DOCUMENT ALL EXISTING CEILING TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL LABELING ON EXISTING CEILING GRID. PROVIDE NEW LABELING PER SPECIFICATIONS.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR STOPPING ALL TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL CONDUIT PENETRATIONS FROM WATER OR RODENT INGRESS IN ALL BUILDINGS UPON COMPLETION OF THE PROJECT.

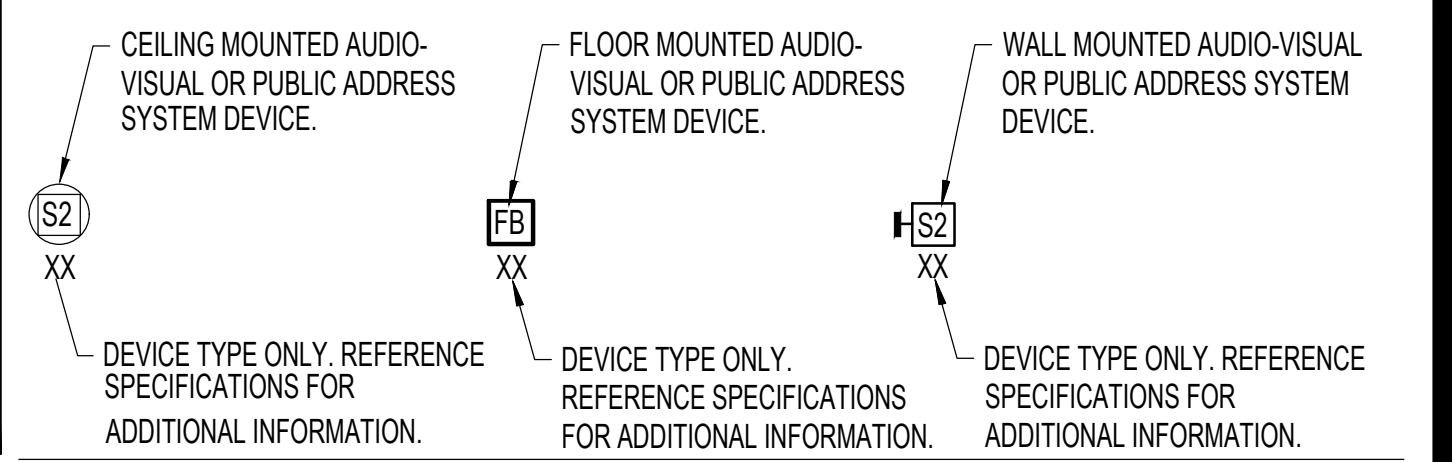
**GENERAL PROJECT NOTES**

◀ EXISTING DATA OUTLET LOCATION FOR REFERENCE ONLY

**DATA DEVICE LEGEND**

- S** SINGLE SIDED CLOCK LOCATION. CONTRACTOR SHALL PROVIDE CABLING AND IP PUBLIC ADDRESS SYSTEM DEVICE. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE SIDED CLOCK AS PER SPECIFICATIONS. ALL CLOCKS ARE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- D** DOUBLE SIDED CLOCK LOCATION. CONTRACTOR SHALL PROVIDE CABLING AND IP PUBLIC ADDRESS SYSTEM DEVICE. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE SIDED CLOCK AS PER SPECIFICATIONS. ALL CLOCKS ARE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.
- C** PAGING / INTERCOM CABINET LOCATION.
- IP** PAGING / INTERCOM AUDIO INPUT PLATE LOCATED UNDER RECEPTION DESK. CONTRACTOR TO PROVIDE BACK BOX WITH (1) 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. CONTRACTOR TO PROVIDE COVER PLATE.
- PA** ADMINISTRATIVE INTERCOM PHONE LOCATION. CONTRACTOR TO PROVIDE CABLING.
- PB** PANIC BUTTON LOCATION. CONTRACTOR SHALL PROVIDE AND INSTALL LATCHING CABLE DUCT COLORED TO MATCH EXISTING RECEPTACLES FOR ALL CINDER BLOCK WALLS, OR RING AND STRING FOR ALL GYP WALL LOCATIONS, FROM NEAREST ACCESSIBLE CEILING SPACE TO BACK BOX INSTALLED AT 48" AFF. CONTRACTOR SHALL PROVIDE AND INSTALL PANIC BUTTON.
- PT** APPROXIMATE LOCATION OF NEW INTERCOM PUSH-TO-TALK BUTTON LOCATION. VERIFY ON SITE TO BE NEAR OR ADJACENT TO ROOM LIGHTING CONTROLS. CONTRACTOR SHALL PROVIDE AND INSTALL LATCHING CABLE DUCT COLORED TO MATCH EXISTING RECEPTACLES FOR ALL CINDER BLOCK WALLS, OR RING AND STRING FOR ALL GYP WALL LOCATIONS, FROM NEAREST ACCESSIBLE CEILING SPACE TO BACK BOX INSTALLED AT 48" AFF. CONTRACTOR SHALL PROVIDE AND INSTALL PUSH-TO-TALK BUTTON.
- ST** APPROXIMATE LOCATION OF NEW SURFACE MOUNTED IP PUBLIC ADDRESS SYSTEM DEVICE. VERIFY WITH SPECIFICATIONS FOR MODEL NUMBERS THAT MATCH THE DESIGNATION REPLACING THE "XX" SHOWN HERE. INTERIOR DEVICES SHALL BE INSTALLED AT 8'-0" AFF AND EXTERIOR DEVICES SHALL BE INSTALLED AT 12'-0" UNLESS OTHERWISE NOTED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING EQUIPMENT. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT THAT ARE EXPECTED TO REMAIN AND BE RECONNECTED TO THE NEW PUBLIC ADDRESS SYSTEM.
- ST** APPROXIMATE LOCATION OF EXISTING CEILING MOUNTED INTERCOM SPEAKER LOCATION. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING EQUIPMENT. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT THAT ARE EXPECTED TO REMAIN AND BE RECONNECTED TO THE NEW PUBLIC ADDRESS SYSTEM.
- HVC** EXISTING VOLUME CONTROL LOCATIONS.

**PUBLIC ADDRESS SYSTEM AND CLOCK SYMBOLS LEGEND**



**AUDIO-VISUAL AND PUBLIC ADDRESS SYSTEM SYMBOL CALL OUT**

**PROJECT ACRONYMS**

RESPONSIBILITY SCHEDULE						
THIS SCHEDULE IS FOR REFERENCE AND DOES NOT INCLUDE ALL PROJECT COMPONENTS. IT SHALL BE USED IN CONJUNCTION WITH THE PROJECT DRAWINGS AND PROJECT SPECIFICATIONS.						
SECTION	DESCRIPTION	DESIGNED BY:	FURNISHED BY:		INSTALLED BY:	
		FIRM RESPONSIBLE FOR DESIGN	CONTRACTOR	OWNER	CONTRACTOR	OWNER
27 5116	PUBLIC ADDRESS SYSTEM					
	MANUFACTURER COMMISSIONING AND SIGN OFF	CRUX	X		X	
	CABLING	CRUX	X		X	
	IP CLOCKS	CRUX	X		X	
	CLASSROOM CLOCK / SPEAKER	CRUX	X		X	
	PANIC BUTTON	CRUX	X		X	
	PUSH TO TALK	CRUX	X		X	
	AUDIO AMPLIFIERS	CRUX	X		X	
	ZONE CONTROLLERS	CRUX	X		X	
	ANALOG SPEAKERS	CRUX	X		X	
						NEW ANALOG SPEAKERS WILL ONLY BE REQUIRED FOR THE REPLACEMENT OF DEFECTIVE EQUIPMENT FOUND DURING THE PRE-INSTALLATION TEST. OWNER APPROVAL REQUIRED.

**STANDARD TECHNOLOGY LEGEND  
NOT ALL SYMBOLS AND NOTES MAY BE USED**

<b>IFC</b>	PUBLIC ADDRESS SYSTEM REPLACEMENT
	JARRELL ISD ELEMENTARY SCHOOL
<b>CRUX</b> <small>TECHNOLOGY + SECURITY CONSULTING 800.885.8440 www.cruxsolutions.com</small>	Sheet Name: GENERAL NOTES AND SYMBOLS
	Sheet No: TG1.01



- TYPICAL PROJECT NOTES:**
1. ALL EXISTING CLOCK LOCATIONS SHALL BE REMOVED BY THE CONTRACTOR. NEW IP CLOCK DEVICES SHALL BE INSTALLED PER SPECIFICATIONS.
  2. EXISTING EXTERIOR, CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
  3. ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING AUDIO SYSTEM TO PROVIDE FOR AN EMERGENCY PAGE MUTE FUNCTIONALITY.

IFC	PUBLIC ADDRESS SYSTEM REPLACEMENT
	JARRELL ISD ELEMENTARY SCHOOL
 <small>TECHNOLOGY + SECURITY CONSULTING 800.855.5440 www.cruxsolutions.com</small>	Sheet Name: MASTER PLAN - FIRST FLOOR
	Sheet No: T1.01

Jarrell Middle School

AC - ACCESS CONTROL  
 AFF - ABOVE FINISHED FLOOR  
 AHJ - AUTHORITY HAVING JURISDICTION  
 AV - AUDIO AND VIDEO  
 BICSI - BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL  
 C - CONDUIT  
 CD - CONSTRUCTION DOCUMENTS  
 CCTV - CLOSED CIRCUIT TELEVISION  
 CO - CONDUIT ONLY (EMPTY CONDUIT WITH MULE TAPE)  
 CP - CONTROL PANEL  
 CU - COPPER  
 DR - DOOR RELEASE  
 EC - ELECTRICAL CONTRACTOR  
 EF - ENTRANCE FACILITY  
 EL - EMERGENCY LOCK DOWN  
 EP - ENTRANCE POINT  
 EPT - ELECTRONIC POWER TRANSFER  
 ESS - ELECTRONIC SAFETY AND SECURITY  
 FBO - FURNISHED BY OTHERS  
 FCC - FEDERAL COMMUNICATIONS COMMISSION  
 GND - GROUND  
 HC - HORIZONTAL CROSS-CONNECT  
 HR - HOME RUN  
 HVAC - HEATING, VENTILATION, AND AIR CONDITIONING  
 IBO - INSTALLED BY OTHERS  
 IDF - INTERMEDIATE DISTRIBUTION FRAME  
 IEEE - THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
 ISP - INTERNET SERVICE PROVIDER  
 JB - JUNCTION BOX  
 LV - LOW VOLTAGE  
 MB - MARKER BOARD  
 MC - MAIN CROSS-CONNECT  
 MDF - MAIN DISTRIBUTION FRAME  
 MH - MANHOLE  
 MIC - MICROPHONE  
 MMF - MULTI-MODE FIBER  
 MD - MOTION DETECTOR  
 MPOE - MAIN POINT OF ENTRY  
 NEC - NATIONAL ELECTRICAL CODE  
 NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION  
 NIC - NOT IN CONTRACT  
 NTS - NOT TO SCALE  
 OC - ON CENTER  
 PB - PULL BOX  
 PM - PROJECTOR MOUNT  
 PNL - PANEL  
 POC - POINT OF CONTACT  
 POE - POWER OVER ETHERNET  
 POS - POINT OF SALE  
 PP - PATCH PANEL  
 RCP - REFLECTED CEILING PLAN  
 RFI - REQUEST FOR INFORMATION  
 RFP - REQUEST FOR PROPOSAL  
 RMU - RACK MOUNT UNIT  
 SMF - SINGLE MODE FIBER  
 SMR - SURFACE MOUNTED RACEWAY  
 SW - SWITCH  
 TE - TELECOMMUNICATIONS ENCLOSURE  
 TIA - TELECOMMUNICATIONS INDUSTRY ASSOCIATION  
 TMGB - TELECOMMUNICATIONS MAIN GROUNDING BUSBAR  
 TYP - TYPICAL  
 UG - UNDERGROUND  
 UL - UNDERWRITERS LABORATORIES INC  
 UNO - UNLESS NOTED OTHERWISE  
 UPS - UNINTERRUPTIBLE POWER SUPPLY  
 USB - UNIVERSAL SERIAL BUS  
 VC - VOLUME CONTROL  
 VP - VIDEO PROJECTOR  
 WAP - WIRELESS ACCESS POINT  
 WP - WEATHER PROOF

**PROJECT ACRONYMS**

01. ANY DIMENSIONS SHOWN ON THESE DRAWINGS ARE INTENDED TO PROVIDE A GENERAL LOCATION AS REQUESTED BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS PRIOR TO ROUGH-IN AND IMMEDIATELY REPORT ANY CONFLICTS WITH THE OUTLET PLACEMENT TO THE GENERAL CONTRACTOR.

02. ALL CABLE BUNDLES WILL BE SUPPORTED EVERY 48"-60" OC WITH A J-HOOK OR OTHER APPROVED PATHWAY DEVICE. REFERENCE SPECIFICATIONS AND DETAILS FOR ADDITIONAL CABLING PATHWAY INSTALLATION REQUIREMENTS. CONTRACTOR WHO VIOLATES THESE REQUIREMENTS WILL BE REQUIRED TO REPLACE THE AFFECTED CABLE PLANT AT THEIR EXPENSE.

03. PLASTIC TIE WRAPS ARE NOT PERMITTED AT ANY TIME ON THIS INSTALLATION. ALL CABLE ROUGH-IN AND DRESS-OUT WILL BE WITH VELCRO ONLY. ALL CABLES BUNDLED WITH PLASTIC TIE WRAPS SHALL BE IMMEDIATELY REPLACED AT THE CONTRACTOR'S EXPENSE.

04. DO NOT INSTALL ANY CABLES IN ANY CONDUIT SLEEVE, STUB UP, OR WALL CAP WITHOUT A PROTECTIVE BUSHING. CABLES PULLED INTO UNPROTECTED CONDUITS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. DO NOT INSTALL ANY CABLING INTO ANY CONDUIT THAT HAS NOT BEEN CONFIRMED TO BE BLOWN CLEAR. COORDINATE WITH ELECTRICAL PRIOR TO ROUGH IN OF ANY CABLING.

05. ANY CABLING FOUND PAINTED DURING THE CONSTRUCTION PROCESS WILL BE REPLACED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND PAINTER TO AVOID CONFLICTS.

06. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REFERENCE BOTH THE PROJECT DRAWINGS AND THE PROJECT SPECIFICATIONS. TOGETHER THEY FORM THE COMPLETE CONTRACT DOCUMENTS. PLEASE REFERENCE THE PROJECT SPECIFICATIONS FOR ALL MATERIALS, EQUIPMENT AND COMPONENTS NOT INDICATED ON THE DRAWING SET.

07. CONTRACTOR SHALL COORDINATE ALL FINAL CAMERA LOCATIONS, HEIGHTS AND CAMERA VIEWING ANGLES WITH OWNER/OWNER'S REPRESENTATIVE. FAILURE TO COORDINATE ALL FINAL CAMERA LOCATIONS, HEIGHTS AND VIEW ANGLES MAY REQUIRE RELOCATION OF CONDUITS, CABLE AND CAMERA LOCATIONS AT CONTRACTOR'S EXPENSE.

08. CONTRACTOR SHALL COORDINATE TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL LOCATIONS SO THAT DATA AND POWER ARE AT THE SAME HEIGHT AND SPACED 18"-24" APART UNLESS SPECIFIED OTHERWISE. REFERENCE TECHNOLOGY AND MEP SHEETS FOR COORDINATION.

09. ALL CABLING INSTALLED IN AREAS WITH EXPOSED CEILINGS SHALL BE INSTALLED IN A PROPERLY SIZED CONDUIT PATHWAY. CONDUIT PATHWAYS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE CONDUIT MAY BE PAINTED TO MATCH CEILING COLOR AS DIRECTED BY THE CONTRACT DOCUMENTS.

10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS FOR ALL DEMOLITION AREAS.

11. CONTRACTOR SHALL DOCUMENT ALL EXISTING TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL DEVICES AND LOCATIONS PRIOR TO DEMOLITION OF CEILINGS AND SPACES. PROVIDE TEMPORARY SUPPORT IN ALL DEMOLITION AREAS FOR DEVICES; RE-INSTALL ALL EXISTING DEVICES IN NEW CEILINGS.

12. CONTRACTOR SHALL DOCUMENT ALL EXISTING CEILING TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL LABELING ON EXISTING CEILING GRID. PROVIDE NEW LABELING PER SPECIFICATIONS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR STOPPING ALL TECHNOLOGY, TELECOM, SECURITY AND AUDIO VISUAL CONDUIT PENETRATIONS FROM WATER OR RODENT INGRESS IN ALL BUILDINGS UPON COMPLETION OF THE PROJECT.

**GENERAL PROJECT NOTES**

EXISTING DATA OUTLET LOCATION(S) FOR REFERENCE ONLY.

**DATA SYMBOLS LEGEND**

**CS** SINGLE SIDED CLOCK LOCATION. CONTRACTOR SHALL PROVIDE CABLING AND IP PUBLIC ADDRESS SYSTEM DEVICE. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE SIDED CLOCK AS PER SPECIFICATIONS. ALL CLOCKS ARE MOUNTED AT 8'-0" AFF UNLESS NOTED OTHERWISE.

**CD** DOUBLE SIDED CLOCK LOCATION. CONTRACTOR SHALL PROVIDE CABLING AND IP PUBLIC ADDRESS SYSTEM DEVICE. CONTRACTOR SHALL PROVIDE AND INSTALL SINGLE SIDED CLOCK AS PER SPECIFICATIONS. ALL CLOCKS ARE MOUNTED AT 8'-0" AFF UNLESS NOTED OTHERWISE.

**IC** INTERCOM CABINET LOCATION.

**IP** EXISTING INTERCOM AUDIO INPUT PLATE LOCATED UNDER RECEPTION DESK. CONTRACTOR TO CONNECT TO NEW PUBLIC ADDRESS SYSTEM AS AUXILIARY AUDIO INPUT.

**PA** ADMINISTRATIVE INTERCOM PHONE LOCATION. CONTRACTOR TO PROVIDE PROGRAMMING FOR NEW PUBLIC ADDRESS SYSTEM.

**PB** PANIC BUTTON LOCATION. CONTRACTOR SHALL PROVIDE AND INSTALL LATCHING CABLE DUCT COLORED TO MATCH EXISTING RECEPTACLES FOR ALL CINDER BLOCK WALLS, OR RING AND STRING FOR ALL GYP WALL LOCATIONS, FROM NEAREST ACCESSIBLE CEILING SPACE TO BACK BOX INSTALLED AT 48" AFF. CONTRACTOR SHALL PROVIDE AND INSTALL INTERCOM PANIC BUTTON.

**PTT** APPROXIMATE LOCATION OF NEW INTERCOM PUSH-TO-TALK BUTTON LOCATION. VERIFY ON SITE TO BE NEAR OR ADJACENT TO ROOM LIGHTING CONTROLS. CONTRACTOR SHALL PROVIDE AND INSTALL LATCHING CABLE DUCT COLORED TO MATCH EXISTING RECEPTACLES FOR ALL CINDER BLOCK WALLS, OR RING AND STRING FOR ALL GYP WALL LOCATIONS, FROM NEAREST ACCESSIBLE CEILING SPACE TO BACK BOX INSTALLED AT 48" AFF CONTRACTOR SHALL PROVIDE AND INSTALL INTERCOM PUSH-TO-TALK BUTTON.

**SI XX** APPROXIMATE LOCATION OF NEW SURFACE MOUNTED IP PUBLIC ADDRESS SYSTEM DEVICE. VERIFY WITH SPECIFICATIONS FOR MODEL NUMBERS THAT MATCH THE DESIGNATION REPLACING THE "XX" SHOWN HERE. INTERIOR DEVICE SHALL BE INSTALLED AT 8'-0" AFF AND EXTERIOR DEVICE SHALL BE INSTALLED AT 12'-0" UNO. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING EQUIPMENT. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT THAT ARE EXPECTED TO REMAIN AND BE RECONNECTED TO THE NEW PUBLIC ADDRESS SYSTEM.

**SI** APPROXIMATE LOCATION OF EXISTING CEILING MOUNTED INTERCOM SPEAKER. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING EQUIPMENT. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT THAT ARE EXPECTED TO REMAIN AND BE RECONNECTED TO THE NEW PUBLIC ADDRESS SYSTEM.

**INTERCOM SYMBOLS LEGEND**

**HAVI XX** EXISTING AUDIO AND/OR VIDEO OUTLET ON WALL FOR REFERENCE ONLY.

**SS** LOCAL SOUND SYSTEM SPEAKERS IN CEILING. CONTRACTOR SHALL BE CERTAIN THAT NEW PUBLIC ADDRESS SYSTEM PROVIDE PAGE MUTE FUNCTIONALITY. TEST EACH SYSTEM PRIOR TO FINAL OBSERVATION.

**AUDIO VISUAL SYMBOLS LEGEND**

RESPONSIBILITY SCHEDULE						
THIS SCHEDULE IS FOR REFERENCE AND DOES NOT INCLUDE ALL PROJECT COMPONENTS. IT SHALL BE USED IN CONJUNCTION WITH THE PROJECT DRAWINGS AND PROJECT SPECIFICATIONS.						
SECTION	DESCRIPTION	DESIGNED BY:		FURNISHED BY:		INSTALLED BY:
		FIRM RESPONSIBLE FOR DESIGN	CONTRACTOR	OWNER	CONTRACTOR	
27 5116	PUBLIC ADDRESS SYSTEM					
	MANUFACTURER COMMISSIONING AND SIGN OFF	CRUX	X		X	
	CABLING	CRUX	X		X	
	IP CLOCKS	CRUX	X		X	
	CLASSROOM CLOCK / SPEAKER	CRUX	X		X	
	PANIC BUTTON	CRUX	X		X	
	PUSH TO TALK	CRUX	X		X	
	AUDIO AMPLIFIERS	CRUX	X		X	
	ZONE CONTROLLERS	CRUX	X		X	
	ANALOG SPEAKERS	CRUX	X		X	NEW ANALOG SPEAKERS WILL ONLY BE REQUIRED FOR THE REPLACEMENT OF DEFECTIVE EQUIPMENT FOUND DURING THE PRE-INSTALLATION TEST. OWNER APPROVAL REQUIRED.

Revision:      Date:      Description:

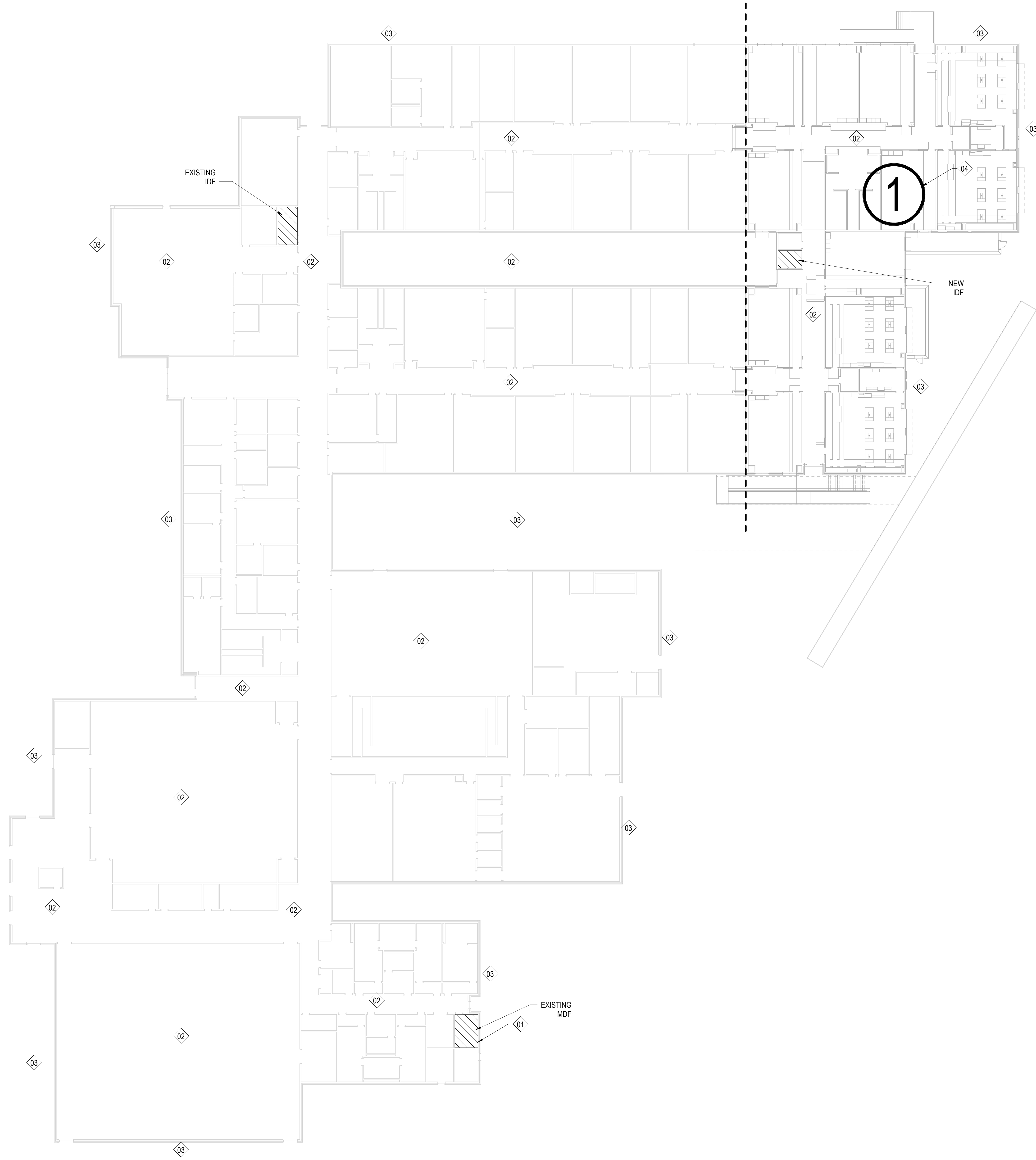
JARRELL MS PUBLIC ADDRESS REPLACEMENT FOR JARRELL I.S.D. JARRELL, TEXAS



**GENERAL NOTES AND SYMBOLS**

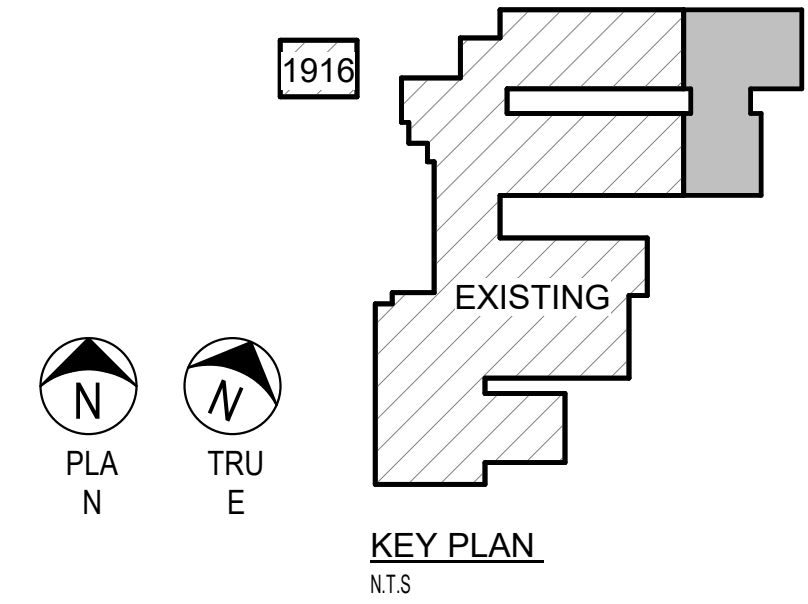
Job No. D-JAR-1001-03      Sheet No. FC-1.1  
 Drawn By: OG  
 Designed By: MB  
 Date: 03/14/24      of

**STANDARD TECHNOLOGY LEGEND**  
 NOT ALL SYMBOLS AND NOTES MAY BE USED



- 01. EXISTING EXTRON GLOBAL CAMPUS VIEWER HEADEND LOCATION.
- 02. ALL EXISTING INTERIOR CLOCK LOCATIONS SHALL BE REPLACED WITH NEW IP BASED CLOCK / SPEAKER COMBO ENDPOINTS. CONTRACTOR SHALL FURNISH ALL CABLING, MOUNTING HARDWARE AND SPECIFIED ENDPOINT.
- 03. EXISTING EXTERIOR PAGING SPEAKER LOCATIONS SHALL BE REUSED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.
- 04. AREA SHOWN ON T1.2-FLOOR PLAN SECTION 1 AS REFERENCE FOR TYPICAL AV AND PUBLIC ADDRESS SYSTEM DEVICE LOCATIONS THAT SHALL BE APPLIED TO THE ENTIRE CAMPUS.

**KEYNOTE LEGEND**  
(NOT ALL KEYNOTES MAY APPLY)



1 MASTER PLAN - FIRST FLOOR  
 T1.1 1" = 20'-0"

Revision	Date	Description

Project:  
**JARRELL MS PUBLIC ADDRESS REPLACEMENT FOR JARRELL I.S.D. JARRELL, TEXAS**

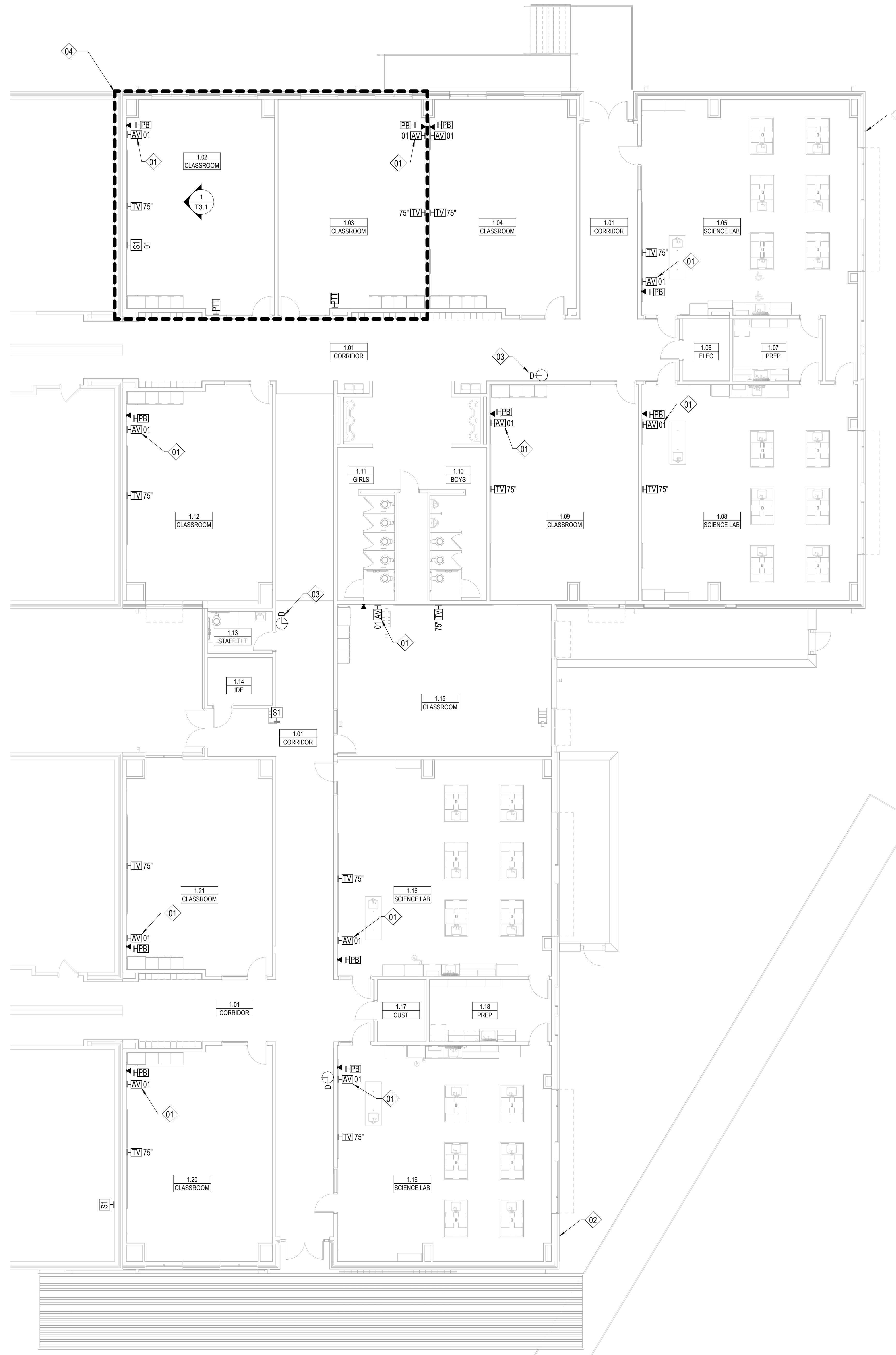


MASTER PLAN - FIRST FLOOR

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	T1.1
Designed By: MB	
Date: 03/14/24	of

C:\Users\mbooka\Documents\Jarrell ISD\_MS\_TECH\_02\_01\_mbooka@cruxsolutions.com.rvt

C:\Jarrell\mbook\Documents\Jarrell ISD MS TECH V21.01\_mbook\jarrell\jarrell.ms.dwg



1. REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.

2. EXISTING EXTERIOR, CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.

**SHEET NOTES**

01. EXISTING TEACHER STATION LOCATION FOR REFERENCE ONLY.

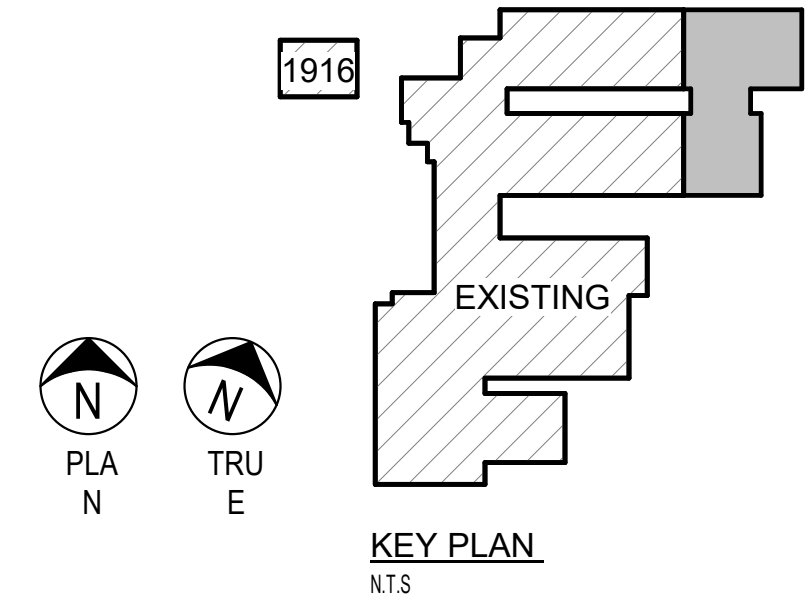
02. EXISTING EXTERIOR PAGING SPEAKER LOCATION.

03. TYPICAL FOR ALL EXISTING INTERIOR CLOCK LOCATIONS. CONTRACTOR SHALL REMOVE EXISTING AND FURNISH AND INSTALL NEW IP CLOCK / SPEAKER COMBO END POINT.

04. TYPICAL CLASSROOM FLOOR PLAN FOR THE PROJECT. THIS SHALL BE REPLICATED FOR ALL CLASSROOMS THROUGHOUT THE CAMPUS.

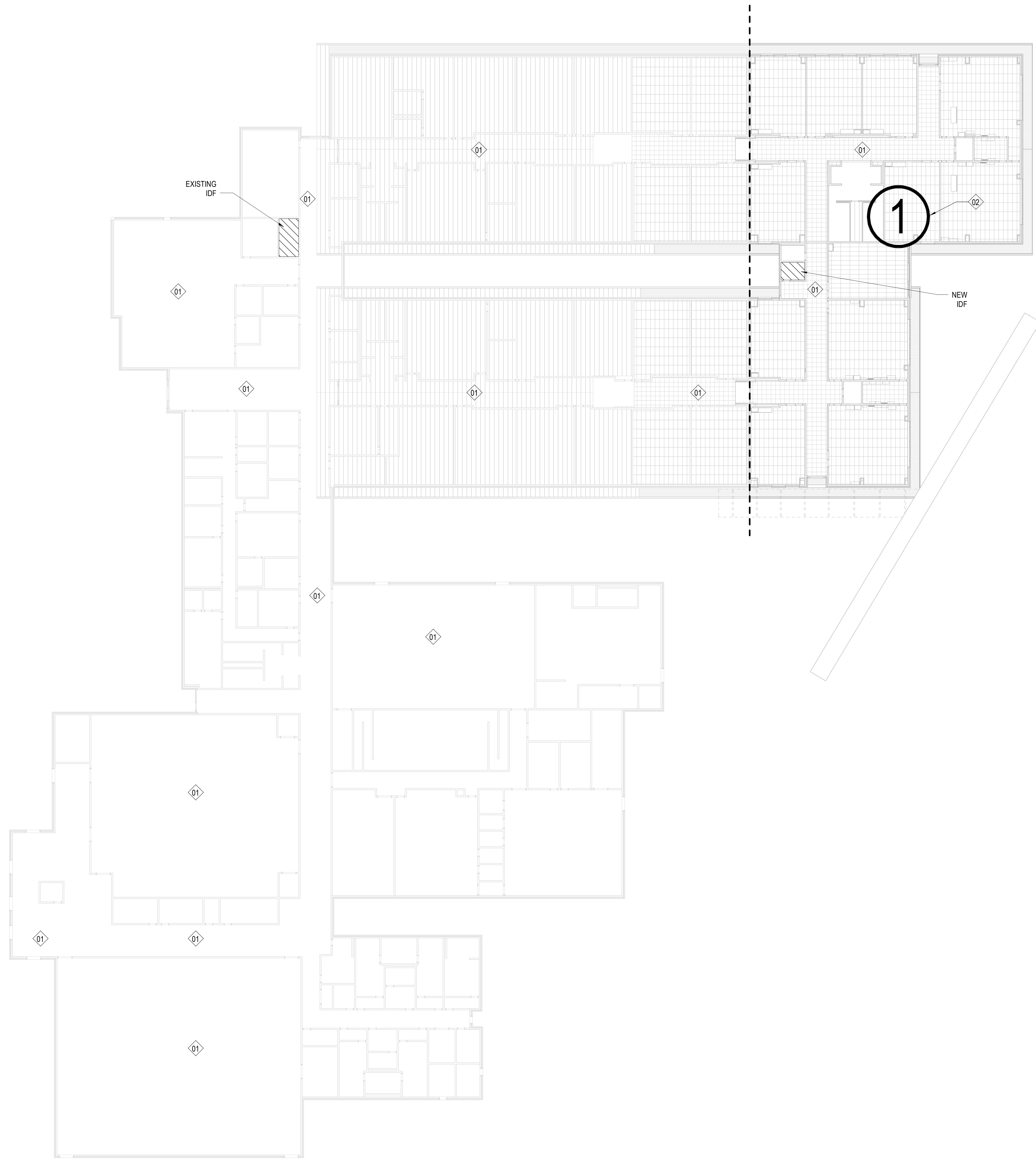
**KEYNOTE LEGEND** (NOT ALL KEYNOTES MAY APPLY)

1 FLOOR PLAN - SECTION 1  
T1.2 1/8" = 1'-0"




Description	
Revision:	Date:
<b>JARRELL MS PUBLIC ADDRESS REPLACEMENT FOR JARRELL I.S.D. JARRELL, TEXAS</b>	
<b>CRUX</b> <small>TECHNOLOGY + SECURITY CONSULTING          6421 Camp Bowie Blvd, Ste 400          Fort Worth, Texas 76116          800.665.6448          www.cruxitd.com</small>	
FLOOR PLAN - SECTION 1	
Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	<b>T1.2</b>
Designed By: MS	of
Date: 03/14/24	

C:\Users\mbooka\Documents\Jarrell ISD\_MS\_TECH\_V21\_01\_mbooka\cruxsolutions.com.rvt



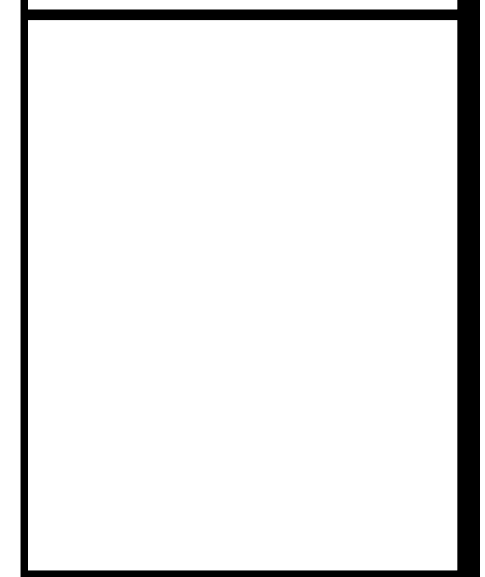
01. EXISTING CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.

02. AREA SHOWN ON T2.2- REFLECTED CEILING PLAN- SECTION 1 AS REFERENCE FOR TYPICAL AV AND PUBLIC ADDRESS SYSTEM DEVICE LOCATIONS THAT SHALL BE APPLIED TO THE ENTIRE CAMPUS.

**KEYNOTE LEGEND**   
(NOT ALL KEYNOTES MAY APPLY)

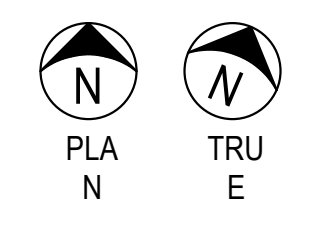
Revision	Date	Description

**JARRELL MS PUBLIC ADDRESS REPLACEMENT FOR JARRELL I.S.D. JARRELL, TEXAS**



**CRUX**  
 TECHNOLOGY + SECURITY CONSULTING  
 6421 Camp Bowie Blvd, Ste 400  
 Fort Worth, Texas 76116  
 800.655.6448  
 www.cruxitd.com

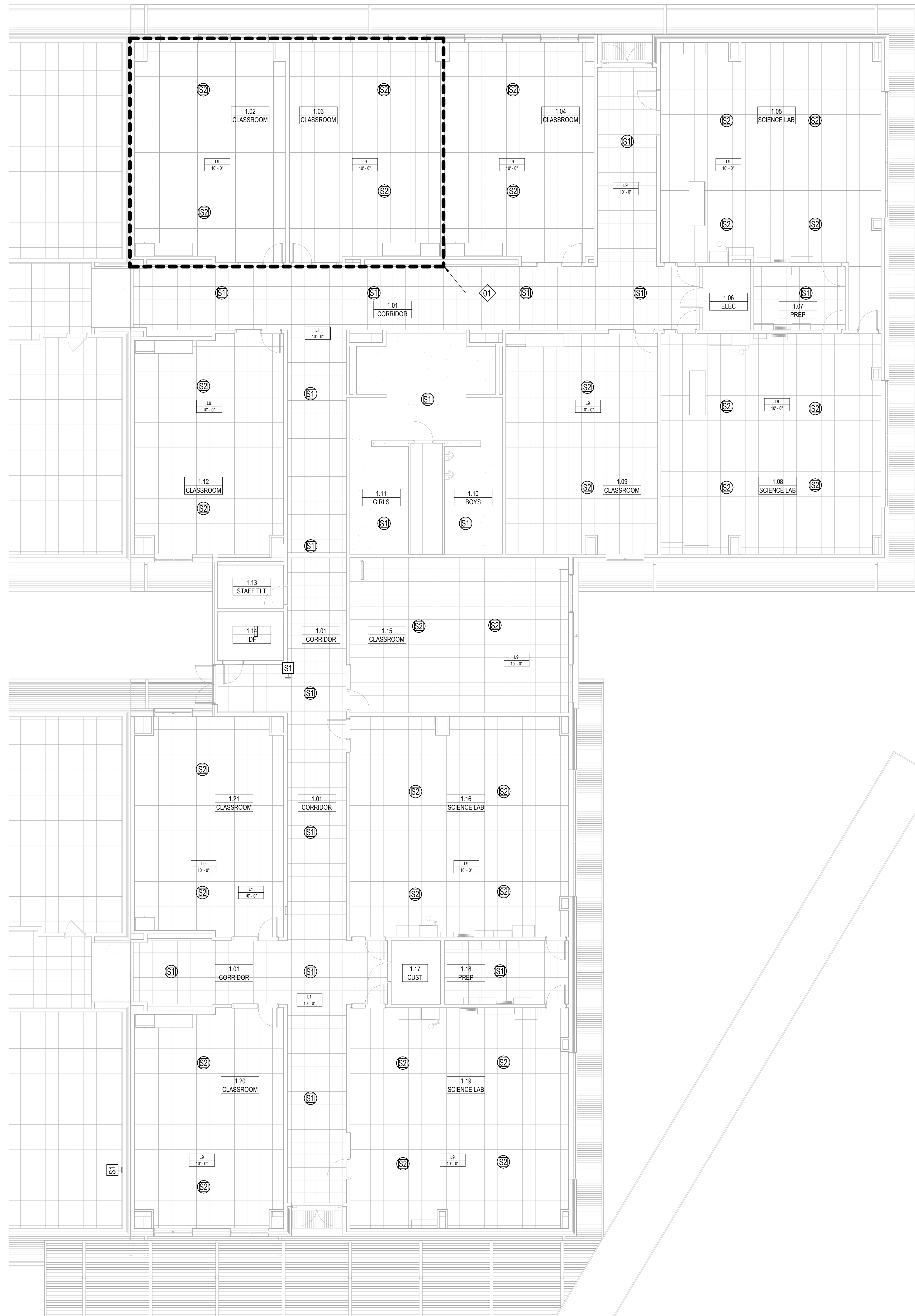
**MASTER REFLECTED CEILING PLAN - FIRST FLOOR**



1 MASTER PLAN - FIRST FLOOR - RCP  
 T2.1 1" = 20'-0"

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	T2.1 of
Designed By: MB	
Date: 03/14/24	





CEILING TYPE	TYPE	HEIGHT
ESF	EXPOSED DECK AND STRUCTURE (FINISHED)	
ESP	EXPOSED DECK AND STRUCTURE (PRIMED)	
GYP	SUSPENDED 5/8" GYPSUM BOARD	
GYP1	SUSPENDED 5/8" TYPE 'X' GYPSUM BOARD (1-HR. RATED)	
L1	TYPE I 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (STANDARD CEILING)	
L2	TYPE II 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ABUSE RESISTANT)	
L3	TYPE III 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)	
L4	TYPE IV 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED)	
L5	TYPE V 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC 'REFLECTIVE')	
L6	TYPE VI 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC 'ABSORPTIVE')	
L7	TYPE VII 2'-0" X 2'-0" LAY-IN SUSPENDED CEILING TILE (ACOUSTIC 'ABSORPTIVE' - GEN. USE)	
LWCS	LINEAR WOOD SUSPENDED CEILING	
MIS	LINEAR WOOD COMPOSITE SOFFIT	
PL	PLASTER	
SPS	SOLID POLYMER SURFACING	
WD	WOOD CEILING	

REFERENCE ARCHITECTURAL DRAWINGS TO VERIFY ALL CEILING TYPES AND HEIGHTS.

**CEILING TAG LEGEND**  
(NOT ALL CEILING TYPES MAY APPLY)

1. REFERENCE SHEET T01.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.

2. EXISTING EXTERIOR, CORRIDOR AND COMMON AREA SPEAKERS SHALL BE RE-USED. COMPLETE INITIAL TESTING PRIOR TO DEMOLITION OF EXISTING HEADEND. PROVIDE A COMPLETE TEST REPORT WITH A RECOMMENDED REMEDY TO ANY DEFECTIVE EQUIPMENT.

**SHEET NOTES**

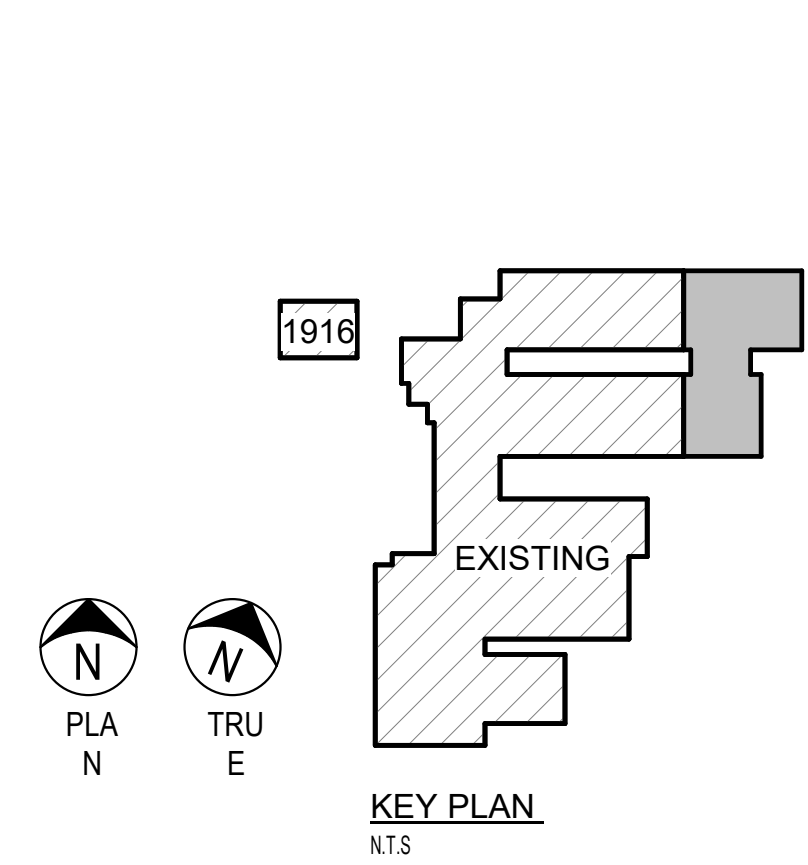
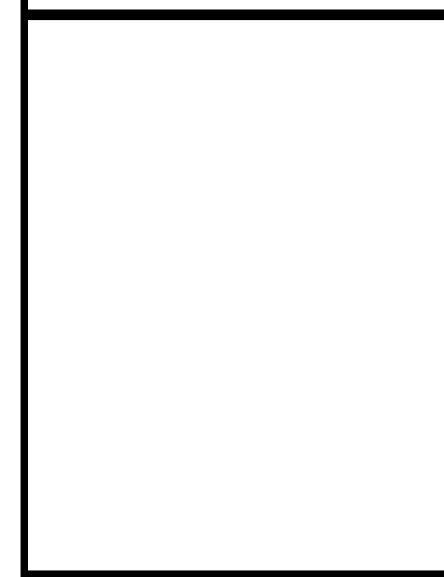
01. TYPICAL PROJECT NOTE: ALL EXISTING CLASSROOM AUDIO SYSTEMS TO REMAIN. THE NEW PUBLIC ADDRESS SYSTEM SHALL CONNECT TO THE EXISTING PAGE MUTE SYSTEM TO PROVIDE FOR EMERGENCY PAGE MUTE FUNCTIONALITY.

**KEYNOTE LEGEND**  
(NOT ALL KEYNOTES MAY APPLY)

Revision:	
Date:	
Description:	

Project:

JARRELL MS PUBLIC ADDRESS REPLACEMENT FOR JARRELL I.S.D. JARRELL, TEXAS



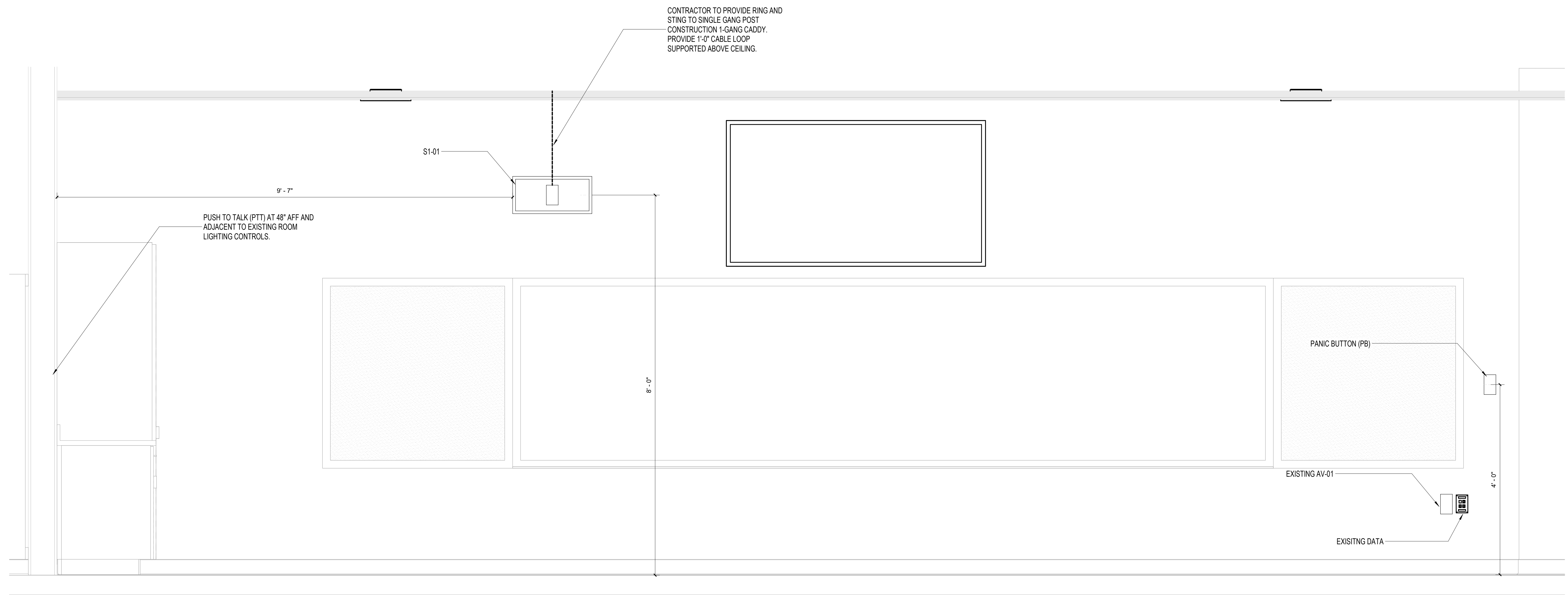
1 FLOOR PLAN - SECTION 1 - RCP  
1/8" = 1'-0"

**CRUX**  
TECHNOLOGY + SECURITY CONSULTING  
6421 Camp Bowie Blvd, Ste 400  
Forth Worth, Texas 76116  
800.655.6448  
www.cruxinc.com

REFLECTED CEILING PLAN - SECTION 1

Job No. D-JAR-1001-03	Sheet No. FC
Drawn By: OG	T2.2
Designed By: MB	
Date: 03/14/24	of

Copyright © 2024, Crux Technology and Security Solutions



1 TYPICAL CLASSROOM ELEVATION  
T3.1 1" = 1'-0"

C:\Users\mbooki\Documents\Jarrell ISD\_MS\_TECH\_V21\_01\_mbooki@cruxsolutions.com.rvt

Description

Date

Revision

JARRELL MS PUBLIC ADDRESS REPLACEMENT  
FOR  
JARRELL I.S.D.  
JARRELL, TEXAS

Project



SECTION VIEWS

Job No.  
D-JAR-1001-03  
Drawn By:  
MB  
Designed By:  
MB  
Date:  
03/14/24

Sheet No.  
FC  
T3.1  
of