

Addendum

Date:	09-06-2022	Addendum #:	1
Project:	Interior Renovation of HB Booker School		
Owner:	Cleveland Metropolitan School District		
Architect:	ThenDesign Architecture 4230 River Street Willoughby, OH 44094 Architect's Project #:		

This Addendum becomes as fully a part of the previously issued Bid Package as if originally issued therewith or originally contained therein.

The Addendum embraces additions to, deductions from, changes and substitutions in, or clarifications and emphasis on parts or requirements of the drawings and specifications pertaining to all trades herewith mentioned.

Contractors for each trade or contract shall familiarize themselves with Addendum items for all trades and contracts, and they shall be held responsible or complete knowledge of same.

Description:

Specifications

1. Division 1 – Section III – Instructions to Bidders – revisions indicated in **red**.
2. Division 1 – Section V – Supplementary Conditions – revisions indicated in **red**.
3. Division 1 – Section VI – Description of Work – revisions indicated in **red**.
4. Division 1 – Section VII – Form of Proposal – revisions indicated in **red**.
5. Division 9 – Section 095113 – Acoustical Panel Ceilings – revisions indicated in **red**.

Drawings

1. Cover Sheet – **revisions**
2. Architectural – **revisions**
 - a. A101, **A101E**, **A101P**, A102, A103, A104, A201, A202
3. Plumbing – **revisions**
 - a. P1, P2, P3
4. Electrical – **revisions**
 - a. E1, E2, E3

Attachments:

Same as above.

Issued By: Jeff Henderson, RA, NCARB

ThenDesign Architecture

cc: File



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1. DEFINITIONS

- A. All definitions set forth in the Contract Documents are applicable to the Bidding Documents.
- B. Contract Documents and Bidding Documents are as defined in the General Conditions and as may be modified in the Supplementary General Conditions.
- C. A Bid is a complete and properly signed proposal submitted per the requirements of the Bidding Documents. Any proposal not meeting the requirements of the Bidding Documents in every respect, may be rejected by the Owner as an improperly executed Bid.
- D. Base Bid is the sum stated in the Bid for which the Bidder offers to perform the work described in the Bidding Documents and/or the Contract Documents as the Base Bid.
- E. Alternate Bid is the sum or adjustment to the Base Bid stated in the Bid for which the Bidder offers to perform Alternate Work described in the Bidding Documents and/on the Contract Documents as Alternate Bid (or Alternate).
- F. A unit price is the amount stated in the Bid for which the Bidder offers to accept for adjustments to the Contract amount for additions or deductions to the scope of the work.
- G. A Bidder is the person or entity who submits a Bid and a Sub-bidder is a person or entity who submits a Bid to the Bidder for any portion of the work.

2. BIDDER'S REPRESENTATIONS

- A. By submitting a Bid, the Bidder represents that he has:
 - 1. Familiarized himself with the Contract Documents and Bidding Documents.
 - 2. Familiarized himself with the site, and with local conditions that may affect the work.
 - 3. Only complete sets of Contract Documents have been used in preparation of the Bid.
 - 4. Based his Bid only on Standards required in the Contract Documents without exception.
 - 5. Has received and is familiar with all addenda.
 - 6. Is a registered contractor with the City of Cleveland, Cuyahoga County and any other local building authority or will become registered before the start of construction.

7. Understands and accepts costs associated with overtime, after hours and weekend work associated with this project.
8. Accepts that this work will be completed after normal working hours.

3. BIDDING DOCUMENTS

- A. Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Notice to Bidders and/or Legal Advertisement.
- B. Should any requirements in the Contract Documents or the Bidding Documents require clarification, the bidder shall request such clarification in writing, 5 business days prior to the time of submission of bids. If it is determined by the Architect, that a clarification is required, the clarification shall be issued in the form of Addenda. Note that on public project, an Addenda cannot be issued with less than 72 hours unless it is done in accordance with O.R.C. 153.12(A). Addenda is the only way in which a binding clarification, correction, or change can be made to the Contract Documents and Bidding Documents during the Bidding period.
- C. Should any of the requirements in the contract documents require clarification during construction that could have reasonably been identified during bidding, any and all costs associated with such clarifications shall be borne by the Contractor. The Architect shall determine which items should have been recognized and identified during the bidding process.

4. SUBSTITUTIONS

- A. The name or make of any article, device, material, form of construction fixtures, etc., named in this project manual shall be known as a "Standard". All proposals shall be based on "Standards" specified unless the bidder obtains the written approval of the Architect as an "Approved Equal".
- B. Where two or more "Standards" are named together, bidders may bid any of the "Standards" named.
- C. Bidders desiring to submit products for consideration as an "Approved Equal" should, 5 business days prior to the time of submission of bids, submit complete specifications and description of the proposed brands requested to be approved as equal to the Architect for review. If approval is granted by the Architect, written approval will be stated by Addenda to all bidders.
- D. If written approval has not been obtained prior to due date for submission of bids, then proposed brand may be bid as a substitute on Substitution Sheet only.
- E. The low bidder will be determined on the basis of bids submitted in accordance with Paragraphs A, B, and C of this heading and other factors as set forth in the Bidding and Contract Documents. Low bidder will not be determined on the basis of substitution.
- F. Bidders desiring consideration for the use of material, equipment, etc., not

named in the project manual may submit proposals for the substitution of same in lieu of "Standards" specified, using the "Substitution Sheet" attached to the Proposal Form and listing for each proposed change.

1. The "Standard" specified.
2. The Substitution.
3. The change in Bid Price (or "no change").

- G. Complete specifications and description of any proposed substitution being considered for acceptance shall be furnished to the Architect promptly, upon receipt.

5. ADDENDA

- A. When issued, Addenda will be mailed or delivered to the address on file in the Architect's office to all who are known by the Architect to have received a set of the Bidding Documents and the Contract Documents.
- B. Addenda will be made available for inspection wherever Contract Documents and Bidding Documents are on file for that purpose.

6. REFERENCE STANDARDS

- A. Any documents, referenced specification, standard, etc., referred to in this project manual as forming a part herein, shall be secured by the respective Contractor, maintained in his records, and shall be available at all times for reference.

7. BIDDING PROCEDURE

- A. Bids will be accepted only on the Form of Proposal which is part of these Bidding Documents.
- B. Alternates to the Form of Proposal, exceptions to any portion of the Bidding Documents and/or Contract Documents, and Form of Proposals that are not filled out completely shall at the discretion of the Owner, disqualify the bidder.
- C. Bid amounts shall be stated both in writing and in figures.
- D. All blanks in the Form of Proposal shall be filled in. If a blank is non-applicable to a bidder, it shall be so stated. The abbreviation NA is acceptable.
- E. All Form of Proposals shall be filled out in ink or typed. All signatures shall be in ink.
- F. Bids shall be signed with proper legal signatures with the names of each and every person interested therein; in the case of a corporation, the proper legal signature of one officer of the corporation authorized to sign for the corporation. All signatures shall have such names "typed in" adjacent thereto. The business address shall be given in all cases.
- G. Bids shall be enclosed in opaque inner and outer envelopes. The outer

envelope shall be sealed and shall be clearly marked, as follows, depending on the nature of the bid:

“INTERIOR RENOVATIONS TO H. B. BOOKER SCHOOL”

Bid Contract A

The properly identified bid shall be sealed, addressed and delivered to the location, and prior to the date and time as noted in the project description.

- H. **The Architect's opinion of probable cost of construction, for base bid is \$800,000.**
- I. Bids must include properly executed Bid Guaranty and Contract Bond per Section 153.571 of the Ohio Revised Code for all public work in Ohio, except for work for incorporated cities. For work for incorporated cities and for privately funded work, bids must include properly executed Bid Bond submitted on AIA document A310, latest edition, for the amount indicated on the Notice to Bidder and/or Legal Advertisement. Irrevocable Letters of Credit and/or Certified or Cashiers Checks may be substituted for the above mentioned Bonds only if such options are indicated on the Notice to Bidders and/or Legal Advertisement. All Bonds must have proper endorsement by the Surety or Sureties.
- The Bond or when permitted, Certified Checks or Letters of Credit, received from the unsuccessful bidders will be returned as soon as the Contracts are awarded, signed and the bond obligations of successful bidders are fulfilled, or no more than 60 days after the closing date for receipt of bids. Bonds, Checks, and Letters of Credit are to be payable to the Owner, as identified in these documents.
- J. The Bid Guaranty (Division I) must be of a sufficient amount to cover the combined base bid and all additive alternates, or the sum of the individual bids and all additive alternates whichever amount is higher.
- K. Bids may be withdrawn only in accordance with ORC, 89.31 and other applicable Ohio law. Once a bid is submitted, it cannot be modified.
- L. Oral, telephonic, telegraphic bids or facsimile bids are invalid and will not receive consideration.
- M. No bids will be accepted later than the time and date, indicated on the Notice To Bidders and/or Legal Notice.
- N. Bids may be withdrawn after receipt of a bid if a letter identifying the bid error is received by the Architect within 48 hours of the bid due date. The Architect has the sole discretion of determining if a bid may be withdrawn.
- O. Subcontractors. Each successful bidder must submit the names of all of his subcontractors prior to commencing work. The architect and the owner reserve the right to reject any subcontractor they deemed not qualified to perform the work. The contractor shall replace such contractor with a qualified subcontractor as approved by the Architect and Owner at no additional cost.

8. CONSIDERATION OF BIDS

- A. the Owner reserves the right to reject any or all bids and to waive any formalities in bidding and may accept or reject any or all alternates.
- B. The Owner intends to award a contract to the lowest and best bid which may include work completion time schedule determined by the Contractor on the Form of Proposal. The lowest and best bid is the bid, in the Owners judgment, that is in the Owners best interest to accept.
- **The date of Substantial Completion of the Project is March 31, 2023.**
 - **There is an Alternate for Substantial Completion by December 30, 2022. Refer to Form of Proposal.**
- C. After opening of Bids, the Architect will determine the apparent lowest Bidder for the Bid contract. The Contractor shall submit, with his bid, to the Architect his list of proposed subs, suppliers, and job superintendent. Upon receipt of this list, Architect and Owner shall review this list and advise contractor of any objections to names on such list. Upon determination of acceptable list, there shall be no change from the list. Failure to submit contractors list of subcontractors, suppliers, and project superintendent with his bid shall be considered grounds to disqualify the bid.
- D. The lowest bid is defined as the lowest cost or base bid and alternates as selected by the Owner.

9. ALTERNATES, UNIT PRICES AND SUBSTITUTIONS

- A. Each bidder shall submit on his bid, prices for all Alternates and Unit Prices, if any, as listed herein for inclusion.
- B. Any substitution the bidder wishes to have considered may be so indicated in the Form of Proposal including the change the substitution would make in the bid amount. Each substitution must be accompanied with the data to aid the Architect in evaluation of the substitute. Base Bids and Alternate Bids cannot be based on substitutes.

10. ALLOWANCES – N/A

11. CONTRACT

- A. The Form of Agreement shall be " The Standard Form of Agreement between Contractor and Owner for Construction of Buildings".
A.I.A. Form A-101 issued by the American Institute of Architects, latest edition.
- B. Bonds shall be required of bidders entering an Agreement with the Owner as follows:
1. Bidders required to submit a Bid Guaranty and Contract Bond per Section 7-1 of these Instructions to Bidders, will not be required to furnish additional Performance and Labor and Material Payment Bonds.
 2. Bidders who submit a Bid Bond or (when permitted) submit a

Certified Check, Cashier's Check or Irrevocable Letter of Credit with their bid, shall be required to provide the Owner with 100% Performance Bond and Labor and Material Payment Bond, on the form required by ORC 153.57 or a Bid Guaranty and Contract Bond meeting the requirements required by ORC 153.57. The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto, a certified and current copy of his power of attorney.

12. QUALIFICATIONS OF BIDDERS

A. The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner, all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigations of such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted.

1. Contracts will be awarded only to responsible Contractors, qualified by experience and in a financial position to do the work specified. Each bidder will be required to submit, at the request of the Architect the following data:
 - a. Experience record showing bidder's training and experience in similar work.
 - b. List and brief description of similar work satisfactorily completed, with location, date of contract, together with names and addresses of Owners.
 - c. List of facilities and equipment available to do this work.
2. The actual work shall be performed by qualified and experienced mechanics working under the Contractor's supervision or under the supervision of an experienced supervisor, who has also been doing this type of work.

13. DISCRIMINATION AND INTIMIDATION

A. The prohibitions against discrimination and intimidation on account of race, creed, sex or color, and the provisions as to forfeitures to be applied in the event of violation of Contract Terms regarding same, as contained in Sections 153.59 and 153.60, and Sections 4112.01 through 4112.99 inclusive, of the Revised Code of Ohio, shall apply to all Contracts entered into in connection with the work.

14. SALES TAX

A. At Contractor's request, Sales Tax Exemption Certificates shall be issued to each successful bidder on all projects that are so permitted under State and Federal Laws.

15. FOREIGN CORPORATIONS

- A. Foreign Corporations authorized under the laws of another State must comply with the licensing statutory requirements of the State of Ohio.

16. MANDATORY BACKGROUND CHECKS

- A. Compliant with House Bill 190, all contractors that will be on-site during construction must complete the BCII and FBI background checks. The background checks shall be conducted by an approved provider and paid for by the contractor. Cost shall be verified by the contractor prior to bidding and included in the base bid.

17. DECLARATION REGARDING MATERIAL ASSISTANCE/NON-ASSISTANCE TO A TERRORIST ORGANIZATION, (DMA).

- A. Compliant with Ohio Senate Bill 9, Ohio's Homeland Security and Anti-Terrorism Legislation the awarded Contractor shall be required to provide this documentation, prior to the commencement of work.

18. CERTIFICATE OF COMPLIANCE – STATE OF OHIO - EQUAL OPPORTUNITY

- A. Compliant with Ohio Revised Code 9.47, the awarded Contractor shall be required to provide this documentation, prior to the commencement of work.

SECTION V - SUPPLEMENTARY CONDITIONS

The following supplements, modify, change, delete from or add to the “General Condition” of the Contract for Construction, AIA Document A201, latest edition as amended by the Owner, a copy, which is attached to Division I, Section IV. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause as they appear in the latest edition as amended by Owner (copy attached to Division I, Section IV), shall remain in effect.

1. CONTRACT DOCUMENTS:
 - A. In the event there is a conflict in the Contract Documents, the most stringent requirements, as determined by the Architect, shall determine the minimal acceptable requirement for the Work.
 - B. The following Contract Forms are required forms for this project. They are on file and may be reviewed at the Architect’s Office.
 1. Standard Form of Agreement Between Owner and Contractor AIA Form A-101.
 2. Bid Guarantee and Contract Bond.
 3. Performance Bond and Labor and Material Payment Bond, AIA Form A-311.
 4. Certificate of Insurance.
 5. Subcontract Form.
 6. Architect’s Field Order.
 7. Consent of Surety to Final Payment.
 8. Contractor’s Affidavit of Release of Liens and Payments of Debt.
 9. Certificate of Substantial Completion.
 10. Payment Certificate.
 - C. The following sections of the AIA Document A201 shall be deleted for this project.
 1. 4.5 Arbitration

2. Sub-Categories: 4.5.1, 4.5.2, 4.5.3, 4.5.4, 4.5.4.1, 4.5.4.2, 4.5.5, 4.5.6, 4.5.7.

C. DRAWINGS

1. Drawings are diagrammatic and are intended to show the approximate locations. Dimensions given on the plans in figures shall take precedence over scaled dimensions; and all dimensions, whether figured or scaled, shall be verified in the field.
2. The exact location of buildings, drives, walkways, etc., shall be ascertained from the Architect or his representative in the field, and the work shall be laid out accordingly. Should the Contractor fail to ascertain such locations the work shall be changed at his own expense when so requested by the Architect. The Architect reserves the right to make minor changes in location up to the time of installing, without additional cost.
3. The drawings and project manual are intended to cover a complete project in every respect. Each and every item, system, etc., is to be complete unless otherwise definitely indicated.
4. The drawings and project manual are intended to supplement each other and any material or labor called for in one shall be furnished even though not specifically mentioned in both.
5. Demolition and/or removal of existing driveways, walks, etc. may necessitate the removal or relocation of existing piping, conduit, wiring services, etc. Such removal and relocation shall be considered part of the demolition work without additional cost, whether or not specifically shown on the drawings or listed in these specifications.
6. The contractor shall visit the project site prior to submitting his bid and shall have full knowledge of all existing conditions. Changes in work scope that could have been reasonably assumed with a site visit shall be the responsibility of the contractor.

D. Industry Standards

1. Federal Specifications, State Specifications, Architectural Woodwork Institute, American Concrete Institute, the Standards of the American Society for Testing Materials (ASTM Standards), the Standards of the American Standards Association, and other Standards referred to in this project manual shall apply to the work as hereinafter specified. In all cases, the latest revision of such Standards or Specifications shall be used.

E. Standards

1. Reference to Standards Codes, Specifications, Recommendations and Regulations, throughout this project manual, shall make applicable portions of such standards, codes, specifications, recommendations, and regulations, that are not in conflict with the Contract Documents, a part of this project manual. In case of discrepancies between Standards, the more restrictive shall apply. In case of discrepancies between Standards and this project manual, the project manual shall govern. In general, meet the requirements and recommendations of the standards listed including the manufacturer's printed specifications, recommendations and instruction.
 2. The specifications, recommendations and/or instructions published by an approved manufacturer of an approved material, are hereby incorporated into this project manual as Standards, and shall be considered as binding wherever they are more restrictive than other general standards so included.
2. ARCHITECT:
- A. Article 2 as set forth in the attached General Conditions shall remain unchanged.
3. OWNER:
- A. The Owner may secure the services of a surveyor to establish lot lines, restrictions, and benchmarks. Once established, it becomes the responsibility of the Contractor to maintain lines, restrictions and benchmarks.
 - B. Cost of Utilities

The Owner shall pay the following charges:
 1. All electric current used from existing, temporary or permanent metering.
 2. Cost of water used from existing facility or new metering.
 3. Cost of all fuel and electricity used in permanent heating system. Electrician shall pay for all fuel for temporary heating devices that require a fuel source other than that provided as part of the permanent structure.
 - C. Stoppage of Work
 1. The Owner reserves the right to stop work at any time, or refuse to allow work to be started, when in his opinion, such stoppage is necessary to insure the proper execution of work. The absence of such a stop order shall not relieve the Contractor of responsibility for any work that may be damaged.
4. CONTRACTOR:

A. Shop Drawing Submittal

Contractor shall review, stamp with his indication of approval, and submit in sets along with transmittal, shop drawings as follows:

- 1. Submit electronic shop drawings (PDF format) for approval, including manufacturer’s brochures, cuts, etc. Provide submittal cover page with Contractor’s name & contact information, project name, contractors review status, and place for A/E’s review stamp.

- | | |
|---|--|
| <input type="checkbox"/> Reviewed | <input type="checkbox"/> Revise and Resubmit |
| <input type="checkbox"/> Reviewed, as Noted | <input type="checkbox"/> Rejected |
| <input type="checkbox"/> Submit Specified Items | |

Submittal review is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for quantities, dimensions, which shall be confirmed and correlated at the job site. Dimensions shown on this drawing have been reviewed (and revised, if necessary) by the Architect solely as a convenience to the General Contractor. This in no way releases the General Contractor from his responsibility for providing correct dimensions on the shop drawings, in accordance with the construction documents, or from his responsibility to coordinate such dimensions with the work of other trades, and any field conditions which may affect the dimensions indicated here. The contractor is also responsible for fabrication processes and techniques of construction, coordination of his work with that of all other trades, and the satisfactory performance of his work.

ThenDesign Architecture, Ltd. (TDA)

By: _____ Date: _____

B. Superintendents

DELETE →

~~1. Each Contractor shall have a superintendent who shall be in attendance each and every full working day at the project, and until all work, including final punch list, has been completed. An amount of \$150.00 (one hundred fifty dollars) per working day shall be credited to the Owner, for each and every day (or portion thereof) that the Contractor’s superintendent is not on the jobsite, unless written exception is granted by the Architect.~~

2. Specific Requirements

- a. General Trades - Working superintendent each and every day until all work, including final punch list is complete. Working superintendent shall have the responsibility to coordinate and schedule the work of all other trades on the project including work associated with Owner provided work such as phone installation, computer wiring, etc.

- b. The General Trades Contractor shall be responsible for the overall schedule and coordination of the project. Upon award of contract, the General Trades Contractor shall submit a project schedule to include his work and the work of all other trades. Each trade shall review, approve and sign the final schedule submitted to the Owner and Architect.

C. Utilities

1. Notify all utility companies that will, in any way, be affected by the proposed work and see that all piping, wires, etc, that may be affected, are properly serviced.
2. Remove abandoned utilities and cap or plug ends.
3. Use maximum care to protect existing utilities and drains. Promptly correct and/or repair any damaged utilities or drains.
4. Report the encounter of active utilities and/or drains, not indicated by documents, to Architect for adjustment in Contract in accordance with Article 12. However, extra payment will not be authorized for work that could have been foreseen by a careful examination of the site.
5. Protect all active utilities pending instructions for disposition.

D. Reference Points

1. The General Contractor shall establish and maintain grades, lines, levels and benchmarks within the limits for construction. He shall be responsible for the accuracy of same to the extent that other contractor's work shall relate to them and the cost of additional work under the Contracts, resulting from deviations of grades, lines, levels and benchmarks as established on the drawing, shall be borne by him.
2. Each Contractor Shall:
 - a. Verify and maintain location of horizontal and vertical reference points in at least two widely separated places and maintain all lines and grades.
 - b. Locate and layout of all work in accordance with the dimensions given on the drawings and shall be responsible for the accuracy of the layout. Immediately report any discrepancies or errors in the drawings or project manual perceived by the contractor. Adjustments to be made shall be made by the Architect.
 - c. Notify Architect when layout is substantially complete and secure his review before proceeding.

E. Permits

1. Each Contractor shall secure all permits and inspections and certificates of inspection, occupancy, and shall furnish Architect with copies of all such reports and certificates prior to final payment.
2. Each Contractor shall be licensed in the County of Geauga, South Russell, and any other local jurisdictions that are required.

F. Materials

1. When a single brand or make of material is called for in the project manual by name or figure number, no other make of material will be acceptable.
2. When no specific make of material or apparatus is mentioned, any first class product of reputable manufacturer may be used, provided that it conforms to the requirements of this project manual and meets with the approval of the Architect.
3. All materials, equipment, etc., to be used in construction shall be delivered to the job and maintained in original unopened containers and/or bundles, stored in a place protected from exposure to the elements and from damage by tampering until used and then used in strict accordance with the manufacturer's written instructions, specifications and recommendations.

G. Labor

1. All labor shall be performed in the best and most workmanlike manner by mechanics skilled in their respective trade. The standards of the work required throughout shall be of quality normal this trade and acceptable to the Architect. Mechanics whose work is unsatisfactory to the Owner, or are considered by the Owner to be unskilled or otherwise objectionable, shall be instantly dismissed from the work upon notice.
2. There shall be no discrimination against the employment of organized or unorganized or open shop labor, and no interference, or hindrance by the labor of any one or more trades with the labor or work or material of another trade. Any such discrimination, interference, or hindrance any other all, shall be sufficient grounds for termination of the contract in the same manner provided in said agreement for terminating contracts in case of any other breach thereof.

H. Observation

1. If the Contractor, Subcontractor or Supplier performs work on a Saturday, Sunday, Holiday, or on any "overtime" basis, such overtime basis must be with the knowledge of the Architect, so that if he desires, the Architect may observe such work during its installation.

2. Work, where observation is to be effective, must be done at the time of installation; shall not proceed without the Architect's field administrator on the job observing the work; or in lieu of that, having given the Contractor approval to proceed without such review by the Architect.

I. Cutting and Patching of Work

1. New Construction

- a. The Mechanical and Electrical Contractors will provide and place all pipe sleeves, etc., required for their work. General Trades Contractor shall provide all flashings and trim as required for all items.
- b. Should the above noted Contractors fail to lay out the openings required and provide appropriate sleeves at the proper time, they will be required to pay the General Trades Contractor to cut and drill the openings and all necessary cutting and patching shall be done by the General Contractor at the Mechanical and Electrical Contractor's expense.

J. Project Record Documents (Submit in Duplicate)(Electronic PDF is Preferred)

1. Each contractor shall be required to provide record documents of all their work.

2. Records

- a. Mark up the most appropriate document to show:
 1. Changes made during the construction process.
 2. Detail not shown in the original Contract Documents.
- b. The information given shall include, but shall not be limited to:
 1. The location of underground utilities and appurtenances, referenced to permanent surface improvements.
 2. The location of internal utilities and appurtenances concealed in building structures, referenced to visible and accessible features of the structures.
 3. Final footing depth.

- c. Keep project record documents current. Do not permanently conceal any work until the required information has been recorded.
- d. Using colored pencil for graphic work and written comments, conform to the following color code: Blue for Architectural Work, White on Blueprint, Yellow for Structural Work, Green for Mechanical Work, and Red for Electrical Work.

K. Operating Maintenance and Service Manuals
(Submit in Duplicate)(Electronic PDF is Preferred)

- 1. Each Contractor shall compile and deliver to the Architect, before request for final payment, all installation drawings, operating manuals, etc., pertaining to all equipment furnished and installed, together with descriptions and instruction for the operation of systems. Provide indexed loose ring notebook containing all information with identification by name, mark, number, etc., as used on drawings.

Include: Manufacturer's descriptive literature, shop drawings, performance data, curves, ratings, and diagrams; spare parts and replacement parts lists, manufacturer's maintenance and service manuals; name of service agency and installer.

For: Each item of equipment: Written description of their operation and actual setting of each instrument.

Also: Include step-by-step procedure for start-up and shut-down for each item of equipment.

- 2. Operating instructions must be in the possession of the Architect before final payment will be approved.

L. Instruction of Owner's Personnel

- 1. Operation
 - a. Each Contractor shall fully instruct the Owner's representative in the complete operation, adjustment and maintenance of the entire installation.
 - b. Cost of utilities for such operation shall be paid by the Owner. Said operation shall not be construed as acceptance of the Contractor's Work.

M. Name, Identification, and Instruction Plates

- 1. Identification, name, and instruction strips or plates on all

equipment shall be permanent, engraved or embossed strips or plates permanently attached. ("Dymo Tape" is not acceptable). No pen, pencil or crayon markings will be acceptable. Tape or plastic inserts, in mechanically applied retainers used for switch, breaker branch and for similar identification, where protected from dislodgment and defacement will be allowed. Identification shall include all major pieces of equipment, including those outside of the building.

N. Cleaning Piping and Equipment

1. Each Contractor shall thoroughly clean all work relating to their Contract.
2. If any system should be stopped by foreign matter after being placed in operation, the system shall be disconnected, cleaned and reconnected wherever necessary to locate and remove obstructions. Any work damaged in the course of removing obstructions, shall be repaired or replaced when the system is reconnected at no additional cost to the Owner.

O. Cleaning of Equipment

1. All materials installed shall be thoroughly cleaned, surfaces to be painted shall be wiped, scraped, or wire brushed as necessary, to furnish a clean, oil free painting surface. All fixture labels shall be removed.

P. Provisions for Expansion and Contraction

1. Each Contractor shall make adequate and proper provisions for expansion and contraction, in accordance with the best practice, and in accordance with respective manufacturer.

Q. Protection of Property

1. All doorways shall be provided with locks which shall be under the control of the General Trades Contractor, who shall lock doors at the close of each day's work.

R. Work Hours

1. Normal work hours for this project will be as follows:
 - a. **Work Schedule:** From 7:30 am to Dusk, Monday through Friday.
 - b. **Weekend work** shall be permitted for the duration of this project from 7:30 am to Dusk only with permission of the Owner.
 - c. Contractor to verify work time restrictions of the City of Cleveland and any other jurisdictions having control over this project.

5. SUBCONTRACTORS:

A. Article 5 as set forth in the attached General Conditions shall remain unchanged.

6. WORK BY OWNER OR BY SEPARATE CONTRACTS:

A. This Section Shall Supersede any conflicts noted elsewhere in the plans and/or project manual. This Section does not limit the Scope of Work required.

ALL CONTRACTORS SHALL:

1. Review dimensions, layouts, access, utility requirement, for existing Plumbing, Heating and Ventilating and Electrical systems and submit any discrepancies in writing to the Architect before proceeding with the work.
2. Each Contractor shall be responsible for proper scheduling of delivery, unloading, temporary protection, installation, cleanup, etc., as outlined in other Sections of the project manual. Contractor desiring to deliver materials, equipment, etc., which requires special protection, ie., from weather, theft, etc., shall obtain from the Architect, written approval, prior to making delivery. Each contractor shall schedule this work at the direction of the General Trades Contractor and date approved master schedule.
3. Contractor furnishing equipment shall:
 - a. Provide all conduit, wiring, controls etc., complete to load side of the starter or disconnect when a starter or disconnect is shown and/or specified.
 - b. Provide all conduit, wiring, controls, etc., complete to junction box on the exterior of the equipment when starter and/or disconnect is now shown and/or specified.

B. Division of Responsibility1. General Trades

- a. General Trades Contractor shall furnish and install rubber base on all cabinet items furnished by this or other Contractors.
- b. General Trades Contractor shall be responsible for documentation of Weekly Job Meetings and Distribution of Meeting Minutes.
- c. The General Trades Contractor shall be responsible for the overall coordination of this project.

C. Foundations, Supports, Piers, Bases, Etc.

1. Contractors or suppliers furnishing equipment shall predetermine the size and location of such equipment foundations and shall inform the proper Contractor in order that he can provide the foundations required. Should any Contractor fail to provide such information at the proper time, they shall be required to compensate the proper Contractor for such installations with additional compensation.
 - a. All exterior pad, all foundations, piers, etc., shall be furnished and installed by the Contractor furnishing the equipment involved.
 - b. Construction of foundations, supports, pier bases, etc., shall be of same material and quality of finishes as adjacent material.
 - c. Pads shall be doveled into structural slabs, and concrete surface shall extend 6" each way beyond the general outline of the equipment.
 - d. Equipment shall be fastened to foundation by Contractor providing equipment as required by Contract Requirements and/or by Code Requirements.

D. Cooperation

1. All Contractors and Subcontractors shall coordinate their work with all adjacent work and shall cooperate with other trades so as to facilitate general progress of work. Each trade shall afford other trades every reasonable opportunity for installation of their work and for storage of their material. The General Trades Contractor shall be responsible for the overall schedule and overall coordination.

E. Interference's

1. Before installing any of his work, Contractor shall see that such work does not interfere with clearances required for the proper erection and finish of any other part of the work. If any work is so installed and it later develops that the original design cannot be followed because of such installation, the Contractor shall, at his own expense, make such changes in his work as necessary to permit completion of all work in accordance with the drawings and project manual.
2. It shall be the duty of each Contractor to report to the Architect any interference between his work and that of any other Contractor as soon such interference is discovered. The Architect will determine which equipment shall be relocated regardless of which was first installed and his decision shall be final.

F. Job Clean-Up

1. Owner requires clean up and/or haul away of the rubbish at any reasonable time during the construction period. If Contractor fails to do so, then Owner may have it done as outlined in 3.4.

7. MISCELLANEOUS PROVISIONS:

- A. The Architect nor Owner assumes no responsibility for the accuracy of contours, and elevations shown on the plans even though this information is the result of field investigations. The contractor shall check all aspects of site and job and determine for himself all existing conditions and submit his bid based upon his check of site and/or job conditions. No change orders will be permitted for alleged omissions from the documents that could have been identified and recognized by an inspection by the Contractor.

8. TIME:

A. Progress Schedule

1. The General Trades Contractor shall be responsible to develop and maintain an overall project schedule including the work of all other contractors.
2. In general, the work shall be scheduled to be at least 25% complete at the expiration of one-third of the Contract Time, and at least 50% complete at the expiration of half of the contract time, and at least 75% complete at the expiration of two-thirds of the Contract.
3. Copies of graphic progress charts, upon which has been indicated the actual progress, shall be furnished to the Architect with each requisition for payment. Should the rate of progress fall materially behind the scheduled rate of progress, and unless the delay is authorized by the Owner, each offending Contractor shall furnish additional labor, work overtime, or take other necessary means required for completion of the work on the scheduled date. No additional compensation beyond the set Contract Price will be paid for action taken on overtime expense incurred in maintaining scheduled progress.
3. When the rate of progress exceeds original expectations so that the work could be completed ahead of Contract Time, each trade shall take all necessary steps, to keep pace with the earlier completion date.

9. PAYMENTS AND COMPLETION:

- A. At various times during construction and particularly near the completion of the Work, the Architect may issue "Punch Lists".

- B. The Architect shall, at about the time of issuance of Certificates of Substantial Completion, list all known items needing corrections, completion, or other Work to conform with plans and project manual. The Architect shall place a dollar value for each item which shall be stated on this list. This list shall be prepared by the Architect. The Architect will present this list to the Owner, who shall have 3 days to review. The Owner and Architect by mutual agreement may adjust this Punch List during this time. At the completion of this ten day period, the Architect's punch list, (plus those items that both the Architect and Owner have mutually agreed upon), shall become the "Final Punch List". The Contractor shall have fifteen (15) days to complete punch list items. The value of any item not completed in this period, as determined by the Architect, shall be deducted from the Contract Price. The Contractor shall be paid, less credit to the Owner for unfinished punch list items. Guarantee items shall not be considered a punch list item.
- C. The completion of Work on the Punch List shall not relieve the Contractor from any provision of guarantee, warranty, etc.
- D. Payment Application and Support Data
1. Three sets of Payment Application on AIA Form G702 and G703 shall be submitted to the Architect on date determined as follows:

The 26th day of the month.

 - a. Payment will be made up to 92% of value of work in place, or stored along with proper substantial data, up to a point when project is 50% complete; thereafter no additional retainage will be withheld.

10. PROTECTION OF PERSONS AND PROPERTY:

- A. Article 10 as set forth in the attached General Conditions shall remain unchanged.

11. INSURANCE:

- A. All successful bidding contractors will be required to comply with the following insurance requirements.
- B. The Owner, Architect and their Sub-Consultants shall be named as additional insureds on the Contractors Policy.
- C. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's Consultants, and Agents and Employees of any of them from and against claims, damages, losses and expenses, including, but not limited to attorney's fees arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense

is attributable to bodily injury, sickness, disease or health, or to injury to or destruction of tangible property (other than the Work itself), including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified thereunder.

- D. All Insurance Certificates shall contain a written thirty (30) day cancellation notice clause to the other parties of the Contract.
- E. Certificates of Insurance shall show the **Owner – Cleveland Metropolitan School District** as the certificate holder.

CONTRACTOR'S LIABILITY INSURANCE:

- a. Current State of Ohio Worker's Compensation Certificate shall be submitted to the Owner and the Architect.
- b. Unless otherwise directed by the Owner in writing, the Contractor shall assume all responsibility for the adequacy of the insurance carried by each of his subcontractors and shall, if requested, file copies of all subcontractors Insurance Certificates with the Owner and the Architect prior to the respective subcontractor's participation in the work.
Certificates to determine their adequacy in complying with the requirements of this Project Manual.

It is the Owner's responsibility to determine whether the information contained in the Certificates of Insurance are adequate and acceptable. The Architect shall not be responsible for the checking or approving of the Certificates of Insurance.

- c. The Owner's Insurance Counsel shall check the Insurance
For the duration of the Contract, the Contractor shall maintain statutory Workmen's Compensation and shall maintain Employer's Liability Insurance with minimum limits of not less than \$1,000,000.00 each accident and aggregate.

For the duration of the Contract, the Contractor shall maintain Comprehensive General Liability Insurance for Bodily Injury, including Personal Injury and Death, with limits of not less than \$5,000,000.00 per person and not less than \$5,000,000.00 each occurrence. The Contractor shall maintain Bodily Injury and Property Damage Liability Insurance with minimum limits of not less than \$5,000,000.00 per each occurrence and \$5,000,000.00 in aggregate.

Insurance shall include the following:

- a. Owner's Protective Liability ("Stop Gap" coverage with the naming of the Owner and Architect and Consultants as an additional insured for all policies).
- b. Contractor's Protective Liability.
- c. Contractual Liability for the Hold Harmless Clause.
- d. Manufacturer's or Contractor's Protective Liability.
- e. Products Liability including Completed Operations.
- f. Coverage for XCU hazards.
- g. Liability due to occurrence as well as by accident.
- h. Coverage for Premises and Operations, Construction Elevators and Hoists, Independent Contractors, Subcontractors and Completed Operations.
- i. Comprehensive Automobile Liability.
- j. Builders Risk for all tools, equipment, and materials owned by Contractors.

F. OWNER'S LIABILITY INSURANCE:

- a. Property Insurance
The Owner shall carry all property insurance as stated in the General Conditions for the building. However, it shall be the responsibility of the Contractors to carry insurance on their respective materials, tools, or other equipment owned by them or their employees including all material and work in place until the completion of the project.

12. CHANGES IN THE WORK:

- A. Delete Paragraphs .3 and .4 in Article 12.1.3 and substitute the following:
 1. The Architect shall determine quantities and cost for proposed changes and submit to Contractor for his review and concurrence. Cost of changes shall be determined as follows:
 - a. Credit for deleted Work by use of the actual costs noted in the current "Construction Pricing and Scheduling Manual", as published by the F. W. Dodge Corporation.

D. Construction Office and Storage Shed

DELETE →

1. The General Trades Contractor shall provide and maintain a central office trailer; located with the approval of the Owner.
2. Storage or Staging of products, materials, equipment, etc., at the exterior of the building shall be permitted only with the permission of the Owner. Such exterior storage shall not interfere with daily operations of the facility.

E. Trash

1. The General Trades Contractor will be responsible to provide trash removal. Disposal shall be to appropriate approved land fill sites.
2. Trash removal shall be provided by the General Trades Contractor for all other trades on the project.

DELETE →

3. The General Contractor shall install and maintain a Telephone, Fax machine, and Copy machine in the construction office during the execution of the work. This equipment shall be made available to the various Contractors. This can be pay equipment at the General Trades Contractor's option.

16. TOLERANCES:

A. All measurements and sizes given, unless noted as nominal, are actual measurements and sizes and shall be so interpreted. No deviation will be allowed unless prior acceptance of such deviation has been secured from the Architect.

1. Concrete Work - As set forth in "Reinforced Concrete, A Manual of Standard Practice", latest edition.
2. Structural Steel - as set forth in "Manual of Steel Construction", latest edition.
3. Lumber as set forth in:
 - a. "National Design Specifications for Stress Grade Lumber and Its Fastenings", latest edition.
 - b. "Southern Pine Grade Use Guide", latest edition.
 - c. "Timber Construction Standards", latest edition.
4. Plywoods - as set forth in
 - a. Commercial Standard, latest edition.

- 5. Millwork - as set forth in
 - a. "Architectural Woodwork Quality Standards Illustrated", latest edition.
- 6. Acoustical Tile and Lay-In Panel Ceiling
 - a. Suspension: As set forth in specifications for such work as published by AMA, NACA, and SCMA, latest edition.
- 7. Tile - as set forth in
 - a. Latest edition of Handbook for Ceramic Tile Installations by the Tile Council of America, latest edition.

17. COMPLETION DATE:

- A. Time is of the essence - Each and every contractor, Subcontractor, and Supplier shall note that time is of the essence for completion of this Contract.
- B. Starting Date:
Contractor shall start Work immediately as outlined in Division I, Section III, Instructions to Bidders and and per the date of the written authorization to proceed as issued by the Architect.
- C. Completion Date all Work:
Including all Punch Lists, shall be completed at the end of the normal work day as outlined in Division I, Section III, Instructions to Bidders.

- D. ~~Liquidated Damages:
If the Work is not complete on above noted date, the Owner shall experience damages. Each Contractors shall be charged \$500.00 per work day until the Work is complete.~~

DELETE

SECTION VI - DESCRIPTION OF THE WORK - BASE BID1. GENERAL INFORMATION

- A. This Section includes special information pertaining to the Work to be performed under Base Bid.
- B. All Contract Documents are part of each contract and subcontract.

2. DESCRIPTION OF THE CONTRACTA. GENERAL TRADES - CONTRACT "A"1. Base Bid Includes:

- a. Unless otherwise noted, all Work indicated on the drawings and/or described in this project manual for Base Bid. This work includes, but is not limited to selective demolition, general trades, electrical, mechanical, plumbing, fire protection, and technology.

2. Base Bid shall include the following:

- a. Removal and disposal of all temporary plywood covering of exterior windows and doors.
- b. Removal and disposal of all temporary security chain link fencing and posts around the building and site.

B. ALTERNATE #1 – ACCELERATED COMPLETION DATE

- 1. Alternate #1 shall include all costs associated with an accelerated completion date of December 30, 2022.

FORM OF PROPOSAL

Proposals due on or before 1:00 PM, Eastern Daylight Savings Time, Monday the 12th of September, 2022.

CONTRACTOR TO CHECK SECTION BID UPON:

() Contract 'A'

We, _____ (a corporation) (a partnership) (an individual) submit our proposal for the INTERIOR RENOVATIONS TO H.B. BOOKER SCHOOL.

The undersigned, having carefully examined the Notice to Bidders and Contract Documents dated 8-29-2022, including all addenda thereto, as prepared by ThenDesign Architecture, Ltd. 4230 River Street, Willoughby, OH. 44094, and on file in their Office hereby propose to furnish all labor, materials, and equipment to complete all work required, as shown on the drawings and as enumerated and described in the Contract Documents for Stipulated Sum as follows:

CONTRACT "A" – BASE BID

Base Bid shall consist of furnishing all materials, equipment, labor and services to perform all Work, as shown on the Contract Documents. **Base bid shall include a 5% contingency allowance to address concealed conditions.**

Materials: _____
Labor: _____
5% contingency allowance _____
Total for the sum of _____ (\$ _____).

ALTERNATE #1 – ACCELERATED COMPLETION DATE

Contractor shall include a detail estimate of premium charges necessary to complete this work by December 30, 2022.

Materials: _____
Labor: _____
Total for the sum of _____ (\$ _____).

SCHEDULE

<u>Event</u>	<u>Date</u>
<u>Begin Construction</u>	_____
_____	_____
_____	_____
_____	_____
_____	_____

Substantial Completion

Schedule must be filled out, including events and dates.

This Proposal includes the following Addenda:

No.	Date
_____	_____
_____	_____
_____	_____
_____	_____

The undersigned agrees that this bid may be accepted any time within Sixty Days after bid due date, and will not be withdrawn prior to that date.

The Contractor acknowledges:

1. That he understands the plans and specifications.
2. That he has the equipment, technical ability, personnel and facilities to construct the project in accordance with the plans and specifications.
3. That the plans and specifications are, in his opinion, appropriate and adequate for the construction of a sound and suitable building project.
4. That he will conform to and abide by the decision of the Owner as to the selection of Contractor.

Official Address:

BY: _____

TITLE: _____

Telephone No: _____

Fax No. _____

The following people have an interest in this Contract:
(Name individuals who are partners or stockholders
in the corporation).

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes acoustical panels and exposed suspension systems for interior ceilings.
- B. Products furnished, but not installed under this Section, include anchors, clips, and other ceiling attachment devices to be cast in concrete.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site to be attended by the installer, the architect, and the construction manager to review the specifications, and detail the materials, the installation, the initial maintenance, and protection of the installed ceiling.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified, 6 inches in size.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical panels, suspension-system components, and accessories to Project site and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain each type of acoustical ceiling panel and its supporting suspension system from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Class A according to ASTM E1264.
2. Smoke-Developed Index: 450 or less.

2.3 ACOUSTICAL PANELS

A. Suspended Acoustical Ceiling Tiles

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Armstrong World Industries, Inc.; Cirrus #574 (24 by 24 inch) and #533 (24 by 48 inch) Square Lay-in Item #1714.
 - b. CertainTeed Corp.; Celotex Brand Fine Fissured High NRC #HHF-497 DP.
 - c. USG Interiors, Inc.; Subsidiary of USG Corporation; Eclipse ClimaPlus, Square Lay-in Item #76575.
2. Classification: Provide fire-resistance rated panels complying with ASTM E 1264 for type, form, and pattern as follows:
 - a. Type and Form: Type III, mineral base with painted finish; Form 2, water felted.
 - b. Pattern: CE (perforated, small holes and lightly textured).
3. Color: White.
4. LR: Not less than 0.85.
5. NRC: Not less than 0.70.
6. CAC: Not less than 35.
7. Edge/Joint Detail: Square.
8. Thickness: 3/4 inch.
9. Modular Size: 24 by 48 inches and 24 by 24 inches, as indicated in Drawings.
10. Broad Spectrum Antimicrobial Fungicide and Bactericide Treatment: Provide acoustical panels treated with manufacturer's standard antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274 or ASTM G 21 (basis of design: Armstrong, Humiguard Plus).

B. Surface Mounted Ceiling Tiles

1. Armstrong Ceilings "Impression" or equivalent.
 - a. White
 - b. 12" x 12"
 - c. Textured surface

2.4 METAL SUSPENSION SYSTEMS

A. Suspension system for ACT-1.

1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Armstrong World Industries, Inc.; Prelude XL 15/16" Exposed Tee System.
 - b. CertainTeed Corporation.; 15/16" Classic System.
 - c. USG Interiors, Inc.; Donn DX Exposed 15/16" Face Suspension System
2. Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized

according to ASTM A 653/A 653M, G30 (Z90) coating designation, with prefinished, 15/16-inch- (24-mm-) wide, aluminum caps on flanges.

- a. Structural Classification: Intermediate-duty system.
- b. End Condition of Cross Runners: Override stepped or butt-edge type.
- c. Face Design: Flat, flush.
- d. Face Finish: Painted white.

2.5 ACCESSORIES

- A. Wire Hangers, Braces, and Ties: Provide wires as follows:
 1. Zinc-Coated, Carbon-Steel Wire: ASTM A641/A641M, Class 1 zinc coating, soft temper.
 2. Stainless-Steel Wire: ASTM A580/A580M, Type 304, nonmagnetic.
 3. Nickel-Copper-Alloy Wire: ASTM B164, nickel-copper-alloy UNS No. N04400.
 4. Size: Wire diameter sufficient for its stress at three times hanger design load (ASTM C635/C635M, Table 1, "Direct Hung") will be less than yield stress of wire, but not less than 0.106-inch- diameter wire.
- B. Hanger Rods: Mild steel, zinc coated or protected with rust-inhibitive paint.
- C. Flat Hangers: Mild steel, zinc coated or protected with rust-inhibitive paint.
- D. Angle Hangers: Angles with legs not less than 7/8 inch wide; formed with 0.04-inch- thick, galvanized-steel sheet complying with ASTM A653/A653M, G90 coating designation; with bolted connections and 5/16-inch- diameter bolts.
- E. Hold-Down Clips: Manufacturer's standard hold-down.
- F. Impact Clips: Manufacturer's standard impact-clip system designed to absorb impact forces against acoustical panels.
- G. Clean-Room Gasket System: Where indicated, provide manufacturer's standard system, including manufacturer's standard gasket and related adhesives, tapes, seals, and retention clips, designed to seal out foreign material from and maintain positive pressure in clean room.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.
- B. Examine acoustical panels before installation. Reject acoustical panels that are wet, moisture damaged, or mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders unless otherwise indicated and comply with layout shown on reflected ceiling plans.
- B. Layout openings for penetrations centered on the penetrating items.

3.3 INSTALLATION

- A. Install acoustical panel ceilings according to ASTM C636/C636M and manufacturer's written instructions.
- B. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or postinstalled anchors.
- C. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
 - 1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
 - 2. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends. Miter corners accurately and connect securely.
 - 3. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- D. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- E. Install acoustical panels with undamaged edges and fit accurately into suspension-system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide precise fit.
 - 1. Arrange directionally patterned acoustical panels as follows:
 - a. Install panels with pattern running in one direction parallel to long axis of space or as indicated in drawings.
 - 2. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and moldings.
- F. **Install surface-mounted ceiling tiles to the substrate with adhesives recommended by the manufacturer.**

3.4 ERECTION TOLERANCES

- A. a tolerance of 1/8 inch in 12 feet, non-cumulative.
- B. Moldings and Trim: Install moldings and trim to substrate and level with ceiling suspension system to a tolerance of 1/8 inch in 12 feet, non-cumulative.

3.5 CLEANING

- A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension-system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.
- B. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095113

RENOVATIONS TO H BARBARA BOOKER SCHOOL

2121 W 67th Street
Cleveland, Ohio 44102

FUNDED THROUGH A PARTNERSHIP WITH:



ARCHITECT:



4135 ERIE ST.
WILLOUGHBY, OH 44094
440.269.2266

CLEVELAND METROPOLITAN SCHOOL DISTRICT

ERIC GORDON
JUSTIN BIBB
ANNE E BINGHAM

CHIEF EXECUTIVE OFFICER
MAYOR OF CLEVELAND
BOARD OF EDUCATION CHAIR

CODE:

USE GROUP: E EDUCATION

CONSTRUCTION TYPE: 1-B

FLOOR AREA:

FIRST: 28,390 SF
SECOND: 22,753 SF

GENERAL NOTES

- DIVISION 1
GENERAL INFORMATION**
- A. GENERAL**
1. Conform to all general and special conditions of contract as specified by Architect and Owner
 2. Specifications are applicable to all Contractors and/or Subcontractors.
 3. Check other plans and specifications and fully coordinate with other systems and grades.
 4. The drawings and project manual, where applicable, are intended to supplement each other and any material or labor called for in one shall be furnished even though not specifically mentioned in both.
 5. Drawings are diagrammatic and are intended to show approximate locations. Dimensions given on the plans in figures shall take precedence over scaled dimensions; and all dimensions, whether figured or scaled, shall be verified in the field.
 6. The architect reserves the right to make minor changes in location up to the time of installing without additional cost.
 7. Visit site, check facilities and conditions, and take all items into consideration in bid. Contractor to review and become familiar with all existing conditions prior to commencing work. Any conditions not documented on these drawings or observed to be different than those shown on these drawings are to be reported to the architect, prior to beginning work.
 8. Systems are to be complete and workable in all respects, placed in operation and properly adjusted.
 9. Each Contractor shall provide for his own clean up, removal and legal disposal of all rubbish on a daily basis or as directed by Owner's representative.
 10. Fully coordinate all work with other Contractors, Subcontractors, and the Owner and cooperate completely.
 11. The Contractor shall take all precautions necessary to secure the area of work.
 12. Arrange for and obtain Owner's permission for any service shutdowns required under this contract.
 13. Parking at the site by all construction staff shall be limited to only the areas designated by the Owner.
 14. Contractor to contact local utilities, if necessary, submit all applicable permit documents, qualifications, etc., and be responsible for all fees associated with permits, utility extensions, tap-ins, etc. Architect to submit documents for permit plan review and owner review; however, the contractor will be responsible for obtaining the permits and all permit and inspection costs.
 15. The Contractor shall protect existing facilities, equipment, fixtures, etc. from damage during the course of construction.
 16. All damaged surfaces and/or finishes as a result of and adjacent to the work shall be repaired and finished to their original condition.
 17. The Contractor shall be solely responsible for construction means, methods, sequences of construction and the safety of workmen.
 18. Demolition and/or removal of existing pavement, equipment, etc. may necessitate the removal or relocation of existing piping, conduit, services, etc. Such removal and relocation shall be considered part of the demolition work without additional cost, whether or not specifically shown on the drawings or listed in the specifications.
 19. The contractor shall schedule his work and material and equipment deliveries so as not to interfere with the daily operations of the facility.
 20. Prior to completion, clean premises for occupancy by owner. cleaning shall include, but not be limited to the following:
 - removal of grease, mastic, adhesive, dust, dirt, stains, labels and other foreign materials from exposed surfaces.
 - the external surface of all equipment shall be cleaned at the completion of the work to remove all concrete, dust and dirt, welding and cutting splatter, etc.
 - prior to final completion, or owner occupancy, contractor shall conduct an inspection of sight-exposed surfaces, and all work areas, to verify that the entire work is clean.
- B. CODES, STANDARDS AND REGULATIONS**
1. Conform to all applicable codes and government regulations.
 2. Obtain permits and pay all fees. Arrange for all required inspections and approvals.
- C. BASE EQUIPMENT AND MATERIALS AND SUBSTITUTIONS**
1. All equipment and materials shall be new and free of defects.
 2. Base equipment, manufacturer, model, and capacity of equipment are listed on the drawings or in this specification. Any other manufacturer is considered a substitution.
 3. Substitutions are subject to the approval of the Owner. If a substitution is submitted, include complete performance data for evaluation.
 4. If substitutions are approved, notify all other Contractors and Subcontractors of trades affected by the substitutions and fully coordinate. Any costs resulting from substitution, whether by Contractor or others, shall be the responsibility of and paid for by the substituting Contractor.
 5. All equipment shall be installed in full accordance with the manufacturer's data and installation instructions. It is the Contractor's responsibility to check and conform to these requirements prior to starting work.
- D. WARRANTY**
1. Fully warrant all materials, equipment, and workmanship for one (1) year from date of acceptance, unless noted otherwise.
 2. Repair or replace without charge to the Owner all items found defective during the warranty period.

SYMBOL LEGEND

ROOM INDICATION

ROOM NAME
ROOM NUMBER
SQUARE FOOTAGE
USE GROUP
OCCUPANCY LOAD

NORTH ARROW

DOOR SYMBOL

WINDOW SYMBOL

WINDOW TYPE
ON ELEVATION
OR METAL FRAME
IN PLAN

BUILDING WALL SECTION INDICATION

SECTION NUMBER
SHEET WHERE SHOWN

ELEVATION INDICATION

EXTERIOR
MULTIPLE INTERIOR

FIRE EXTINGUISHER CABINET

DETAIL INDICATION

AREA DETAILED
DETAIL NUMBER
SHEET WHERE SHOWN

REVISION INDICATION

REVISION NUMBER

ALIGN WITH EXISTING CONSTRUCTION

PARTITION TYPE SYMBOL

EQUIPMENT DESIGNATION

(SEE EQUIPMENT MANUAL)
EQUIPMENT TYPE

CEILING HEIGHT

ACTUAL
CLEAR

FINISH SYMBOLS

DENOTES CORNER
GUARD LOCATION

MATCHLINE

INDICATOR OF AREA SHOWN ON DRAWING
SHEET NUMBER OF ADJACENT DRAWING

LINE TYPE SYMBOLS

EXISTING COLUMN GRID
DENOTED WITH AN E/ PREFIX
COLUMN GRID

LIMIT OF WORK

PROPERTY LINE

CENTER LINE / ELEVATION LINE

WORK ABOVE, BEYOND OR TO BE REMOVED

BREAK LINE

KEYNOTE SYMBOL

KEYNOTE INDICATOR

EXISTING DOOR DESIGNATION

NEW DOOR DESIGNATION

EMERGENCY DOOR DESIGNATION

EMERGENCY SWING

DOUBLE EGRESS DOOR DESIGNATION

NEW DOOR

GENERAL DIMENSIONING

COLUMN GRID CENTERLINE INDICATOR
FACE OF SURFACE INDICATOR

NOTE: DIMENSIONS ARE TAKEN FROM TO FINISH SURFACE, UNLESS OTHERWISE NOTED.

NOTE: THE ± INDICATES A DIMENSION THAT CAN VARY. (NOTIFY THE ARCHITECT OF ANY CHANGE IN THAT DIMENSION IF IT IS GREATER THAN 1")

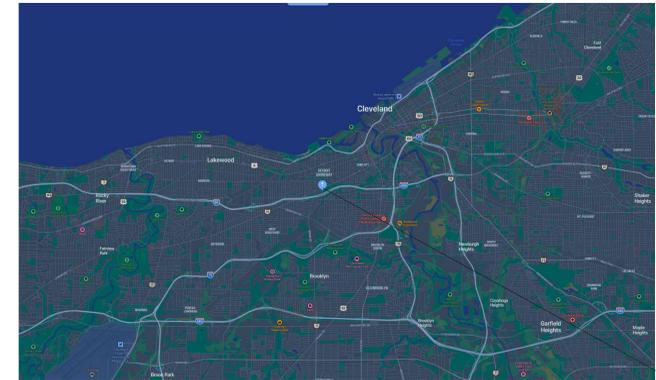
NOTE: EXISTING DIMENSIONS INDICATED AS (0'-0") OR WITH (VIF) ARE SUPPLIED TO THE ARCHITECT BY OTHERS AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. (SEE "GENERAL CONTRACTOR RESPONSIBILITIES WITH RESPECT TO EXISTING CONDITION NOTES")

NOTE: CLEAR = THE ACTIVE DIMENSION MAY NEVER BE LESS THEN THE CLEAR DIMENSION, BUT MAY BE GREATER BY 1" MAX.

NOTE: HOLD = THE ACTUAL DIMENSION IS THAT DIMENSION AND MUST BE MAINTAINED

SITE MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



MATERIAL LEGEND

SECTIONS

ACOUSTICAL TILE
ALUMINUM (3/4 SCALE OR LARGER)
BATT OR BLANKET INSULATION
BRASS OR BRONZE (3/4 SCALE OR LARGER)
CONCRETE
CONCRETE MASONRY UNIT
CRUSHED STONE OR GRAVEL
EARTH
E.I.F.S. (EXTERIOR INSULATION AND FINISH SYSTEM)
FACE BRICK
FINISHED WOOD (FOR LARGE SCALE DETAILS)
FIRE SAFING

MEDIUM DENSITY FIBERBOARD
PLASTER, CEMENT, MORTAR OR G.W.B.
PLYWOOD VENEER
PRE-CAST CONCRETE
RIGID INSULATION
ROUGH WOOD (ALL BLOCKING AND FRAMING LUMBER)
SHIM
SPRAY-ON FIREPROOFING
SPRAY-APPLIED INSULATION
STEEL (3/4 SCALE OR LARGER)
STONE: GRANITE OR MARBLE

DRAWING LIST	
SHEET NUMBER	SHEET NAME
GENERAL	
CS1	COVER SHEET
ARCHITECTURAL	
A101	FIRST FLOOR PLAN
A102	FIRST FLOOR MEZZANINE PLAN
A103	SECOND FLOOR PLAN
A104	SECOND FLOOR MEZZANINE PLAN
A201	TYPICAL RCP 1
A202	FIRST MEZZANINE PARTIAL RCP
PLUMBING	
P-1	PLUMBING GENERAL NOTES
P-2	FOOD SERVICE PLUMBING PLAN
P-3	MECHANICAL SPECIFICATIONS
ELECTRICAL	
E-1	ELECTRICAL PLAN AND DETAILS
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL SPECIFICATIONS
FOOD SERVICE	
FSE-1	FOOD SERVICE EQUIPMENT FLOOR PLAN - FOR REFERENCE ONLY
FSE-2	FOOD SERVICE EQUIPMENT SCHEDULE
FSE-3	FOOD SERVICE ELECTRICAL FLOOR PLAN - FOR REFERENCE ONLY
FSE-4	FOOD SERVICE PLUMBING FLOOR PLAN - FOR REFERENCE ONLY
FSE-5	FOOD SERVICE REFRIGERATION FLOOR PLAN - FOR REFERENCE ONLY



RENOVATIONS TO
H BARBARA BOOKER SCHOOL
2121 W 67th Street
Cleveland, Ohio 44102

no.	description	date
Sheet Revisions		
02	BIDDING	8.29.22
01	PLAN REVIEW	8.29.22
Project Issues		
no.	description	date

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sheet name: COVER SHEET

drawn by: **Author**

checked by: **Checker**

sheet number: **CS1**

job number: **22021**

GENERAL NOTES - ARCHITECTURAL

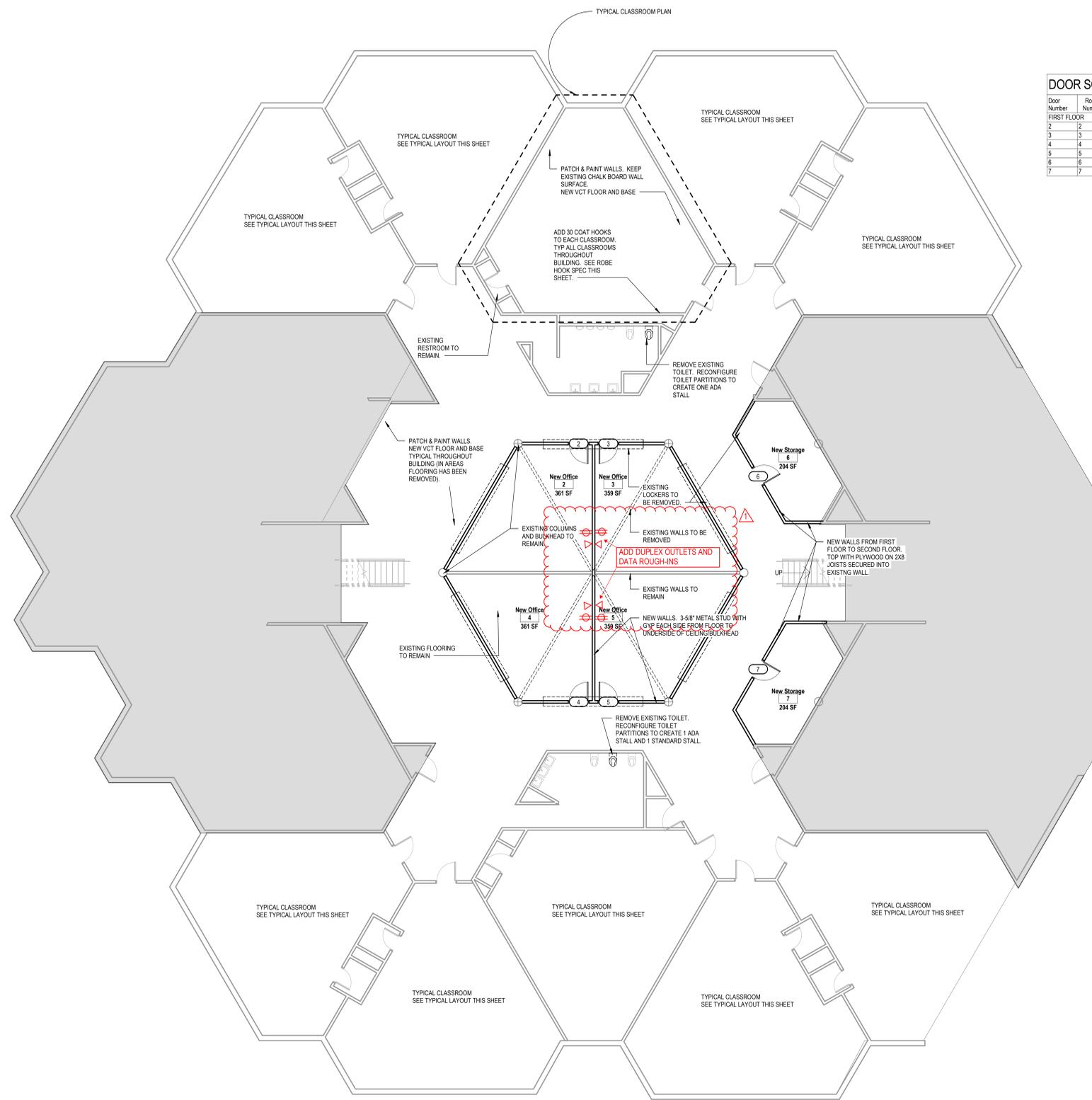
1. ALL DIMENSIONS ARE DRAWN TO FINISH FACE OF WALL.
2. DO NOT SCALE DRAWINGS. DIMENSIONS LOCATED ON PLANS, ELEVATIONS, AND DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
3. DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION AND INSTALLATION OF CASEWORK. REFER TO CASEWORK NOTES FOR ADDITIONAL INFORMATION.
4. PROVIDE METAL STUD FRAMING AROUND ALL PENETRATIONS THRU METAL STUD PARTITIONS.

SPEC
 ROBE HOOK (RHADA):
 1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENT. PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
 A. AMERICAN SPECIALTIES, INC.
 B. BOBRICK WASHROOM EQUIPMENT, INC.
 C. BRADLEY CORPORATION
 D. GAMCO SPECIALTY ACCESSORIES, A DIVISION OF BOBRICK
 2. DESCRIPTION: SINGLE PRONG UNIT
 3. MATERIAL AND FINISH: STAINLESS STEEL, ASTM A480/A480M NO. 4 FINISH (SATIN).



DOOR SCHEDULE

Door Number	Room Number	Room Name	Panel Type	Doors			Frame	Head Detail	Jamb Detail	Hardware Set No.	Fire Rating	Remarks
				Mat.	Width	Height						
FIRST FLOOR												
2	2	New Office	F	SCW	3'-0"	7'-0"	HM					MATCH EXISTING
3	3	New Office	F	SCW	3'-0"	7'-0"	HM					MATCH EXISTING
4	4	New Office	F	SCW	3'-0"	7'-0"	HM					MATCH EXISTING
5	5	New Office	F	SCW	3'-0"	7'-0"	HM					MATCH EXISTING
6	6	New Storage	F	SCW	3'-0"	7'-0"	HM					MATCH EXISTING
7	7	New Storage	F	SCW	3'-0"	7'-0"	HM					MATCH EXISTING



ELECTRICAL ITEM

no.	description	date
Sheet Revisions		

no.	description	date
03	Addendum #1	
02	BIDDING	8.29.22
01	PLAN REVIEW	8.29.22

no.	description	date
Project Issues		

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1 FIRST FLOOR EXISTING/DEMO/NEW
 A101 SCALE: 1/8" = 1'-0"

drawn by:

Author

checked by:

Checker

sheet number:

A101E

job number:

22021

RENOVATIONS TO
 H BARBARA BOOKER SCHOOL
 2121 W. 67th Street
 Cleveland, Ohio 44102

GENERAL NOTES

DESIGN CRITERIA

- 1. Applicable Building Codes
A. Building: IBC 2015 | OBC 2017
1) Construction classification type: TYPE II | B
2) Primary use and occupancy classification:
a) Educational: Group E
B. Mechanical: IMC 2015 | OMC 2017
C. Plumbing: IPC 2015 | OPC 2017
D. Electrical: NEC 2017
E. Gas: IFGC 2017
F. Local Building Code and Revisions.
GENERAL
1. The Item General Contractor (G.C.) as used in these documents refers to the Contractor / Construction Manager in responsible charge of the project in terms of coordination, scheduling, subcontractor coordination, etc. This term refers to, but is not limited to, General Contractor, Construction Manager, Design Build Contractor, Prime Contractor, etc. The term is referencing the entity that coordinates the work of other trades.

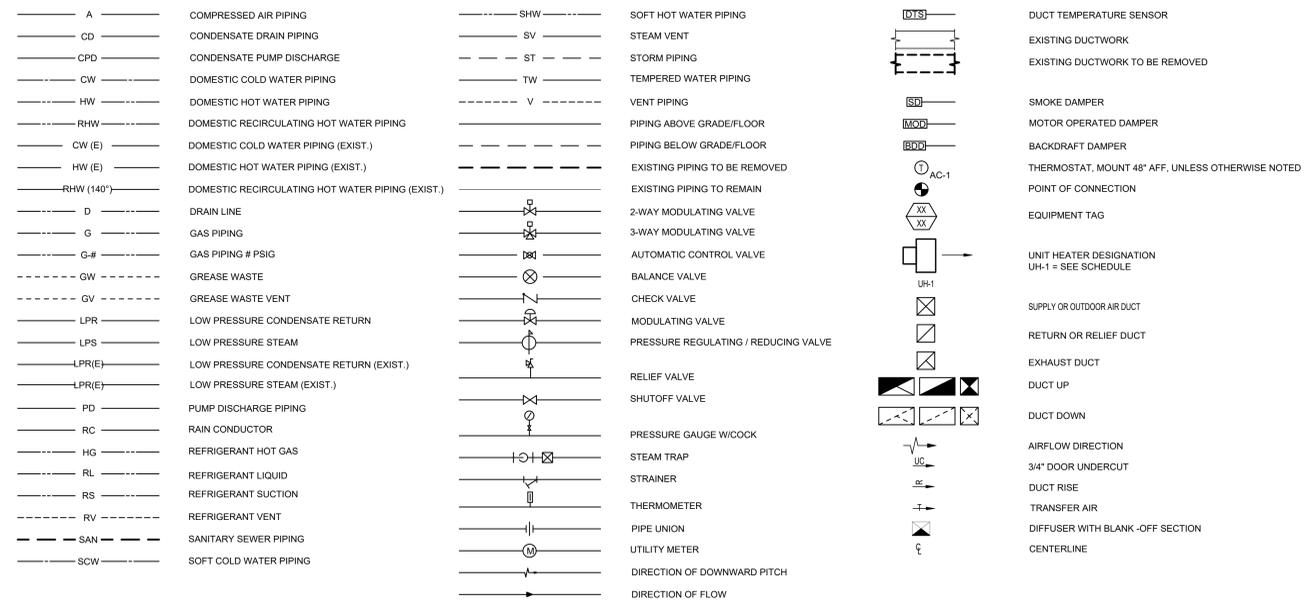
Cutting, Patching and Drilling

- A. All cutting and patching of the building construction required for this work shall be by this contractor unless shown on architectural drawings and confirmed as to size and location prior to new construction. Cutting shall be in a neat and workmanlike manner.
B. Neatly saw out all rectangular openings, set sleeve through opening, and finish patch or provide trim flange around opening.
C. Neatly saw out floors and patch floor to match existing, including floor covering.
D. Contractor shall field verify slab-on-grade or supported floor construction type prior to cutting. Under no circumstances shall this contractor cut a floor thicker than 4 inches, a structural floor slab, whether on grade or supported, without prior written approval from the architect. If floor slab indicated to be cut on mechanical plans is found to be structural in nature, do not cut. Contact architect immediately for further directions.
E. Core drill and sleeve all round openings.
F. Do not cut any structural components without architect's written approval, including, but not limited to roof joists, columns, floor joists, beams, girders, structural floor slabs, rebar, etc.
G. Patch, and finish to match adjacent areas that have been cut, damaged or modified as a result of the installation of the mechanical systems. Fire-stop all penetrations of fire-rated construction in a code approved manner.
H. All contractors shall confirm with owner, prior to bid, times available for noise producing work such as cutting and core drilling of floors, walls, etc. as well as times for work which requires access into adjoining tenant spaces. Include any premium time in bid.
I. All openings required for this branch of work shall be accomplished in time to be incorporated in, and be compatible with the construction program; otherwise this contractor shall be responsible and pay for all changes made necessary for his failure to do so. Pipe holes in floors and walls shall be core drilled if not sleeved during construction.
J. Existing slabs shall be core drilled at reentrant corners of new floor openings to prevent overcutting.
K. Refer to mechanical, plumbing, and electrical plans for location of mechanical, plumbing, and electrical equipment. Coordinate location of disconnect switch associated with each piece of mechanical and plumbing equipment with electrical contractor.
L. Installation requirements for plumbing systems shall be reviewed and coordinated with all other trades involved prior to rough-in. Give equipment shop drawings from installer/supplier/contractor equipment, as required, for review and coordination to all other trades involved. Contact architect/engineer with any discrepancies found between construction drawings and equipment being furnished prior to rough-in.
M. Firestopping
A. The contractor shall review all architectural drawings for type of walls, fire rating, & firestopping details and shall provide all fire dampers and firestopping required for these walls whether shown or not on the mechanical plans.
B. All penetrations through fire rated walls associated with the installation shall be sleeved and fire-stopped using a UL approved method. UL approved method shall meet or exceed fire rating of structure being penetrated. Reference architectural plans for fire rated structures. If shown, reference architectural, mechanical and electrical drawings for penetration details.
C. All openings through fire rated walls, floors, and/or roofs for ductwork, piping, conduit, etc. shall be fire sealed with a calcium silicate, silicone RTV foam, 3M fire rated sealants, Hill Firestop Systems, or approved equal to maintain the intended fire rating and associated UL ratings as recommended by the architect and/or sealant manufacturer.
D. All fire stopping sealants shall be firestopic so as not to slump or sag and shall be trowelable. Fire stopping sealants shall be intumescent and shall be free of asbestos, halogens, and volatile solvents.
E. Fire stopping materials shall be classified in the Underwriters Laboratories (UL) fire resistance directory or listed in the Warnock Hersey International Directory.
26. All equipment and devices for this project must be UL listed. Devices, equipment, systems shall be installed per National Electrical Code requirements and manufacturer's instructions.
27. All conduit and cabling shall be properly supported as required by the National Electrical Code. For existing installations, the contractor shall be responsible to replace and/or rework existing conduit and/or cabling that is not in compliance with this requirement.
28. Shop Areas and Material Storage
A. The contractor shall make provisions for the delivery and safe storage of his materials and equipment in coordination with the work of others. Materials and equipment shall be delivered at such stages of the work as will expedite the work as a whole and shall be marked and stored in such a way as to be easily checked and inspected. The arrival and placing of large equipment items shall be scheduled early enough to permit entry and setting when there is no restriction or problem due to size and weight.

Demolition

- 1. The architectural drawings are to be used only as a guideline for demolition. The contractor must visit the site prior to bidding to verify all work required for a complete job and include the cost of such work in his bid.
2. The mechanical drawings are intended to show only the general existing building construction within the area of demolition. The drawings do not show all systems, quantities, sizes, obstructions, etc., and are not intended to be used by the contractor to define the complete scope of demolition. The contractor must field verify the actual building and systems conditions to define all elements within the scope of demolition.
3. Examine areas and conditions under which demolition work must be performed. This contractor shall coordinate his work with other trades performing demolition work and/or demolition work performed by the owner. In every instance of demolition and/or remodeling, the contractor shall figure a complete job as none other shall be accepted.
4. The extent of work shown or not shown shall include removal and legally dispose off site, all the items and systems being removed.
5. This contractor shall retain on the premises in neatly stacked piles where instructed for selection by the owner, all material, wire, fixtures and/or equipment which are specified to be removed or replaced. All such items, not selected for salvage by the owner, shall become the property of this contractor and shall be removed from the premises and legally disposed.
6. Conform to all applicable codes for demolition of items and systems, safety of adjacent systems, dust control, legal run-off control, disposal and all items necessary to complete the work completely.
7. Demolition shall be done in a manner so as not to damage adjacent work and not affect the operation of systems to remain in use. Any item to remain that is damaged by the contractor shall be replaced and/or repaired at the contractor's expense.
8. Demolition and cutting shall be done in a manner which does not deform or apply loads to the existing framing and equipment of the building to remain.
9. All walls, ceilings, floors, etc., being disturbed by the work shall be returned to finished conditions to match existing by the contractor and contractor shall do his own cutting and patching as necessary under his contract.
10. The contractor shall maintain existing services to and in the existing area as required.
11. The existing systems to remain are to be supported as required until the modified elements are installed and supported.
12. If necessary, the contractor shall provide temporary services in the existing areas.
13. Existing slabs shall be saw-cut in a manner that does not cause the steel framing or the rebar supporting the slab to be cut. Contractor shall field verify slab thickness and rebar spacing.
14. Existing slabs shall be core drilled at reentrant corners of new floor openings to prevent over cutting.
15. The demolished systems shall be reduced to pieces of a weight, and transported across the remaining structure in a manner, such that the remaining structure is not overstressed.
16. Equipment and devices shall be removed complete including hangers, supports, conduit, wire, pipes, etc. Wiring shall be disconnected at circuit breakers, removed and breakers marked "spare".
17. All open ended piping that is to remain shall be capped and properly secured.
18. Any existing pipes, conduit, low voltage control, wiring and/or electrical and mechanical devices being disturbed by the work shall be reworked by this contractor as required to return to its former existing operating condition.
19. Any pipes or tubing feeding through devices or equipment being relocated, reworked, or abandoned and serving other devices, and/or equipment shall be maintained in working condition.
20. All asbestos removal will be handled by the owner and is not a part of this work.
21. Use of explosives will not be permitted.
22. Existing architectural, mechanical and electrical equipment and systems shall be protected from damage resulting from demolition.
23. Contractor shall submit a proposed deconstruction sequence to the owner and architect for review prior to commencement of work.

MECHANICAL LEGEND



ABBREVIATIONS

Table with 3 columns: Abbreviation, Description, and another Abbreviation. Includes terms like AMPS, ADDL, AFC, AFF, AFG, AP, ARCH, BLDG, BOT, C, CB, CC, CFH, CFM, CI, CJ, CL(C), CLG, CO, COL, CONST, CONT, CONTR, CTX, CU, CUH, D, DCBP, DF, DIA, DN, DS, DSW, DWG, DWH, EA, EC, EF, EJ, ELEC, ELEV, EM, EQ, ETR, EWC, EXIST, EXP, FA, FOC, FD, FFE, FPC, FS, G, GA, GALV, GC, GCO, GE, GND, GRE, GWH, HB, HE, HOA, HORIZ, HP, HVAC, HX, JB, JEC, K, KVA, KW, L, LTG, MAU, MAX, MB, MBH, MC, MECH, MFR, MIN, MTD, N, NEW, NEC, NF, NFPA, NIBH, NIC, NTS, OAI, OAC, OD, P, PC, PH, PNL, PRE, PRV, PSF, PSI, PVC, RAD, RD, REOD, RHC, RHG, RPB, RPZ, SA, SECT, SG, SF, SK, SQ, STL, STRUC, SW, SYM, TA, TC, TCC, TD, TG, TPV, TS, TYP, UH, UL, UNO, UV, V, VD, VERT, VTR, W, WP, XFMR.



tda the design architecture
BARBARA BOOKER ELEMENTARY SCHOOL
CLEVELAND MUNICIPAL SCHOOL DISTRICT
2121 W. 67TH ST.

Table with 3 columns: no., description, date. Contains revision entries.

Table with 3 columns: no., description, date. Contains project issues.

Project information including design and construction documents, sheet name (PLUMBING GENERAL NOTES), sheet number (P-1), and job number (2022-0221).

Logo for Thorson + Baker + Associates CONSULTING ENGINEERS, 3030 West Streetsboro Road, Redfield, Ohio 44286.

MECHANICAL SPECIFICATIONS

Section 200500 - General Requirements

- A. General
1. Specifications are applicable to all contractors and/or subcontractors for all mechanical systems in Divisions 01, 20.
2. This contract is also referred to the architectural, food service and electrical and all other drawings and specifications pertinent to this project...

Section 200510 - Basic Material and Methods

- A. General
1. Provide all materials, labor, equipment, and accessories required to furnish and install the mechanical items identified in this section.
2. This section includes basic mechanical materials and methods to complement other division sections in this specification and requirements indicated on the mechanical drawings.
B. Interferences
1. Before installing any work, contractor shall see that it does not interfere with clearance required for finish on beams, columns, pilasters, walls, or other structural or architectural members...

Section 200520 (cont.)

- J. Thermometers and Gauges
1. Pressure gauges shall be provided in pipe lines and at inlets and outlets to equipment as called for or specified. These shall be installed to indicate pressure changes across equipment only. This means that they must have connections installed as close as possible to equipment flanges.
K. Miscellaneous Steel
1. Furnish and install all miscellaneous steel required for supports, hangers, anchors, guides, etc., required for installation of equipment and materials furnished and installed under this division.
L. Painting
1. This contractor shall perform all painting incidental to this work.
2. All painting shall be done with a brush or roller. Spray painting will be prohibited.

Section 200523 - Piping and Valves

- A. General
1. Furnish all material, labor, equipment, and accessories required to install complete plumbing piping systems as indicated on drawings and in these specifications.
2. Install in full accordance with local code requirements, see other specification section for additional requirements and install in accordance to manufacturer's recommendations and requirements.
B. Connections to Equipment Furnished by Others
1. Provide valved water connection for equipment furnished by other contractors or owner.
C. Installation
1. All piping shall be installed parallel with or perpendicular to the building walls. All vertical risers shall be installed plumb and straight.

Section 200523 (cont.)

- 5. Install cleanouts at base of each vertical waste stack, each change in a direction of piping greater than 45 degrees as shown on drawings. Provide cleanouts not over 50'-0" on center along straight runs. Cleanouts shall be size of pipe to which it is installed up to 6" in diameter.
6. All fixtures and sanitary drains shall be vented as indicated on drawings and in accordance with Code. Vent pipes, where not vertical shall have continuous slope up to vent through roof.
9. Pipe Schedule
a. Above grade
1) No-void cast iron pipe and fittings CIPSI 1-301-78.
2) PVC-DWV SCH 40 solid core pipe, ASTM D-1785 with ASTM D-2665 DWV solvent weld socket-dwv fittings.
b. Expansion Joints
1) Ductile-iron, flexible expansion joints; AWWA C110 or AWWA C153 with two gasketed ball-joint sections and one or more gasketed sleeve sections rated for 250 piag minimum.
2) Ductile-iron expansion joints, three-piece assembly of telescoping sleeve with gaskets and restrained-type, ball-and-spigot end sections; AWWA C110 or AWWA C153, rated for 250 piag minimum.
10. PVC piping shall not be installed unless permitted by Code and shall not be installed in return air plenums.
E. Domestic Water Piping
1. Install domestic water piping as indicated on drawings. Include all fittings, valves, hangers, and other accessories. Extend domestic water piping to all fixtures and equipment required for complete installation.
2. Includes unions, or other disconnected means, stops or valves for isolation of fixtures and equipment. Valves to be fully compatible with piping for service intended as manufactured by Nibco, Crane or Milwaukee.
3. Install shock absorbers at each quick closing fixture and where required to prevent water hammer as manufactured by J.R. Smith, Sioux Chief or Zurn. Absorbers shall be installed in vertical upright position.
4. Hangers on insulated pipe to be of 150# or 200# cast, sized accordingly with a sufficient saddle to protect insulation as manufactured by Grinnell or Michigan.
5. Pipe Schedule
a. Above grade (2" and ASTM)
1) Type "L" hard copper ASTM B8-832 with wrought copper fittings ASTM B 16.22 180 and non-lead or antimony solder joints, or copper tube, pressure-seal-joint with EPDM g-ring seal in each end.
6. Flush, vent and sanitize all water piping with chlorine as required per AWWA, local building department and health department codes.
7. Allow 1/4" per 100 feet of length for expansion in domestic hot water lines.
8. All piping in return air ceiling plenums or walls shall be plumbed metal materials.
F. Condensate Drain Piping
1. Trap shall be installed near equipment if not integral with equipment. Install piping at a uniform slope of 1/16" foot per foot downward inclination to drain.
2. Pipe Schedule
a. Piping of all sizes shall be type L hard copper pipe with brass or copper fittings and soldered joint.
J. General Domestic Valves and Strainers
1. Ball valves 2" and smaller shall be 600# WOG, 150# SWP, two-piece, full port cast bronze or forged brass body, chrome plated brass ball, replaceable Teflon or TFE seals and seals, blowout-proof stem, vinyl lined body.
2. Gate valves 2" and smaller shall be 150# W.S.P., bronze, screwed pattern with rising stem, and union bonnet, solid wedge disc. Valves shall conform to MSS SP-80.
3. Check valves 2" and smaller shall be 150# W.S.P., bronze, screwed pattern with rising stem, and union bonnet, and ANSI 420-S stainless steel tapered plug and seat.
4. Check valves 2" and smaller shall be 150# W.S.P., bronze, swing check, bronze seat, screwed pattern.
5. Balance valves 2" and smaller shall be 125# bronze body screwed pattern ball type circuit seal valve with memory stop, straight pattern with Schrader valve connection for differential pressure gauge.
6. Valves to be Taco or Bell & Gossett.
7. Air vents for main water lines shall be 200#, cast iron body, screwed pattern with 20 mesh stainless steel or Monel screens, strainers to be Muesco No. 11, Armstrong, Crane, Sarco, or Hayward.
8. Air vents for main water lines shall be 200#, bronze, screwed pattern, non-rising stem angle valves with 20 mesh stainless steel and 3/4" Chicago standard hose threaded valves to be Crane 117, Walworth 24, or Jenkins 112.
9. Air vent PET cocks (located inside unitary equipment) shall be 125# bronze "try-cock" similar to Crane 730.

Section 200593 - Testing, Adjusting, and Balancing

- A. General
1. After installation, check all equipment and perform start up in accordance with the manufacturer's instructions.
2. All piping shall be tested and free of leaks as required by the local authority having jurisdiction.
3. Work that is scheduled to be concealed or insulated shall remain uncovered until required tests have been completed.
4. Instruct owner in operation of systems and submit operating and maintenance manual for all equipment and operation.
5. Work under this division of the specifications shall not be considered complete until the contractor has obtained required inspection, performance tests, made necessary adjustments and has submitted satisfactory evidence of the architect or his representative will make spot checks to determine the accuracy and completeness of final adjustments.
6. Test results shall be submitted to the architect/engineer.
B. Balancing, Start Up and Instructions
1. Start up and place all systems in operation and tag all switches and controls with permanent labels.
2. Train and instruct owner on proper operation and preventative maintenance of system.
C. Piping: Testing to be done by the contractor.
1. All piping shall be given the following pressure test without appreciable pressure drop. Contractor shall use recording line charts to record all pressure testing outcomes.

Table with 4 columns: SERVICE, TEST MEDIUM, MIN. PRESSURE, TIME (HOURS). Rows include Cold Water, Hot Water, Re-circulated Hot Water, Sanitary Sewer.

- *A minimum notice of 48 hours shall be given the architect prior to purging of any gas lines. Purging shall be to the outside of building at a safe location.
During the testing period, this contractor shall maintain on the job a competent individual thoroughly familiar with all phases of plumbing for as long as necessary to ensure that the system is thoroughly adjusted all of the systems and to demonstrate to the architect that they are functioning properly.
3. All hydrostatic and/or air tests shall be drained by the piping after concealed or covered. This contractor shall be responsible for completely draining the systems after hydrostatic tests are performed.
4. All materials and installations under the plumbing system shall be inspected by the inspector to ensure compliance with requirements of the Plumbing Code.
5. This contractor shall notify the plumbing inspector whenever work is ready for test and inspection.
6. When work for the plumbing permit is issued and completed, this contractor shall request final inspection. Such request shall be made before the building is occupied or used but not more than 30 days after completion of the work.
7. Before approving the plumbing system, the plumbing inspector may require that the system in whole or part be tested to prove sufficiency. All equipment, material, power and labor necessary for inspections and test shall be supplied by the plumbing contractor.

Section 200523 (cont.)

- 8. All piping of plumbing system shall be tested with water or air per testing schedule.
a. Drainage system water test: provide fitting at property line or termination point for purpose of test plug. Water test shall be applied to entire system or by section.
b. Drainage system air test: attach air apparatus to suitable opening, close all other inlets and outlets, and then force air into the system until there is uniform pressure, sufficient to balance a column of mercury 10" in height or 5 pounds gauge pressure on the entire system.
c. No part of system shall be covered before inspection is made and approved.
d. Defective work or materials shall be replaced and inspection and tests repeated within three days.
11. Certificates of approval of satisfactory completion and final inspection shall be obtained by the plumbing contractor.
12. Damages which result from breakage or faulty installation shall be the responsibility of the plumbing contractor.
13. After the system has been in service for a two-week period and again before the system is turned over to the owner, all dirt pockets, traps, and strainers shall be cleaned, removed, and reinstalled.

Section 200700 - Insulation

- A. General
1. Furnish all material, labor and equipment as required to install complete plumbing insulation as indicated on plumbing drawings and in these specifications.
2. Install in full accordance with manufacturer's recommendations.
B. Scope: This contractor shall furnish and install all insulation necessary to the project and in accordance with the following requirements. All insulation and accessories used in an air plenum space, regardless of physical location, shall have a composite (insulation, jacket, and adhesive) fire and smoke hazard rating as tested under procedure ASTM E-84, NFPA 255 and UL 723, not exceeding a flame spread 25 and smoke developed 50.
C. Workmanship:
1. All insulation shall be installed over clean, dry surfaces.
2. All pipe insulation shall be installed with joints butted firmly together.
3. All insulation ends shall be tapered and sealed regardless of services.
4. All insulated, exposed piping 6'-0" and below to the finished floor shall include a 0.020" thick vinyl jacket.
5. Repair all damaged sections of the existing piping insulation damaged during this construction period.
D. Plumbing Insulation (as manufactured by Owens Corning, Knurr or Schuller)
1. Insulate all above-grade hot water, hot water return and cold water piping with 1" thick molded fiberglass having an all service jacket.
2. Insulate all above-grade, horizontal condensate floor drains and waste lines with 1" thick molded fiberglass having an all service jacket.
3. Include insulation of fittings and valves. Keep vapor barriers intact. Apply per manufacturer's recommendations.



BARBARA BOOKER ELEMENTARY SCHOOL
CLEVELAND MUNICIPAL SCHOOL DISTRICT
12121 W. 67TH ST.

Table with 3 columns: no., description, date. Includes rows for Sheet Revisions and Project Issues.

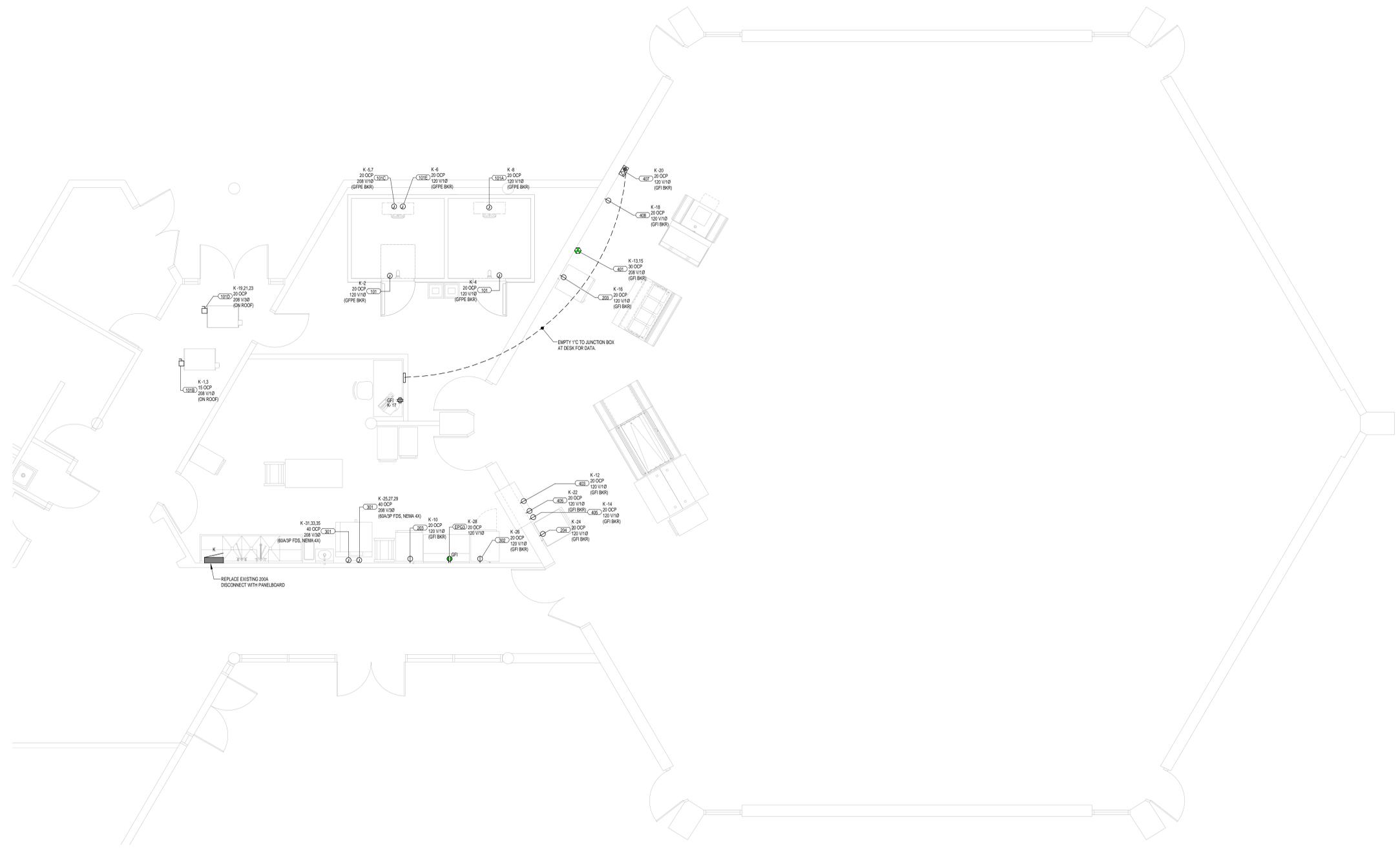
MECHANICAL SPECIFICATIONS
drawn by: TBA
checked by: TBA
P-3
job number: 2022-0221



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CMSD BARBARA BOOKER ELEMENTARY
 CLEVELAND METROPOLITAN SCHOOL DISTRICT
 2121 W. 67TH ST.
 CLEVELAND, OHIO 44102



ELECTRICAL PLAN
 1/4" = 1'-0"

NOTE:
 ALL RECEPTACLES ON THIS DRAWING SHALL BE GFCI PROTECTED PER N.E.C. 210.8(B).

PANELBOARD DESIGNATION: K

LOCATION: VOLTS: 120/208 V_{LINE} A.I.C. RATING: 10K
 SUPPLY FROM: PHASES: 3 MAINS TYPE: MCB
 MOUNTING: WIRES: 4 MAINS RATING: 200
 SPECIAL REQUIREMENTS: BUS RATING: 200

NOTE	CKT	DESCRIPTION	-A	-P	A	B	C	-P	-A	DESCRIPTION	CKT	NOTE	
	1	COOLER COMPRESSOR	20	2	0.6	1.0			1	20 WALK-IN COOLER/FREEZER	2	GFE	
	3					0.6	1.0		1	20 WALK-IN COOLER/FREEZER	4	GFE	
	5	WALK-IN FREEZER COIL	20	2			1.0	0.6	1	20 FREEZER COIL HEAT TAPE	6	GFE	
	7			1.0	0.6				1	20 WALK-IN COOLER COIL	8	GFE	
	9	SPARE	30	2		0.0	1.4		1	20 HOT FOOD CABINET	10	GFI	
	11					0.0	0.9	1	20	COLD FOOD TABLE	12	GFI	
	13	HOT FOOD TABLE	30	2	1.8	0.4			1	20 MILK COOLER	14	GFI	
	15				1.8	1.4			1	20 HOT FOOD CABINET	16	GFI	
	17	REC. OFFICE	20	1			0.4	1.2	1	20 LOW PROFILE AIR CURTAIN	18	GFI	
	19	FREEZER COMPRESSOR	30	3	1.4	1.2			1	20 CASH REGISTER/POS. BY OWNER	20	GFI	
	21				1.4	0.4			1	20 MILK COOLER	22	GFI	
	23					1.4	1.8	1	20	COLD FOOD CABINET	24	GFI	
	25	CONVECTION OVEN	60	3	3.7	0.6			1	20 REFRIGERATOR	26	GFI	
	27					3.7	0.2		1	20 GENERAL PURPOSE DUPLEX	28		
	29						3.7	0.0	1	20	SPARE	30	
	31	CONVECTION OVEN	60	3	3.7	0.0			1	20	SPARE	32	
	33					3.7	0.0		1	20	SPARE	34	
	35						3.7	0.0	1	20	SPARE	36	
	37	SPARE	20	1	0.0	0.0			1	20	SPARE	38	
	39	SPARE	20	1		0.0	0.0		1	20	SPARE	40	
	41	SPARE	20	1		0.0	0.0		1	20	SPARE	42	
	43	SPARE	20	1	0.0	0.0			1	20	SPARE	44	
	45	SPARE	20	1	0.0	0.0			1	20	SPARE	46	
	47	SPARE	20	1	0.0	0.0			1	20	SPARE	48	
	49	SPARE	20	1	0.0	0.0			1	20	SPARE	50	
	51	SPARE	20	1		0.0	0.0		1	20	SPARE	52	GFI
	53	SPARE	20	1		0.0	0.0		1	20	SPARE	54	GFI
	55	SPARE	20	1	0.0	0.0			1	20	SPARE	56	GFI
	57	SPARE	20	1	0.0	0.0			1	20	SPARE	58	GFI
	59	SPARE	20	1		0.0	0.0		1	20	SPARE	60	GFI
		KVA SUB TOTALS			15.9	15.6	14.8					KVA TOTAL	46.3
		AMPS SUB TOTALS			133.7	130.8	123.3					AMP TOTAL	128.5

PANELBOARD SCHEDULE CIRCUIT BREAKER NOTES

- ALL BREAKERS SHALL BE "AFCI" RATED
- NOT ALL NOTES MAY APPLY TO THIS PROJECT.
- GFI - 5mA "GFI" TYPE FOR PERSONNEL PROTECTION
- SFE - 30mA "GFI" TYPE FOR EQUIPMENT PROTECTION
- AF - "ARC-FAULT" TYPE
- AFCI - COMBINATION "ARC-FAULT"/5mA GFI TYPE
- ST - SHUNT-TRIP TYPE
- ET - ELECTRONIC TRIP TYPE
- L - BREAKER TO HAVE LOCK-ON CLIP
- UR - BREAKER TO HAVE LOCK-ON CLIP AND RED MARKING
- HT - FURNISH AND INSTALL HANDLE TIES FOR MULTIPLE CIRCUITS
- EB - EXISTING BREAKER WITH NEW CIRCUIT. EXISTING BREAKER ASSUMED TO BE SPARE OR EXISTING CIRCUIT ASSUMED DEMOLISHED DURING SCOPE OF THIS PROJECT. FIELD VERIFY.
- NB - FURNISH AND INSTALL NEW BREAKER. BREAKER SHALL MATCH EXISTING PANELBOARD MANUFACTURER, TYPE AND AIC RATING.
- ETR - EXISTING CIRCUIT TO REMAIN. LOAD SHOWN BASED UPON EXISTING DRAWINGS OR 80% OF FULLY LOADED BREAKER AMPACITY.

WHERE ROOM NAME/NUMBER IS INDICATED FOR CIRCUIT DESCRIPTION, CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT NAME/NUMBER WITH ARCHITECTURAL PLANS PRIOR TO INSTALLING CIRCUIT DIRECTORY.

KITCHEN EQUIPMENT SCHEDULE - KITCHEN

ITEM #	DESCRIPTION	VOLTAGE	PHASE	LOAD (kW)	HP	AMPS (A)	OCB	CIRCUIT	FEEDER	CONNECTION	ADDITIONAL INFORMATION/REQUIREMENTS	MOUNTING HEIGHT	REMARKS
101	WALK-IN COOLER/FREEZER	120 V	1	1.0 kW		8.0 A	20 A	K-4	(2) #12 & (1) #12 GND 3/4"	DIRECT	GFFE BKR	48"	WIRE TO JB FOR LIGHTS, DOOR HEATER
101	WALK-IN COOLER/FREEZER	120 V	1	1.0 kW		8.0 A	20 A	K-2	(2) #12 & (1) #12 GND 3/4"	DIRECT	GFFE BKR	48"	WIRE TO JB FOR LIGHTS, DOOR HEATER
101A	WALK-IN COOLER COIL	120 V	1	0.6 kW		5.0 A	20 A	K-8	(2) #12 & (1) #12 GND 3/4"	DIRECT	GFFE BKR	96"	WIRING FROM COIL TO TIME CLOCK
101B	COOLER COMPRESSOR	208 V	1	1.2 kW		5.7 A	15 A	K-1.3	(2) #12 & (1) #12 GND 3/4"	30A/3P, WP, FDS	ON ROOF	48"	REMOTE, ROOF MOUNTED COMPRESSOR UNIT FOR WALK-IN COOLER/FREEZER. TRADES TO VERIFY EXACT LOCATION.
101C	WALK-IN FREEZER COIL	208 V	1	2.0 kW		9.8 A	20 A	K-5.7	(2) #12 & (1) #12 GND 3/4"	DIRECT	GFFE BKR	96"	WIRING FROM COIL TO TIME CLOCK
101D	FREEZER COMPRESSOR	208 V	3	4.2 kW		11.6 A	20 A	K-19.21.23	(3) #10 & (1) #10 GND 3/4"	30A/3P, WP, FDS	ON ROOF	48"	REMOTE, ROOF MOUNTED COMPRESSOR UNIT FOR WALK-IN COOLER/FREEZER. TRADES TO VERIFY EXACT LOCATION.
101E	FREEZER COIL HEAT TAPE	120 V	1	0.6 kW		5.0 A	20 A	K-6	(2) #12 & (1) #12 GND 3/4"	DIRECT	GFFE BKR	96"	
203	HOT FOOD CABINET	120 V	1	1.4 kW		12.0 A	20 A	K-10	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	72"	
203	HOT FOOD CABINET	120 V	1	1.4 kW		12.0 A	20 A	K-16	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	72"	
204	COLD FOOD CABINET	120 V	1	1.8 kW		15.0 A	20 A	K-24	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	72"	
301	CONVECTION OVEN - DOUBLE DECK	208 V	3	11.2 kW		31.0 A	40 A	K-25.27.29	(3) #6 & (1) #10 GND 1"	DIRECT	60A/3P FDS, NEMA 4X	24"	
301	CONVECTION OVEN - DOUBLE DECK	208 V	3	11.2 kW		31.0 A	40 A	K-31.33.35	(3) #6 & (1) #10 GND 1"	DIRECT	60A/3P FDS, NEMA 4X	24"	
302	REFRIGERATOR	120 V	1	0.6 kW		4.9 A	20 A	K-26	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	90"	
401	HOT FOOD TABLE	208 V	1	3.5 kW		17.0 A	30 A	K-13.15	(2) #10 & (1) #10 GND 3/4"	6-30P	GFI BKR	16"	
403	COLD FOOD TABLE	120 V	1	0.9 kW		7.8 A	20 A	K-12	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	16"	
405	MILK COOLER	120 V	1	0.4 kW		3.0 A	20 A	K-22	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	16"	
405	MILK COOLER	120 V	1	0.4 kW		3.0 A	20 A	K-14	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	16"	
407	CASH REGISTER/POS. BY OWNER	120 V	1	1.2 kW		10.0 A	20 A	K-20	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	16"	
408	LOW PROFILE AIR CURTAIN	120 V	1	1.2 kW		10.4 A	20 A	K-18	(2) #12 & (1) #12 GND 3/4"	CAP	GFI BKR	16"	INTERWIRE TO OFFICE/CPU - W/F
EPG3	GENERAL PURPOSE DUPLEX	120 V	1	0.2 kW		1.5 A	20 A	K-28	(2) #12 & (1) #12 GND 3/4"	CAP		48"	

CONNECTION TYPES:
 DIRECT - DIRECT CONNECTION TO LIMIT DISCONNECT SWITCH
 MS - MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION - TYPE AND RATING PER EQUIPMENT BEING SERVED.
 DS - DISCONNECT SWITCH - TYPE AND RATING PER EQUIPMENT BEING SERVED.
 FDS - FUSIBLE DISCONNECT SWITCH - TYPE, RATING, AND FUSES PER EQUIPMENT BEING SERVED.
 WP - WEATHERPROOF TYPE

NOTE:
 FOR ALL DIRECT CONNECTED EQUIPMENT, E.C. TO FURNISH WIRING WHIPS LONG ENOUGH TO PERMIT EQUIPMENT TO BE MOVED OUT FOR SERVICE/REPAIR WITHOUT REQUIRING EQUIPMENT TO BE DISCONNECTED.

no.	description	date
01	Issue For Bidding	8-5-22

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sheet name: ELECTRICAL PLAN AND DETAILS

drawn by: TBA
 checked by: TBA
 sheet number: E-1
 job number: Project Number



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