

ACCESS CONTROL UPGRADES

Technology Request for Bid



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INVITATION TO BID

PART 1 - GENERAL

1.01 WORK INCLUDED: DISTRICT TECHNOLOGY UPGRADES

A. Southfield Public Schools (Owner) is seeking bids for purchase and installation low voltage cabling, security and building access associated equipment and installation. Proposed systems shall be configured and installed as described herein.

B. Project: ACCESS CONTROL UPGRADES

C. Owner: Southfield Public Schools
24661 Lahser Road
Southfield, Michigan 48033

D. Designer: Communications by Design, Inc.

E. Sites of Work:

1. Southfield High School for Arts & Technology
24675 Lahser Road
Southfield, Michigan 48033
2. University K12
19301 W. 12 Mile Road
Lathrup Village, Michigan 48076
3. Levey Middle School
25300 W. 9 Mile Road
Southfield, Michigan 48033
4. Adler Elementary
24500 Larkins Street
Southfield, Michigan 48033
5. Birney K-8 School
27225 Evergreen Road
Southfield, Michigan 48076
6. McIntyre Elementary School
19600 Saratoga Blvd
Southfield, Michigan 48076

7. Stevenson Elementary School
27777 Lahser Road
Southfield, Michigan 48034
8. Thompson K-8 International Academy
16300 Lincoln Drive
Southfield, Michigan 48076
9. Vandenberg World Cultures Academy
16100 Edwards Avenue
Southfield, Michigan 48076
10. Eisenhower Elementary School
24500 Larkins Street
Southfield, Michigan 48033
11. Kennedy Learning Center
16299 Mount Vernon
Southfield, Michigan 48075
12. Southfield Regional Academic Campus
21705 Evergreen
Southfield, Michigan 48075
13. Instructional Technology Center
24855 Lasher Road
Southfield, Michigan 48033
14. John W. English Administrative Center
24661 Lasher Road
Southfield, Michigan 48033

1.02 GENERAL DESCRIPTION OF PROJECT SEQUENCE

- A. Sequences and dates specified herein are for information only and indicate the plan and intent of the Owner. Actual dates shall be established based on the final award of project.
- B. Sequence of operations shall be established by the Contractor within the guidelines established by the Owner as required to meet schedules.
- C. Schedule:
 1. Request for Bid Distributed: September 19, 2024
 2. Pre-Bid Meeting: September 25, 2024 at 3:00 PM

3. Intent to Bids Due: September 30, 2024 by 5:00 PM
4. Question and Clarification Deadline: September 30, 2024 by 5:00 PM
5. Public Bids Due: October 15, 2024 at 11:00 AM

1.03 TYPES OF BIDS

- A. Bids shall be submitted in total and with required detail for each item bid and as is required herein and include all portions of the work identified for the individual bid package as specified herein. Bids shall be made on unaltered bid forms as included herein. Bidder shall fill in all blank spaces and the bid shall be signed by a legal officer or agent authorized to bind the bidder to a contract.

1.04 PRE-BID CONFERENCE

- A. A pre-bid conference will be held. A discussion of the project and review of bid documents will be followed by a site review and an opportunity to ask questions. Attendance is highly encouraged for all contractors interested in bidding on any components or portions of this project. Attendance at the pre-bid conference will be a factor considered during evaluation of bids.
- B. Time: 3:00 PM on September 23, 2024
- C. Location: John W. English Administrative Center
24661 Lasher Road
Southfield, Michigan 48033
- D. Any drawings identified in the table of contents herein will be distributed electronically and reviewed at this conference.
- E. Physical building inspections of sites of work will be provided for at this time.

1.05 TIME AND PLACE OF BID RECEPTION

- A. Physically sealed bids for the base bid work will be received at the district office and read aloud at a public opening. Bids arriving after the appointed time as determined by the Owner's representative conducting the public opening, shall be returned unopened at the Owner's discretion. Bids will be accepted beginning forty-eight (48) hours prior to the appointed opening time provided they are in sealed packages and addressed as specified herein.
- B. Bid Receipt Deadline: October 15, 2024 by 11:00 AM
- C. Bid Opening Location: John W. English Administrative Center
24661 Lasher Road
Southfield, Michigan 48033

D. Faxed or electronically delivered bids will not be accepted.

1.06 EXAMINATION AND PROCUREMENT OF DOCUMENTS

A. Specifications and any relevant Drawings may be obtained from the Technology Designer. Contractors may obtain copies by documented request to Communications by Design, Attn: Rebecca Szilagy. Requests may be made by:

1. Writing – 4101 Sparks Drive Grand Rapids, Michigan 49546
2. Email – rszilagy@cbdconsulting.com

1.07 BID SECURITY

- A. Bid security equal to five percent (5%) of the total bid amount, must accompany each base bid in accordance with the Instruction to Bidders.
- B. Bid security shall be either a Bid Bond issued by a company licensed in the State of Michigan to furnish bid security or Certified Check made payable to the Owner.

1.08 OWNER’S RIGHT TO REJECT BIDS

- A. The Owner reserves the right to reject any and/or all bids. The Owner reserves the right to accept a bid, or portion thereof by issuance of a valid purchase order within ninety (90) calendar days following the bid opening. No bids may be withdrawn during this time without the specific approval of the Owner.
- B. Withdrawal of any Bids after the opening time without specific approval by Owner may result in forfeiture of required bid security by Bidder.

1.09 DEFINITIONS

- A. “Owner” is intended to mean Southfield Public Schools, a general powers school district.
- B. For purposes of this project, the terms “Architect”, “Engineer” and “Designer” are used synonymously to refer to Communications by Design, Inc., a Michigan Corporation.
- C. The term “Bidder” refers to any organization properly and accurately submitting a complete “Intent to Bid Form” prior to the required time specified herein and subsequently properly submitting completed set of bid documents as specified herein.

- D. The term “Contractor” herein is a reference to the firm(s) eventually selected by the Owner to provide the intended system(s), or any portion thereof, and fulfill the terms of the contract.
- E. The term Contract is a reference to the collective set of documents, drawings, diagrams, Owner’s Purchase Order, Addenda, and all other materials as provided for herein defining arrangement between Owner and Contractor.
- F. The term Addenda (or Addendum) are that portion of the Contract consisting of modifications, amendments, deletions, or substitutions to the contract documents issued prior to the execution of the Contract.

END OF SECTION

SECTION 00 40 00
BID FORMS

Intent to Bid Form

Complete and submit the following form if you have interest or intend to submit a Bid for this project. Unaltered and completed forms must be received on or before 5:00 PM on September 30, 2024. Only bidders returning a completed "Intent to Bid Form" will be notified of required addenda.

Company Information

Name: _____

Address Line1: _____

Address Line2: _____

City, State and Zip Code _____

Primary Contact Information

Name: _____

Phone No.: _____

Fax. No.: _____

E-Mail Address: _____

Portions of the bid for which you will be responding:

- Section 27 10 00 - Low Voltage Cabling
- Section 28 13 00 - Building Access System

Submit unaltered and completed form to:

Rebecca Szilagy

Communications by Design, Inc.

rszilagy@cbdconsulting.com

SEALED BID LABEL

Separate, or fold over, the label on the line below, and affix to the exterior of sealed container so information is clearly visible for Bid Submission. Ensure label is attached in a manner to prevent accidental removal or defacement. Label shall serve as sole identification for sealed bid at submission.

BID TO: Southfield Public Schools
Attention: Jesse Sutton, Purchasing Specialist
John W. English Administrative Center
24661 Lasher Road Southfield, MI 48033

BID FROM: _____

PROJECT: ACCESS CONTROL UPGRADES
TECHNOLOGY BID ID #3044

INCLUDING Addendum No. _____ Dated _____
ADDENDA: Addendum No. _____ Dated _____

DUE: October 15, 2024 at 11:00 AM

BID FORM

BID TO: Southfield Public Schools
Attention: Jesse Sutton, Purchasing Specialist
John W. English Administrative Center
24661 Lasher Road Southfield, MI 48033

BID FROM: _____

PROJECT: ACCESS CONTROL UPGRADES
TECHNOLOGY BID #3044

The undersigned, having familiarized themselves with all local conditions affecting the cost of work, and having examined the site and all applicable Bidding Documents herein, and herein referenced, including, but not limited to, all addenda issued thereto, hereby propose to furnish all labor, material, equipment, applicable taxes and services required for proper completion of each of the following categories of this project for the sum of:

Bid Category _____ Title _____
_____ Dollars (\$) _____).

Said amount written above constituting the Base Bid

Bid Category _____ Title _____
_____ Dollars (\$) _____).

Said amount written above constituting the Base Bid

TAXES:

Bid sum includes all applicable taxes.

ALLOWANCES:

Base bid includes all applicable allowance cost(s) as set forth herein.

COST OF BONDS:

Bid sum includes cost of furnishing a Performance Bond and Labor and Material Payment Bond, each in the amount of one hundred percent (100%) of the bid.

ACKNOWLEDGEMENT OF ADDENDA:

The following addenda have been received, are hereby acknowledged, and their execution is included in both base bid and alternate bids herein.

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

ALTERNATES:

Based bid amount may be increased or decreased in accordance with each of the following alternate bids as may be selected, following procedures stated herein. Voluntary Alternates shown below are identified and described in detail on appropriate attachment(s) as referenced herein.

Alternate A _____

Alternate B _____

PRINCIPAL SUBCONTRACTORS

As required herein, the following Subcontractors are proposed to be used for this project:

Legal Name: _____ Work Proposed _____

Legal Name: _____ Work Proposed _____

Legal Name: _____ Work Proposed _____

BID SECURITY:

Accompanying this Bid, as required herein, is a bid security in the form of Certified Check/Cashier's Check/Bidder's Bond in the amount of:

_____ Dollars (\$ _____),

payable to the Owner, which it is agreed, shall be retained as liquidated damages, not as a penalty, by the Owner, if the undersigned fails to execute the Contract in conformity with the form of Contract incorporated and referenced herein and fails to furnish specified bonds within ten (10) days after date of issuance of a Letter of Intent to the undersigned.

If awarded the Contract, the undersigned agrees to commence work within ten (10) calendar days after date of issuance of a Purchase Order, which shall be considered as the notice to proceed, and agrees to complete the work in accordance with the schedule herein.

FAMILIAL DISCLOSURE:

Accompanying this Bid, as required herein, is a legally executed and notarized Michigan Familial Disclosure Statement.

EXCEPTIONS:

Bidder takes no exception to contract form, terms, conditions, specifications and/or any other requirements herein unless expressly noted, and specifically identified as provided for herein on unaltered Contract Exception form accompanying this Bid.

SIGNATORY AUTHORITY:

The undersigned certifies they are an authorized agent of the bidding entity, and legally able to bind the bidding entity to the terms, conditions and responsibilities of this, and all referenced bid documents. Furthermore, the undersigned acknowledges an understanding that non-compliance of this authority or any other bidding requirements may result in

forfeiture of bid security, dismissal of consideration of bid submitted, and/or personal liability against the signatory.

AGREEMENT:

The undersigned agree(s) to provide the post-bid information required within ten (10) days after notification of a Letter of Intent and to execute the attached Owner Contract for work covered by this Bid for which terms and conditions are expanded to include all Bidding Documents and subsequent addenda issued thereto.

In submitting this bid, it is understood that the Owner reserves the right to reject any or all bids. It is further agreed that this bid is binding for a period of Ninety (90) days from the opening thereof.

Respectfully submitted,

Date: _____

Firm Name: _____

By: _____

Signed: _____

Title: _____

Official Address: _____

Telephone Number: _____

Fax Number: _____

Primary Contact Email Address: _____

(If Corporation, affix Seal)

Michigan Familial Relationship Disclosure Statement

In accordance with Section 1267 of Michigan Revised School Code this sworn and notarized statement of an authorized representative, discloses any familial relationship between the owner and/or any employee of the Bidder, and any member of the project Owner’s governing Board(s) or Superintendent(s).

If any conflict of interest is discovered subsequent to submission of bid, written disclosure shall be submitted to the project Owner within seven (7) days of discovery. The project Owner reserves the right to immediately terminate any contract with Bidder upon notification of a conflict of interest. Upon such termination, the project Owner shall compensate Bidder only for the value of any goods or services provided to the Owner prior to such termination as determined by Designer.

(Check only one Box Below)

It is hereby acknowledged and certified by Bidder that no familial relationship exists between the owner or any employee of the Bidder and any member of the project Owner’s governing Board(s) or Superintendent(s).

A familial relationship exists between the owner or an employee of the Bidder and a member of the project Owner’s governing Board(s) or Superintendent(s). The person(s) and the relationship(s) are as follows:

Bidder

Board or Superintendent

| | |
|--|--|
| | |
| | |
| | |
| | |

Bidder Authorized Representative:

Bidder: _____

Representative’s Signature: _____

Print or Type Name: _____

Representative’s Title: _____

Subscribed and sworn this _____ day of _____, 2024.

In the County of _____ State of _____

By _____
Notary Public Signature

Seal or Stamp:

My commission expires on: _____

IRAN LINKED BUSINESS AFFIDAVIT

All Bids shall be accompanied by a sworn statement disclosing any Iran Linked Business relationship that exists within the owners, including its officers, directors, and employees.

The undersigned, owner or authorized officer of

_____ (bidder), pursuant to Michigan Public Act No. 517 of 2012, the “Iran Linked Business” requirement provided in the Southfield Public Schools Proposals hereby represents and warrants that the bidder, including its officers, directors and employees, is not an “Iran Linked Business” within the meaning of the applicable Public Act, and that in the event bidder is awarded a contract as a result of this RFB, the bidder will not become an “Iran Linked Business” at any time during the course of performing under the contract. The bidder further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the District investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on future Requests for Bids for three (3) years from the date that it is determined that the person has submitted the false certification.

There is not an “Iran Linked Business” that exists within the bidder and/or owner, officers, directors and employees.

Bidder:

[Company Name]

[Signature]

[Title]

Notary:

This instrument was acknowledged before me, a Notary Public in and for

_____ County, on this

_____ day of _____, 20_____.

[Notary Public Signature]

My Commission expires: _____

Acting in the County of: _____

REFERENCES

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____

Date of completion: _____

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____

Date of completion: _____

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____

Date of completion: _____

CONTRACT EXCEPTIONS

Check one Box

Bidder takes no exception to, and agrees to comply with all sections, terms, conditions and/or requirements of the Contract Documents.

Bidder proposes the following exceptions to the Contract Documents:

| <i>Paragraph Number</i> | <i>Explanation</i> |
|-------------------------|--------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

NOTE:
Exception(s) to any bid sections, terms, conditions and/or requirements deemed excessive for any reason by the Owner and/or Designer may result in disqualification of Bid.

END OF SECTION

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 OWNERSHIP

- A. Bidders prepare and provide bids without any cost to the Owner and/or Designer. Once opened, bids become the sole property of the Owner. Bidders have no claim to, or ownership of bids opened. Bids become subject to all legal statutes including, if applicable, United States and Michigan Freedom of Information Acts and related laws.

1.02 COMPLIANCE

- A. This document establishes the primary system(s) design configuration. The Bidder's bid response shall include all services, supplies, components, and equipment required to provide a complete turnkey system(s) which meets or exceeds all specifications for each given bid item being proposed.
- B. Owner prefers to enter into a contract with a single bidder for all materials for completion of this project but shall consider combinations of portions of bids from various bidders. The Owner reserves the right to award portions of the project to multiple bidders who will be required to cooperate with one another in order to complete the work.
- C. By their response, Bidders agree to comply with all sections, terms, conditions and/or requirements of the contract documents except as expressly noted, and specifically identified by paragraph number on the unaltered Contract Exceptions Bid Form. Exceptions to any bid sections, terms, conditions and/or requirements deemed excessive by the Owner and/or Bid Coordinator may disqualify bid.
- D. In compliance with the Freedom of Information Act (FOIA), the Owner shall make bid documents available for public review after issuance of executed Contract with the successful bidder/s.
- E. In connection with the execution of this Contract, Contractor and any Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, or national origin.
- F. Negligence in preparation, improper preparation, errors in, or omissions from Bids shall not relieve Bidder from fulfillment of any and all obligations and requirements of the Contract Documents.

G. All Bid documents and worksheets must be completed in detail and submitted together on time.

1.03 NOTICE AND RESPONSE

- A. Upon notification of Bidder being considered as a finalist, the Bidder shall provide to the Owner and Designer, within 48 hours, a current “Dunn and Bradstreet Supplier Evaluation Report” and other documentation as may be required of finalists herein and as requested by Owner and/or Bid Coordinator.
- B. Bidder shall provide timely response to all requests from Designer and/or Owner regarding clarification and/or elaboration concerning, but not limited to its Bid as may be deemed relevant by the Owner and/or Designer.

1.04 DRAWINGS DIAGRAMS AND ILLUSTRATIONS

- A. Drawings, Diagrams, and Illustrations are diagrammatic in nature and indicate general arrangement and nature of systems and work included.
- B. Floor plan drawings are provided to assist the contractor in preparing documentation and reports as required herein.

PART 2 - MATERIALS

2.01 VOLUNTARY ALTERNATES AND SUBSTITUTION OF SPECIFIED PRODUCTS

- A. This Request for Bid describes a particular implementation. All Bids must provide pricing on the “base bid” as described herein. Voluntary alternatives providing comparable functionality with significant cost reduction and/or performance enhancement may be proposed. Voluntary alternatives are encouraged but must be identified as “Voluntary Alternates” and detailed on unaltered Bid Forms contained herein. Voluntary Alternates may be further detailed and/or explained in attachments to the unaltered Bid Forms contained herein. Exceptions to the Request for Bid specifications must be clearly noted and explained for each Voluntary Alternate proposed.
- B. No substitutions of specified products may be made in base bids without specific prior authorization by Designer and Owner. Individual bid divisions herein contain particular information related to acceptable manufacturer and product requirements.
- C. Trade-in, equipment/license exchanges or other return allowances may be provided as a voluntary alternate. Trade-in, exchange, or other return equipment allowances shall not be included in base bid amount.

PART 3 - EXECUTION

3.01 EXAMINATION OF DOCUMENTS AND SITE

- A. Bidders shall carefully examine the Contract Documents and the construction site to obtain first-hand knowledge of existing conditions and requirements. No plea of ignorance of conditions that exist, or any other relevant matter concerning work to be performed in the execution of work will be accepted as justification for failure to fulfill every detail of all requirements as described herein.

3.02 QUESTIONS, INTERPRETATIONS, AND ADDENDA

- A. Any bidder finding discrepancies between Drawings, Specifications, and/or Bid Documents, or be in doubt as to the exact meaning of any provision or detail shall notify the Designer at once, and before the deadline for Questions and Clarifications. The Designer may then, at their option, issue Addenda and/or documented answers clarifying same. The Designer is not responsible for oral instructions, or Bidder's/Contractor's misinterpretations of Drawings, Specifications, and/or Bid Documents.
- B. The Designer reserves the right to issue Addenda at any time up to thirty-six (36) hours prior to the scheduled bid opening. All such addenda shall become, upon issuance, an inseparable part of the Specification/Contract Documents. Each bidder shall incorporate within their bid all costs for items listed in any/all Addenda and shall acknowledge receipt and identifying number of each Addendum on the Bid Form and on the outside of the sealed bid container.
- C. Addenda will be forwarded to each bidder who has received a copy of the Bidding Documents and has submitted "Intent to Bid Form".

3.03 BID SECURITY, BONDS, AND INSURANCE

- A. Bid Security, Performance and Payment Bonds are required on this project.
 - 1. Bid security equal to five percent (5%) of the bid amount must accompany each bid in accordance with the Instruction to Bidders.
 - a. Bid security shall be either a Bid Bond issued by a company licensed in the State of Michigan to furnish bid security or Certified Check made payable to the Owner.
- B. The selected Contractor will be required to provide a performance bond and a payment bond each in an amount equal to one hundred percent (100%) of the bid amount including any accepted alternates at the Owner's discretion.
 - 1. The surety of the performance bond shall remain in effect until all acceptances and final contract close-out requirements herein have been executed by the Owner.

C. All such bonds and/or insurance shall be issued by surety licensed by the State of Michigan and acceptable to the Owner.

1. Insurance certificate(s) shall be signed by insurance agent licensed in the state of Michigan or a representative of the insurance company.

3.04 MODIFICATION AND WITHDRAWAL

- A. Bids may be withdrawn and/or changed any time prior to the deadline for submission of bids. Bids may not be withdrawn or changed thereafter and shall be deemed a firm offer continuing for ninety (90) calendar days. Bids received after the deadline for submission will be returned unopened at the Owner's discretion.
- B. Withdrawal of any Bid after the opening time without specific approval by Owner may result in forfeiture of required bid security by Bidder.

3.05 CODES, ORDINANCES, REGULATIONS AND RELATED

- A. The Contractor shall pay for all applicable licenses, permits, taxes, and fees required for this project; and shall comply with all federal, state, local and Owner's codes, laws, ordinances, regulations and other requirements applicable to the work specified at no additional cost to the Owner. Contractor shall submit copies of all approved certificates and approvals to the Owner upon receipt.

3.06 SUB-CONTRACTOR AND MATERIAL SUPPLIER

- A. The successful Bidder shall submit to the Owner and Designer a complete list of all sub-contractors and all material suppliers proposed to engage on the work. Sub-contracts shall not be awarded until after they have been approved by the Designer and Owner.
- B. Finalist bidders may be required to submit additional details related to sub-contractors and suppliers within forty-eight (48) hours after the bid opening.
- C. Names of any principal sub-contractors must be listed on the Bid Form.
- D. All contracts made by the successful Bidder with Subcontractors shall be covered by the terms and conditions herein. The successful Bidder shall see to it that Subcontractors are fully informed in regard to Contract terms and conditions and shall bind all subcontractors to the same terms and conditions. Failure to do so will absolve the Owner from any liability for additional cost due to subcontractor claims for additional cost, time, or any claim(s) for additional cost by subcontractor(s).

3.07 BID RESPONSE FORMAT

- A. Bidder shall provide complete Bid copies in two formats as described herein.
1. One (1) Hard copy format responses shall be in a bound tabulated format. Each response shall have tab indicators for each section.
 2. One (1) Electronic copy format responses shall be submitted on a USB Drive, readable by a standard Microsoft Windows 11 workstation. Electronic media shall contain separate folders to organize response documentation as described herein. Files submitted electronically shall be *Adobe Acrobat* “PDF” format (SCHEDULE OF VALUES is additionally required to be on the disk in the appropriate folder as a Microsoft Excel compatible spreadsheet and as described herein).
- B. All Bid Response formats shall be clearly externally marked to include, but not be limited to:
1. Bidder identification.
 2. Project Owner identification.
 3. Project name.
 4. Bid submission date.
- C. Bid Responses shall include an index containing copies/PDF of a complete index of documents comprising Bid Response. Responses shall include, but not be limited to the following tabbed/folder sections:
1. Section 1 – Forms, which shall contain copies/PDF files of all required and completed bid forms.
 - a. BID FORM
 - b. Michigan Familial Relationship Disclosure Statement
 - c. REFERENCES
 - d. CONTRACT EXCEPTIONS
 - e. SCHEDULE(s) OF VALUES
 - f. BID BOND
 2. Section 2 – Overview, which shall contain copies/PDF files of cover letter and/or executive overview.
 3. Section 3 – Submittals, which shall contain copies/PDF files of all required and voluntary submittals.

4. Section 4 – Appendices, which shall contain copies/PDF files of other reference materials Bidder wishes to or is required to submit.

3.08 AWARD OF CONTRACT

- A. The material proposed to be used for the completion of work, and the competency, solvency and responsibility of bidders will receive due consideration before award of contract. In the reception of bids for this work, the Owner incurs no obligation to accept the lowest, or any bid submitted. The right to accept or reject any and all bids or portion thereof is reserved by the Owner. The Owner reserves the right to require testimonial, accounting or legal documents pertaining to the solvency of a Contractor, or any other decision factor the Owner deems appropriate, prior to award of contract.
- B. Owner reserves the right to select individual components from schedule of values independent of installation as may be determined in Owners best interest. Selected bidder may be required to install selected components provided by others.

3.09 TIME, SCHEDULES, PROJECT MANAGEMENT, MEETINGS AND PLANS

- A. Time is of the essence on this project. Award of contracts for this project will be contingent on the bidder's agreement to complete the work on or before the contract completion date stated herein.
- B. All Contractors will commence work in such a manner and at such a time as to expeditiously interface with the work of other Contractors and will pursue the project diligently to completion. All Contractors will work in a cooperative manner with Owner and other Contractors.
- C. Contractor shall appoint an overall Project Manager acceptable to Owner, with skills and experience deemed appropriate by the Owner for the scope and size of the project. Project Manager shall be responsible for the scheduling of all Contractor resources and attending all project meetings. Upon notification of Bidder being considered a finalist, the Bidder shall submit professional resume of proposed Project Manager within forty-eight (48) hours.
 1. Project meetings shall be conducted at Owner's selected and identified location weekly and at Owner's and/or Designer's discretion.
 2. Within five (5) days of Letter of Intent, Contractor's Project Manager shall provide to the Owner a critical flow path in the form of a "Gantt Chart" (or equivalent) indicating the proposed sequence of events and approximate beginning and completion dates in accordance with, compliance to, and coordinated with requirements herein. Additionally, Contractor shall execute Owner's Contract document and return to the Owner for their execution within that time period.

3. Changes of the Project Manager during the project shall not be acceptable without prior written approval from the Owner.
4. It is the responsibility of the Contractor's Project Manager to schedule work, work out issues, ensure that all required products and services are delivered according to schedule and attend to any other matters required by the Owner in the interest of professional and timely completion of the project.
5. The appointed Project Manager, or a designee acceptable to the Owner, shall be in attendance of all project meetings throughout the term of the project. Failure to do so may be considered a material breach of contract.
6. After a ten (10) business day notice, the Owner reserves the right to request a new Project Manager, when it appears that, in the Owner's sole discretion, the Project Manager is not fulfilling the full responsibilities of the position. Failure by Contractor to provide adequate Project Manager meeting requirements of the Owner, may result in Contract termination.

3.10 CHANGES IN THE WORK

- A. No changes in work with the effect of either increasing or decreasing in the project value shall be made without specific and prior authorization by the Owner and Designer.
- B. Owner, without invalidating the contract and without notice to any surety, may at any time order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly. All such work shall be authorized by a written Change Order approved by Owner and Contract Designer. Upon receipt of such an order Contractor shall promptly proceed with the work involved. All such work shall be executed under the conditions of the original Contract. Owner authorized change order(s) may be issued at any time prior to Contract close out.
- C. When so directed, Contractor shall promptly submit an itemized estimate and a unit price for performing or deleting such extra or changed work as may be contemplated. Any extensions or reductions of the contract time associated with extra or changed work shall be identified at the time Contractor submits such documentation.
- D. At the Owner's discretion, adjustments in the Contract Sum shall be determined by one or more of the following methods:
 1. By mutual acceptance of a lump sum cost, including overhead and profit, itemized and supported by sufficient substantiating data to permit evaluation.

2. By unit prices stated in the Contract Documents including, but not limited to, Schedule of Values.
3. By unit prices mutually agreed upon.

3.11 PAYMENT REQUESTS AND PAYMENTS

- A. Contractor's invoices shall be submitted monthly in correlation with the Project Schedule indicating percentage of work completed.
- B. All contract and change order invoices shall be sent directly to Contract Designer.
- C. A 10% retainage shall be held back on all payment requests, including, but not limited to hardware, software, change orders and services, until final completion and close out of the project or project phase as determined by Owner and Designer.
- D. Contractors are required to submit all invoices on approved AIA Payment Request Forms or other billing format pre-approved by Contract Designer. Each AIA Payment Request Form shall be accompanied by a properly completed, executed, and notarized Waiver of Lien which shall be in a format and contain verbiage approved by Owner.
- E. The Contract Designer and Owner shall process payment requests on a monthly schedule and in accordance with their respective established processes and procedures. Payments will be made by the Owner based only on AIA Request Forms having been previously certified, audited and approved by Contract Designer and accompanied by acceptable Waiver of Lien.

END OF SECTION

CONTRACT CLOSE OUT
00 65 00 - 29

SECTION 27 10 00
LOW VOLTAGE CABLING

PART 1 - GENERAL

1.01 DESCRIPTION OF PROJECT

- A. Work described in this specification section pertains to structured cabling to support various types and styles of communications systems. Owner expects structured cable system shall be used to provide connectivity for items including, but not limited to, Access Points, Phones, Computers, Printers, Cameras and video displays.
- B. Structured cable system shall be compliant with EIA/TIA 568B.
- C. The Contractor shall configure, supply, install, connect, test, document and train Owner representatives and warrant a fully operational and compliant communications transport system, complete and with full functionality as specified herein including, but not limited to:
 - 1. Cables
 - 2. Jacks
 - 3. Cable support hardware
 - 4. Communication distribution racks
 - 5. Cross connect blocks and devices
- D. Contractor shall coordinate their installation with other contractors, Architect, Construction Manager, Architect/Engineer and the Owner as is appropriate.

1.02 DRAWINGS

- A. Drawings show the location and general arrangement of data cabling in each building respectively. No work shall proceed without final approval of locations by Owner and/or Designer. Data cabling locations are identified for bidding purposes, final location of data cabling may be adjusted as necessary.
- B. Examine drawings of other trades and verify conditions of work sites. Arrange work accordingly.
- C. Deviations from final drawings, with the exception of minor changes in routing and other such incidental changes not affecting functionality or serviceability of systems, shall not be made without written approval of Architect/Engineer.

1.03 WARRANTY

- A. Complete installation shall be free from defect and/or failure for a period of three (3) years. Any replacement, upgrade or fix, including labor for any non-conforming or non-operational part of the system shall be fixed and/or replaced at no cost to the Owner.
- B. Manufacturer's warranty shall be provided for all components of the system.
 - 1. Any paperwork and/or submittals required by individual manufacturers for compliance with the standard and/or applicable extended warranty programs shall be provided and submitted for approval by the Contractor.
 - 2. Contractor shall submit all paperwork, apply for warranty or extended warranty certification, and provide a Certificate of Warranty or Extended Warranty as may be applicable from the manufacturer prior to project closeout.
- C. On site services provided under the warranty shall be performed by personnel or representatives of Contractor as herein defined and located within physical proximity to provide response levels deemed acceptable to Owner.
 - 1. Contractor shall provide response times for all malfunctioning equipment of two (2) business days or less.
 - 2. Response time shall be measured from the time Contractor is notified by Owner to the time work is begun to resolve the matter.

1.04 SUBMITTALS

- A. Submittals shall consist of technical cut sheets and information pamphlets on all components of the system to be installed. All cut sheets and submittals shall be distinctly marked to highlight the actual part number of the item being submitted for approval.
- B. Equipment or material installed for this project that does not have an approved submittal associated with it, shall be removed and replaced with acceptable equipment or material as defined by the Architect/Engineer. All replacement costs including, but not limited to material and labor, shall be the sole responsibility of the Contractor.
 - 1. The Owner and/or Architect/Engineer may notify Contractor of any offending situations under this provision allowing Contractor up to forty-eight (48) hours to correct the situation prior to taking other corrective action.
 - 2. The Owner reserves the right to replace unapproved materials and deduct the costs of doing so as defined herein from any amounts that may be due, or become due Contractor.

- C. Shop drawings and diagrams shall be submitted by Bidder for approval by Architect/Engineer with Bids.
 - 1. Shop drawings and diagrams shall show all data relating to structural, electrical, wiring, cross connect, interconnect, equipment arrangement/layout, and any other information deemed significant by the Architect/Engineer.
 - 2. No work constituting final installation shall be commenced until after approval of shop drawings by Architect/Engineer.

1.05 REFERENCE STANDARDS

- A. All work, products, and materials shall conform with the following standards as applicable for the intended use:
 - 1. ANSI/NFPA
 - 2. EIA/TIA Commercial and Administration Standards
 - 3. NECA
 - 4. BICSI
 - 5. UL
 - 6. MOSHA Safety Standards

1.06 CONTRACTOR

- A. The Contractor shall accept complete responsibility for the installation, certification and support of the system. Contractor shall provide proof of manufacturer support by photocopy of certification and letter of support from major component manufacturers for this specific project. Contractor shall be an authorized vendor of all major components.
- B. All work shall be performed and supervised by Project Managers, Engineers and/or Technicians who are qualified to install system and perform related tests as recommended by the manufacturer and in accordance with the manufacturer's best practices and methods.
- C. Project Managers, Engineers and Technicians employed on this project shall be properly and fully trained and qualified by the manufacturer on the installation and testing of the equipment and systems to be installed. Certification of such training shall promptly be provided if requested by Architect/Engineer.

- D. The Contractor shall have a proven track record in structured cable configuration and installation. This must be shown by the inclusion of references of at least three (3) projects involving the installation of similar systems completed by the Contractor in the prior two (2) years on unaltered forms with the sealed Bid as provided herein.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer(s) of major components of the structured cable system shall be a known and leading entities in the communications field, and shall have been designing, manufacturing and installing similar systems for a period of no less than four (4) years.
- B. Acceptable Manufacturers (In alphabetical order):
 - 1. Belden
 - 2. Berk-Tek
 - 3. General Cable
 - 4. Hubbel
 - 5. Nordx-CDT
 - 6. Panduit
 - 7. Systimax
- C. System shall be built upon an open and standard platform, supporting industry standards. Systems that are deemed Proprietary in nature shall not be considered.

2.02 COPPER CABLE

- A. Station Cable shall meet or exceed:
 - 1. Four (4) pair Category 6 Unshielded Twisted Pair (UTP) cable.
 - 2. Rated and certified for installation in plenum air return spaces as may be required.
 - 3. Twenty-three gauge wires (23AWG)
 - 4. Compliant as per EIA/TIA-36 specifications
 - 5. Certified under UL's LAN Cable Certification Program

- B. All cables shall be terminated for T568B compliant connection.
- C. Coordinate cable color(s) with Owner requirements prior to installation.

2.03 CROSS CONNECT EQUIPMENT

- A. Cross Connect Equipment shall meet or exceed:
 - 1. Patch Panel for UTP Category 6 Cable Termination.
 - a. Rack mounted category 6 compliant printed circuit board technology, patch panel with T568B compliant terminations on front of panel and 110 type terminations on rear of panel.
 - b. Rack mounted patch panels shall be no larger than Forty-eight (48) ports each.
 - 2. Furnish and install smear resistant, mechanically imprinted polyester or similar material labels to identify each port of all patch panels (fiber optic and copper) in compliance with EIA/TIA 606 standards or Owner required scheme. Labels shall be permanently affixed to patch panels.

2.04 WIRING DEVICES

- A. All station cable shall terminate on modular jacks that meet or exceed:
 - 1. Category 6 compliant
 - 2. 4 position T568B compliant modular female jack.
 - 3. Snap-in, high impact housing
 - 4. Field verify and coordinate insert color to match Owner requirements.
 - 5. Field verify and coordinate plates and/or outlet frame colors and materials to coordinate with electrical devices and Owner requirements.
 - 6. Where station cable is to terminate above finished ceiling or behind a finished wall for cameras, speakers, or other special station devices, modular jack shall be surface mounted in appropriate high strength, impact resistant plastic enclosure that provides high visibility reflective tape and/or surface(s) to allow for more visible location.
 - 7. Furnish and install matching coordinating blank cover plates for all unused communications outlets in common raceway.
 - 8. Mount flush plates so all four edges are in continuous contact with finished surfaces.

9. Furnish and install smear resistant, mechanically imprinted polyester or similar material labels to identify each connector at all station cables in compliance with EIA/TIA 606 standards or Owner required scheme. Labels shall be permanently affixed to patch panels.

2.05 OWNER STANDARDS

- A. Contractor shall provide connectors in a color to match the Owner's existing standards.
- B. Contractor shall provide cover plates and any associated keystone inserts as may be required matching Owner's existing standards.
 1. Stainless Steel cover plates.
 2. Grey keystone inserts.
- C. Contractor shall provide connector identification and labels on all terminations matching EIA/TIA 606 or Owner's existing standard at the Owner's direction. Field verify all label conditions per site prior to final installation.

2.06 PROJECT CABLE CONFIGURATIONS

- A. Data Outlet
 1. Contractor shall supply data locations in quantities and locations identified on provided Appendix B and Appendix C.
 - a. Cabling quantity and locations is identified with the Xd identifier, the "X" showing the quantity of data activations.
 2. Contractor shall provide data outlets including, but not limited to:
 - a. UTP station cable(s) terminated on compliant patch panel in nearest IDF and wire devices in a single box location.
 - b. In locations that terminate above ceilings, Contractor shall supply surface mount device box. Box shall be bright in color and/or contain a permanently attached brightly colored reflective identification label to facilitate visual location of connection point behind finished surfaces.
 - c. Faceplate compliant with Owner standards shall be provided.

2.07 ALLOWANCES

- A. Contractor shall include allowances for equipment and/or other contract service reimbursements as required below in base bid lump sum amount(s).

Equipment and/or contract services shall be provided and sourced at Owner's discretion and convenience with full cooperation by Contractor, and paid for from successful bidder's contract in the amount(s) provided for herein. Any allowance amount proving to be excessive for the intended equipment and/or contract services shall be credited to the Owner against contract payment requests.

1. Allowance shall be made in the amount of \$10,000.00 for contract services related to supply and installation of Owner directed infrastructure upgrades.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Contractor shall conduct detailed walk-through examination with Architect/Engineer verifying equipment and material locations as well as mounting and placement requirements prior to commencement of other installation activities.
- B. Contractor shall ensure all submittals and shop drawings have been provided to, and approval has been obtained from Architect/Engineer prior to commencement of any final installation activities.

3.02 INSTALLATION

- A. Contractor shall be familiar with the environment where work shall be done as specified herein.
- B. Work Areas shall be cleaned at the end of each day. All debris shall be cleared, removed and disposed of in an approved container for the site. All equipment and tools shall be removed from common areas and stored in approved, secure storage locations. Any work that may impede the general use of the space and cannot be removed shall be flagged and cordoned off by the Contractor prior to their departure.
- C. All equipment and materials shall be installed in a neat and workmanlike manner. Best practices installation principles shall be used throughout the project. All manufacturer recommended installation practices and standards shall be complied with.
- D. The Contractor shall furnish, set in place, and install all equipment necessary for a fully compliant and operational system as specified herein. The installation process includes, but is not limited to the following:
 1. Cables installed in a professional manner to prevent tangling and congestion and to facilitate installation or removal of cables in the future.

2. Cables installed without kinks (any bend with a radius less than manufacturer defined minimum).
3. All cable free of abrading or penetrating of cable jacketing.
4. In suspended ceiling where cable trays or conduit are not available, Contractor shall support wiring with “D – rings”, beam clamps or other approved cable support devices at appropriate distances (6 ft. minimum).
5. All information outlets shall be labeled. Labels shall be completed using printed labels. Handwritten labels are not acceptable.
6. The Contractor shall label all cables, jacks, patch panel positions, faceplates and cross connects.
7. In-line cable splicing shall not be permitted.
8. Contractor shall provide 10’ minimum service loop above accessible ceiling for each terminated cable to accommodate future changes.
9. Length of each individual run of horizontal cable from the MDF/IDF to the information outlet shall not exceed 90 meters (295 ft.).
10. IDF(s) and MDF locations have been identified in the appendices herein. Contractor shall calculate distances to ensure the adherence to the EIA/TIA 568 distance limitations. Contractor shall notify Architect/Engineer of cable length exceptions prior to installation in writing and request direction.
11. All copper data cabling shall terminate on Category 6 compliant connectors. Approximately 10 ft. of Category 6 and/or fiber cabling shall be coiled and stored at each cable distribution center in order to accommodate future change.
12. Wiring not installed in conduit or cable tray shall not be routed within 18 inches of light fixture ballasts or within 36 inches of motors or transformers.
13. Coordinate cable colors with Owner requirements prior to installation.
14. Contractor shall include any sleeves where wall penetrations are needed. Sleeves shall be a minimum of 2” diameter and sized for cable being installed with a maximum fill rate of 25%. All installed sleeves shall be fully fire stopped with compliant fire stop material following cable installation.
15. Provide backboards, properly treated for fire retardation on single wall of MDF where required by site conditions.

16. Assemble, install, configure and test all equipment and components, maintaining accurate inventory records and status documents and discarding packaging.
17. Work shall be performed to meet local codes, manufacturer best practices and industry standards, including, but not limited to:
 - a. Grounding and Bonding.
 - b. Termination
 - c. Testing
 - d. Labeling
 - e. Record keeping

E. Sites of Work:

1. Southfield High School for Arts & Technology
24675 Lahser Road
Southfield, Michigan 48033
2. University K12
19301 W. 12 Mile Road
Lathrup Village, Michigan 48076
3. Levey Middle School
25300 W. 9 Mile Road
Southfield, Michigan 48033
4. Adler Elementary
24500 Larkins Street
Southfield, Michigan 48033
5. Birney K-8 School
27225 Evergreen Road
Southfield, Michigan 48076
6. McIntyre Elementary School
19600 Saratoga Blvd
Southfield, Michigan 48076
7. Stevenson Elementary School
27777 Lahser Road
Southfield, Michigan 48034

8. Thompson K-8 International Academy
16300 Lincoln Drive
Southfield, Michigan 48076
 9. Vandenberg World Cultures Academy
16100 Edwards Avenue
Southfield, Michigan 48076
 10. Eisenhower Elementary School
24500 Larkins Street
Southfield, Michigan 48033
 11. Kennedy Learning Center
16299 Mount Vernon
Southfield, Michigan 48075
 12. Southfield Regional Academic Campus
21705 Evergreen
Southfield, Michigan 48075
 13. Instructional Technology Center
24855 Lasher Road
Southfield, Michigan 48033
 14. John W. English Administrative Center
24661 Lasher Road
Southfield, Michigan 48033
- F. It shall be the responsibility of the Contractor to repair or replace any damage done to the structure of finishes in the building by the Contractor. If in the course of work, Contractor damages, marks or misplaces any surfaces or access plates/panels the Contractor shall repair and/or replace the surface, plate or panel to the original condition.
1. Final determination as to the damage condition and/or repair/replacement fitness of any surface, plate or panel shall be the sole responsibility of the Designer.
 2. The building and work area shall be returned to its original condition prior to final sign off of the project.

3.03 DOCUMENTATION

- A. Contractor shall be responsible for providing thorough, timely documentation. Documentation shall include, but not be limited to both printed and electronic copies of:
1. As-built drawings of each building.

2. Copper station cable test results.

B. In addition to the as-built drawings for the new data cabling in each building, Contractor shall document existing data drops in accessible ceilings in the vicinity of the project work. Contractor is not responsible for the testing or labeling of existing cabling. Contractors will only responsible for identifying existing cabling in locations where work is taking place. Contractor will be responsible for documenting the following information:

1. Location and quantity of existing drops
2. Data drop information on label (if exists)

3.04 TESTING

A. End to end testing of UTP copper Category 6 cables shall be conducted at 350 Mhz to meet or exceed reference standards. 100% of all pairs shall be tested. Documentation of test results shall be provided including, but not limited to the following parameters:

1. Attenuation.
2. Near End Cross Talk (NEXT).
3. Signal to noise ratio.
4. continuity
5. Pair integrity
6. EMI interference.
7. Any cable that does not meet EIA/TIA 568 specifications shall be repaired or replaced at the Contractor's expense.
8. Cable length.

3.05 TRAINING

A. Not Used.

3.06 SCHEDULE, MEETINGS AND PLANS

A. Sequence of operations shall be established by the Contractor within the guidelines established by the Owner, documented herein, required by Architect/Engineer, Architect and/or Construction Manager and as required to meet schedule.

- A. Contractor shall attend all construction progress meetings as may be required by Construction Manager and Owner. Such meetings shall aid in coordination and scheduling for field work and be held at the convenience of the Construction Manager.
- B. Schedule
 - 1. Post bid Interviews: Week of October 21, 2024
 - 2. Contractor Chosen: Week of October 28, 2024
 - 3. Work Commences: December 2024
 - 4. Substantial Completion: February 2024
 - 5. Project Close-out: March 2024
- C. Planned sequence of operations shall be established by the Contractor within the guidelines established by the Owner, as required herein and as required to meet schedules.
- D. All work shall be coordinated with Owner's construction manager on site.
- E. Project progress meetings shall be held, but not limited to, weekly at a site and time identified as convenient for Owner and as required herein. Meetings will be attended as required herein.

END OF SECTION

SECTION 28 13 00
BUILDING ACCESS CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION OF PROJECT

- A. Work described in this specification section pertains to a new and rework of existing access control equipment for the sites listed and specified herein. All equipment will be integrated into new Genetec integrated access control system. Building access control work shall consist of three (3) categories:
1. Addition of necessary hardware, software and labor to enhance security in the identified existing locations, including the inclusion of door contacts and REX devices on all exterior doors of the locations provided, see Appendix B.
 - a. Configuration 1
 - b. Door Interface Hardware, Electric Strike Devices, Door Contact, REX, Credential Reader
 - c. Configuration 2
 - d. Door Interface Hardware, Door Contact, REX
 2. Complete migration of existing Vanderbilt door access control system to new contractor provided access control system, see Appendix C.
 3. Addition of necessary hardware, software and labor to enable new electronic door access and security devices in construction spaces as identified in provided documents and as specified herein, see Appendix B, Appendix C, Appendix D, and Appendix E.
- B. Contractor shall advise, coordinate, and work cooperatively with Owner representatives and/or owner's designee related to any installation or special security provisions.
- C. The Contractor shall design, engineer, configure, supply, connect, test, document, train Owner representatives and warrant a fully operational and compliant system, complete and with full functionality as specified herein.
- D. Contractor shall coordinate their installation with other contractors, Designer and the Owner as is appropriate.

- E. Contractor shall fully coordinate and cooperate with door hardware vendor supplying the balance of items identified in section Appendix D and Appendix E Construction Coordination Hardware Schedule as identified herein. All final connections, component integration, configuration, testing and programming functions to provide for a fully operational and functional system as specified shall remain the responsibility of Contractor selected for work in this section/division.

1.02 WARRANTY

- A. Complete installation shall be free from defect and/or failure for a period of three (3) years. Any replacement, upgrade, or fix, including labor for any non-conforming or non-operational part of the system shall be fixed and/or replaced at no cost to the Owner.
- B. Manufacturer's warranty shall be provided for all components of the system.
 - 1. Any documents and/or submittals required by individual manufacturers for compliance with the standard and/or applicable extended warranty programs shall be provided and submitted for approval by the Contractor.
 - 2. Contractor shall submit all documents, apply for warranty or extended warranty certification, and provide a Certificate of Warranty or Extended Warranty as may be applicable from the manufacturer prior to project closeout.
- C. On site services provided under the warranty shall be performed by personnel or representatives of Contractor as herein defined and located within physical proximity to provide response levels deemed acceptable to Owner.
- D. Contractor shall provide the following response times for all malfunctioning equipment:
 - 1. Eight (8) hours or less for matters that render twenty percent (20%) or more of the system unable to maintain normal functionality.
 - 2. Two (2) business days for matters not meeting the above criteria.
 - 3. Response time shall be measured from the time Contractor is notified by Owner to the time work is begun to resolve the matter.
- E. System Warranty shall commence on date of substantial completion as certified by Designer and provided for herein. Delivery to work site of materials, physical removal from packaging, issuance of Contractor documents including, but not limited to invoices and/or packing slips, or any event or documentation, not specifically provided for herein, shall have no effect on Warranty or System Acceptance by Owner and/or Designer.

1.03 STORAGE OF MATERIALS

- A. All materials shall be secured when not in use by the Contractor.
- B. It shall be the Contractor's responsibility to secure all equipment including material to be installed as part of the contract. No changes shall be made to the contract due to loss or theft of equipment and/or materials not officially accepted by the Owner.
- C. Formal receipt of the materials shall not be completed by the Owner until completion of project closeout. The Contractor shall be responsible for all equipment until time of closeout as provided for herein.

1.04 SUBMITTALS

- A. Submittals shall consist of, but not be limited to, technical cut sheets and detailed information pamphlets on all components of the system to be installed. All cut sheets and submittals shall be distinctly marked to highlight the actual part number of the item being submitted for approval with Bid Proposals.
- B. Shop drawings and diagrams shall be submitted by Bidder for approval by Designer with Bid Proposals.
 - 1. Shop drawings and diagrams shall show all data relating to structural, electrical, wiring, cross connect, interconnect, equipment arrangement/layout, and any other information deemed significant by the Designer.
 - 2. No work constituting final installation shall be commenced until after approval of shop drawings by Designer.
- C. Contractor shall provide proof of manufacturer support by photocopy of certification and letter of support from major component manufacturers for this specific project with Bid Proposals.
- D. Equipment or material installed for this project that does not have an approved submittal associated with it, will be removed, and replaced with acceptable equipment or material as defined by the Designer. All replacement costs including, but not limited to material and labor, shall be the sole responsibility of the Contractor.
 - 1. The Owner and/or Designer may notify Contractor of any offending situations under this provision allowing Contractor up to forty-eight (48) hours to correct the situation prior to taking other corrective action.

2. The Owner reserves the right to replace unapproved materials and deduct the costs of doing so as defined herein from any amounts that may be due or become due Contractor.
- E. The Contractor shall submit within ten (10) calendar days after the Letter of Intent, a schedule that reflects the sequence of activities of the contractor's approach to the execution of and completion of the work. The schedule shall be broken into work areas to provide for a clear identification of the planned progress of the work. Included in the schedule will be a list of tasks with list of deliverables and the percentage of work completed. This schedule shall coincide with progress payments applications dates and projected amounts. All durations shown will be in calendar days. The timeframe described in the Contractor's Schedule shall represent the Contractor's plan for organizing, directing, managing, controlling, staffing, and executing the work required by the Contract Documents. Owner will rely on such schedules to coordinate and otherwise plan related work of Owner personnel, other separate contractors, or the Owner's routine daily work.

1.05 REFERENCE SPECIFICATIONS

- A. All work, products, and materials shall conform with the following standards as applicable for the intended use:
1. IEEE
 2. EIA/TIA Commercial and Administration Standards
 3. NEC
 4. FCC – All Applicable Rules and Regulations
 5. UL
 6. MOSHA Safety Standards
- B. Bidder shall be responsible for supply, configuration and installation of components identified in Appendix D and Appendix E – Construction Coordination Hardware Schedule

1.06 CONTRACTOR

- A. The Contractor shall accept complete responsibility for the installation, certification, and support of the system. Contractor shall be an authorized vendor of all major components.
- B. All work shall be performed and supervised by Project Managers, Engineers and/or Technicians who are qualified to install system and perform related

tests as recommended by the manufacturer and in accordance with the manufacturer's best practices and methods.

- C. Project Managers, Engineers and Technicians employed on this project shall be properly and fully trained and qualified by the manufacturer on the installation and testing of the equipment and systems to be installed.
- D. The Contractor shall have a proven track record in security system configuration and installation. This must be shown by the inclusion of references of at least three (3) projects involving the installation of similar systems completed by the Contractor in the prior two (2) years on unaltered forms with the sealed Bid Proposal as provided herein. Bid Proposal Form(s) may be duplicated as required in order to provide adequate space to list required number of reference installations for each division Bidder is responding to.

1.07 CONTRACT TERM PRICING

- A. Owner intends to work exclusively with awarded Contractor during the contract warranty period related to additions, changes and/or system modifications. All such work that is not applicable to the warranty specified herein shall be conducted at rates and pricing consistent with that provided for and documented herein.
 - 1. Such work shall be conducted in a professional and expeditious manner consistent with best practices and industry norms.
 - 2. Hourly rates, including travel charges, shall remain fixed for the term of the contract except as provided for herein.
- B. During the contract term, Contractor shall provide a consistent cost-plus model of fixed pricing during the contract duration, with certain audit provisions to Owner for all materials and products during the implementation and through the Warranty term of this project.
 - 1. Owner may direct at its sole discretion, Designer to conduct a spot audit of Contractor pricing to verify compliance with agreed upon mark-up models of pricing. Contractor shall fully and completely cooperate with Designer by providing all requested materials, including, but not limited to vendor invoices, vendor contract documents and other related documentation deemed relevant by Designer.
- C. Owner reserves the right, with input from Designer and Contractor, to select other model(s) of materials, products, and/or equipment at their sole discretion, at any point during the contract term. Any such model change, being from the same or replacement product family, shall be accommodated by Contractor and provided at the same pricing strategy as similar and/or prior models as proposed under this contract.

- D. Owner may, or may not, elect to purchase individual integrated door hardware components, as may be applicable to system expansion from Contractor or other related door vendors. Contractor shall fully cooperate with Owner decisions for related product sourcing and provide all integration service for such products as is appropriate for a fully functioning and operational system to meet the Owner's needs.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer of major components of the included Building Access Control system shall be known and leading entity in the relevant communications field, and shall have been designing, manufacturing, and installing similar systems for a period of no less than three (5) years.

- B. Acceptable Manufacturers:

- 1. ASSA ABLOY

- a. Door Interface Hardware, Electric Strike Devices, Door Contacts (or equal), REX (or equal)

- 2. Von Duprin

- a. Door Interface Hardware, Electric Strike Devices, Door Contacts (or equal), REX (or equal)

- 3. GENETEC

- a. Central Management Software and associated licensing

- 4. LENEL S2

- a. OnGaurd

- 5. Or Equal

- 6. MERCURY

- a. Door Controllers

- 7. HID

- a. Credential Readers

2.02 Supply most current version of all products provided.

- A. Proposed components shall have been field tested and proven in actual use.

- B. Prior and/or old versions of products, unless specifically approved and documented by Designer and/or Owner shall not be acceptable.
 - C. In cases where a newer version of hardware or software is available at the time of installation, Contractor shall request clarification from Designer on which version is to be used.
- 2.03 Furnish only new, first-class quality materials and equipment.
- 2.04 System shall be comprised of interoperable components including, but not limited to, controller, credential sensors, and management software integrated into a common working system.
- 2.05 System administrator shall be capable of complete system back-up and full system restoration from a previously saved configuration.
- 2.06 System shall be of a distributed processing design with a fully distributed database including, but not limited to time, date, valid codes, access levels and related data so that each Controller makes access control decisions for that location. If communications with central station/server equipment is lost, all transactions shall be buffered until the restoration of a connection to the central station/server.
- 2.07 In the event of a power failure, complete system shall automatically re-initialize and “become active” to the last configuration in use with no human intervention.
- 2.08 Contractor shall be responsible for final and working system. Use of existing components and materials provided by others during new construction shall be integral to system configuration and cost-effective installation. Bidders are encouraged to use all compatible and working components in system solution. See schedule(s) and reference files for additional detail.
- 2.09 CENTRAL MANAGEMENT SOFTWARE
- A. New access control hardware shall be integrated with new open platform security software for a fully functional system.
 - B. Contractor will supply all necessary licensing and labor to integrate new door access hardware into new contractor provided access control system. Including all existing hardware as indicated on Appendix B, Appendix C and all new card readers, strikes, door position indicators and REX devices in existing buildings as indicated on provided documents and as specified herein.
 - C. Contractor will supply all necessary licensing and labor to integrate ALL existing Vanderbilt door access components into new system. Including all existing accessories for a fully functional system. Such integration responsibility shall include, but not be limited to, all door release switches and all other integration enabled in the current Vanderbilt system.

- D. Contractor shall supply all necessary administration workstation licensing to connect up to Fifty (50) administrative workstations for electronic door access control.
- E. Provide communication to credential readers, each with individual associated door interface hardware. See associated schedule herein.
- F. Contractor shall supply all necessary licensing, labor and accessories to integrate existing Von Duprin electronic locks into system. Contractor shall migrate and maintain all existing programming and features for a fully functional system.
- G. System reporting shall include, but not limited to:
 - 1. Access through entrance doors.
 - 2. Attempted access per entrance.
 - 3. Propped and unsecured door alerting.
- H. All necessary licensing and labor to integrate existing Microsoft Active Directory will be provided and installed. Contractor shall work collaboratively with the Owner and Designer to implement Active Directory integration.
- I. System shall provide for Owner definition of access groups, schedules and door groups that can be combined by Owners system administrator into combination of access policies for users.
- J. All licensing shall be provided for in base bids for a complete and functional system as specified herein.

2.10 CONTROLLER

- A. Acceptable Manufacturer(s)
 - 1. MERCURY
 - a. LP1501
 - 1. PoE+
 - 2. Output Relays 2 Form-C contacts: 2 A @ 30 VDC, Resistance
- B. Door controllers shall be provided in locations at all electrified door hardware locations and as identified on drawings and door hardware schedule. Contractor shall provide one door controller for each 1 or 2-leaf opening requiring electrified door hardware as identified on Appendix B, Appendix C, Appendix D and Appendix E.

- C. Controllers are to be housed in a surface mounted lockable impact resistant enclosure to protect the controller and provide for cable termination and management above door/behind the finished surface on the secured side. Contractor shall provide all necessary plenum rated cables at both the closet and device location to the controller.
- D. Contractor shall supply and install all necessary patch cables to connect equipment to network and in data closet location. Contractor shall cross connect equipment in data closet and report to Owner data closet, switch and port location for programming.
- E. In identified locations where new controllers and doors are to be added. Controller(s) shall provide, but not be limited to:
 - 1. Mercury hardware based to support multiple software vendor's systems.
 - 2. Capable of supporting multiple types and styles of credential readers.

2.11 CREDENTIAL READERS

- A. Where indicated on drawings, credential readers shall be provided that meet or exceed the following requirements:
 - 1. HID
 - a. SIGNO
 - 2. Contractor shall supply appropriately size card reader for either wall switch or mullion mounting.
 - 3. Read Owner supplied credentials.
 - 4. DC powered from associated Controller.
 - 5. Response time for passage requests of 800ms.
 - 6. Sealed weatherproof shell enclosure rated for outdoor operation.
 - 7. Surface mounted on exterior surface of structure for external readers.
 - 8. LED or other type of visual indicator indicating request status.
 - 9. Audible status indicator upon user prompt.
 - 10. Range of four inches (4").
- B. See associated supplied drawings and door schedule for location and quantity.

2.12 CONTACT CLOSURE DEVICES

- A. System shall provide three (3) additional contact closures (per building), which when activated result in engagement of predefined door locking condition(s) to predefined zone(s).

2.13 DOOR INTERFACE HARDWARE (INTEGRATED COMPONENTS)

- A. All controllers shall be Mercury door controllers, where new door controllers are to be provided, the door interface hardware provided by others shall meet or exceed the following:

- 1. 12v PoE+ controller compliant strikes will be provided by others as part of Section 08700 work and shall be integrated into the door controller installation by Contractor. In locations where electric strikes are to be added to existing doors, Contractor shall supply appropriate door strike. Selected strike shall use no more than 0.260A at 12 DC.
 - a. ASSA ABLOY
 - 1. 9600
 - 2. Or Equal.
 - 2. Where new door controllers are to be provided and as indicated on provided door schedule and diagrams, each door controlled by the system shall be equipped with PIR REX device where applicable and shall be integrated into the door controller installation by Contractor.
 - a. ASSA ABLOY
 - b. RISCO
 - c. Or Equal.
 - d. ASSA ABLOY
 - e. NASCOM
 - f. Or Equal.
 - 3. All door strike, REX and DPI cables shall of a sufficient length to be neatly routed by Contractor supplying material, to a location suitable to reach inside controller enclosure for door(s).

2.14 HIDDEN DOOR RELEASE SWITCHES

- A. Door release switches are to be provided in locations identified as indicated in supplied door schedule.
 - 1. Door release switches shall meet or exceed the following requirements:

a. Alarm Controls Corp TS-18

2. Hidden door release switches shall be programmed to provide door release capabilities for doors identified on provided drawings and a specified herein. Contractors shall supply all necessary cabling, labor and accessories to integrate hidden door release switches with Contractor provided door controllers.

2.15 INTEGRATION

- A. Provided Credential Readers/Door Controllers shall be integrated with door handicap operators where applicable. Contractor shall supply all labor and accessories to integrate Credential reader with handicap operators for a safe and fully functional system. Contractor shall work collaboratively with handicap operator installers to verify the following functionality:
1. External operator buttons shall only be functional in the event of a successful card read or remote door unlatch. Door operator motor should only be operable in the event of a successful card read.
 2. Internal operator buttons shall be functional at all times, the door should unlock automatically.
 3. Contractor to supply all hardware necessary including accessories and installation to enable this capability

2.16 RACEWAY

- A. In new construction areas, pathways are to be provided by Others. In existing locations, Contractors shall supply all necessary appropriately sized metallic raceway to fully enclose and protect all cabling.

2.17 COMPONENT INTERCONNECTION

- A. All wiring not installed in conduit shall be plenum type cable and shall be so identified with continuous marking.
- B. No cable shall be exposed.
- C. Wiring color shall remain the same throughout the system. Colors used for coding shall be as directed by the system manufacturer, Owner and Designer.
- D. Wire shall be copper.
- E. Contractor shall coordinate with all relevant building trades subcontractors as well as Owner's Construction Manager to integrate and interconnect all relevant equipment, components, devices, connections and wires that may be provided by others. Refer to construction documents provided for reference.

2.18 ALLOWANCES

- A. Contractor shall include allowances for equipment and/or other contract service reimbursements as required below in base bid lump sum amount(s). Equipment and/or contract services shall be provided and sourced at Owner's discretion and convenience with full cooperation by Contractor and paid for from successful bidder's contract in the amount(s) provided for herein. Any allowance amount proving to be excessive for the intended equipment and/or contract services shall be credited to the Owner against contract payment requests.
 - 1. Allowance shall be made in the amount of \$40,000.00 for contract services related to supply, installation, and connection of contingency upgrades.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Contractor shall conduct detailed walk-through examination with Designer and Owner verifying equipment and material locations as well as mounting and placement requirements prior to commencement of other installation activities.
- B. Contractor shall ensure all submittals and shop drawings have been provided to, and approval has been obtained from Designer prior to commencement of any final installation activities.

3.02 INSTALLATION

- A. Contractor shall be familiar with the environment where work will be done as specified herein and make every reasonable effort to minimize interference with Owner's or other contractor's activities.
- B. Work Areas shall be cleaned at the end of each day. All debris shall be cleared, removed, and disposed of in an approved container for the site. All equipment and tools shall be removed from common areas and stored in approved, secure storage locations. Any work that may impede the general use of the space and/or other contractor's work and cannot be removed shall be flagged and cordoned off by the Contractor prior to their departure.
- C. All equipment and materials shall be installed in a neat and workmanlike manner. Best practices installation principles shall be used throughout the project.
- D. The Contractor shall furnish, set in place, and install all equipment necessary for a fully compliant and operational system as specified herein. The installation process includes, but is not limited to the following:

1. Inventory receipt of all components and equipment.
2. Storage of all equipment and components until such time those items are installed according to the specifications.
3. Transport equipment to the Owner's installation location(s).
4. Assemble, install, configure, and test all equipment and components, maintaining accurate inventory records and status documents and discarding packaging.
5. Collect all information necessary to accurately program all system devices to the Owner's intended use and need.
 - a. It is intended that work performed, and configurations made by contractor shall include, but is not limited to:
 1. All door control functionality and configurations shall be reviewed with the Owner and Designer prior to final configuration work.
 2. A door position switch shall be provided and installed on all new entrances and configured in the system for door position monitoring and alarming. Refer to provided door schedule for work and components that may be provided by others.
 3. Coordination with both hardware and scheduling to program momentary deactivation of magnetic hold opens associated with academic wing access doors. This may be associated with normal schedules as well as special situations including, but not limited to building lockdown.
 4. Lock/Unlock schedules configured for doors as desired by owner.
6. Label all system devices as may be appropriate and required by Owner and Designer.
7. Complete end user and system administrator training programs as specified herein.
8. Work shall be performed to meet local codes and industry standards including proper grounding and bonding of installed equipment.

E. Sites of Work:

1. Southfield High School for Arts & Technology
24675 Lahser Road
Southfield, Michigan 48033

2. University K12
19301 W. 12 Mile Road
Lathrup Village, Michigan 48076
3. Levey Middle School
25300 W. 9 Mile Road
Southfield, Michigan 48033
4. Adler Elementary
24500 Larkins Street
Southfield, Michigan 48033
5. Birney K-8 School
27225 Evergreen Road
Southfield, Michigan 48076
6. McIntyre Elementary School
19600 Saratoga Blvd
Southfield, Michigan 48076
7. Stevenson Elementary School
27777 Lahser Road
Southfield, Michigan 48034
8. Thompson K-8 International Academy
16300 Lincoln Drive
Southfield, Michigan 48076
9. Vandenberg World Cultures Academy
16100 Edwards Avenue
Southfield, Michigan 48076
10. Eisenhower Elementary School
24500 Larkins Street
Southfield, Michigan 48033
11. Kennedy Learning Center
16299 Mount Vernon
Southfield, Michigan 48075
12. Southfield Regional Academic Campus
21705 Evergreen
Southfield, Michigan 48075
13. Instructional Technology Center
24855 Lasher Road
Southfield, Michigan 48033

14. John W. English Administrative Center
24661 Lasher Road
Southfield, Michigan 48033

- F. It shall be the responsibility of the Contractor to repair or replace any damage done to the structure of finishes in the building by the Contractor. If in the course of work, Contractor damages, marks, or misplaces any surfaces or access plates/panels the Contractor shall repair and/or replace the surface, plate or panel to the original condition.
1. Final determination as to the damage condition and/or repair/replacement fitness of any surface, plate or panel shall be the sole responsibility of the Designer.
 2. The building and work area shall be returned to its original condition prior to final sign-off of the project.
- G. Following installation and system “turn-up”, but prior to final acceptance of the system, Contractor shall conduct follow-up interviews with Owner identified administrators and staff to review system functionality, suitability and confirm feature and program fitness for Owner applications.
1. Follow-up interviews shall be fully documented by Contractor and submitted to Owner for approval.

3.03 TESTING

- A. In an effort to ensure a smooth “turn-up” of the new system Contractor shall submit to a thorough testing process as defined herein prior to cut-over.
- B. Prior to requesting testing by Designer, the Contractor shall use adequate means to assure the Work is completed in accordance with the specified requirements, meets the owner’s specific application requirements and is ready for functionality and integrity testing.
- C. Testing Procedures
1. Prior to system “turn-up”, Contractor shall submit a written request to Designer indicating they have completed full and final configuration of the system and are ready to have system integrity and functionality tested.
 2. Within reasonable time after receipt of request, Designer will provide a test schedule and coordinate testing date(s) with Owner and Contractor.
 3. Should Designer determine the Work is not acceptably configured or not of adequate integrity:

- a. Designer promptly will so notify Contractor, giving reasons therefore and providing sufficient details to allow Contractor to make corrective actions.
 - b. Contractor shall then expeditiously remedy the deficiencies and notify Designer in writing when ready for re-testing.
 - c. Designer will schedule re-test of the Work.
 - d. Excessive re-testing of Work may result in fees being assessed Contractor.
4. Should Designer and Owner concur the Work is configured properly, and system integrity is as required:
- a. Designer will review Contractors detailed “turn-up” plan, and upon finding it acceptable issue a memorandum of Testing Completion to Owner and Contractor after which system “turn-up” can proceed.

3.04 DOCUMENTATION

- A. Contractor shall, throughout the completion of the project, provide Owner a file storage system that shall include all necessary equipment, including if reasonably required, file drawers, folders, dividers, etcetera, to contain all as-built drawings, owner’s manuals of all equipment installed, warranty and maintenance information and other information the Contractor, Designer and/or Owner deem necessary. Documentation shall also be provided in a digital format in file formats and on media as specified by Owner and/or Designer.
- B. Contractor shall be responsible for providing thorough, timely documentation on all hardware, software. Documentation shall include, but not be limited to:
1. Equipment description.
 2. Equipment make.
 3. Model number.
 4. Software release.
 5. Date installed.
 6. Manufacturer's warranty.
 7. Maintenance contract terms.
 8. Verification of maintenance contract engagement.

9. Telephone numbers for service and support.
10. Detailed technical support and service procedure instructions.
11. All product (hardware and software) manuals and manufacturer supplied documentation, including, but not limited to owner manuals, system administrator manuals and configuration guides. Where number of duplicate copies for particular manual or documentation item could be reasonably considered excessive, Contractor shall request direction from Owner and Designer.
12. Photocopy of original invoice listing make and model for all components and equipment from individual manufacturer(s), distribution source(s), or authorized agent(s) to establish manufacturer warranty start date for potential use after end of contract warranty provisions.
13. CAD as built drawings for each building.
14. System Configuration Report.
15. Complete inventory of installed hardware and system software. Hardware inventory shall include, but not be limited to, model numbers, serial number, physical installation location and software/firmware options.

3.05 TRAINING

- A. Training shall be conducted at the Owner's discretion and at times and places convenient to Owner personnel. Prior to any training being conducted, Contractor shall provide Owner and Designer with detailed training syllabus and schedule for proposed training event. Compliant syllabus and schedule shall be provided at least ninety-six 96 hours in advance. Owner reserves the right to postpone training if syllabus and/or schedule submitted are deemed inadequate. Training shall not be conducted until such time a syllabus and schedule submitted by Contractor are found to be acceptable to Owner.
- B. Contractor shall provide User/Operator Level Training for the Owner designated system operator(s). Owner shall designate up to (20) operators to be trained. Training shall be a minimum of one (1), two (2) hour sessions in length, at the convenience of the Owner personnel, and of sufficient duration to satisfactorily complete training on all basic system administrator functions including, but not limited to:
 1. Review standard system reports
 2. Review/monitor door status, open, closed.
 3. Review of system alerts

- C. Contractor shall provide physical on-site training for the Owner designated system administrator(s). Owner shall designate up to eight (8) system administrators to be trained. Training shall be a minimum of one (2), four (4) hour session(s) in length, at the convenience of the Owner personnel, and of sufficient duration to satisfactorily complete training on all system administration functions including, but not limited to:
1. Add, remove and reconfigure access.
 2. Basic configuration and system administration of the installed system
 3. Basic trouble shooting of the installed system and components including diagnostic and problem resolution actions.
 4. System back-up and restore functions and procedures for all system parameters and configurations.
 5. Review of system alerts, logs and monitoring of configuration parameters including, but not limited to, configuration changes and device status.
 6. System database updates and maintenance.
 7. Review standard system reports

3.06 SCHEDULE, MEETINGS AND PLANS

A. Schedule

1. Post bid Interviews: Week of October 21, 2024
2. Contractor Chosen: Week of October 28, 2024
3. Work Commences: December 2024
4. Substantial Completion: March 2024
5. Project Close-out: July 2024

B. Planned sequence of operations shall be established by the Contractor within the guidelines established by the Owner, as required herein and as required to meet schedules.

C. All work shall be coordinated with Owner's construction manager on site.

D. Project progress meetings shall be held, but not limited to, weekly at a site and time identified as convenient for Owner and as required herein. Meetings will be attended as required herein.

END OF SECTION

APPENDIX A

OWNER/CONTRACTOR AGREEMENT FOR TECHNOLOGY IMPROVEMENTS

THIS OWNER/CONTRACTOR AGREEMENT FOR TECHNOLOGY IMPROVEMENTS ("Agreement") is made this ___ day of _____, 2023 by and between **SOUTHFIELD PUBLIC SCHOOLS**, a Michigan general powers school district, whose address is 24661 Lahser Road, Southfield, Michigan 48033 (the "Owner") and _____, a _____, whose address is _____ (hereinafter referred to as "Contractor"), for the installation of Southfield Public Schools _____ Project, Bid Pack 1 - Technology, including the purchase and installation of all equipment, as well as related services and support, training, maintenance and warranties related to same, all in accordance with the terms and conditions herein. The Owner and Contractor may each be referred to herein as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, the Owner desires installation of technology improvements, including, but not limited to, equipment, services and support, training, maintenance and warranties, all as set forth in the Owner's Bond Proposal, the approved plans, Specifications, Drawings, and Contract Documents, and as otherwise approved by the Owner (collectively the "Project");

WHEREAS, the Owner, in its Project Manual, _____ dated _____, including Addendum No. 1 dated _____ (collectively the "Project Manual"), sought bids for the Project;

WHEREAS, Contractor is an entity which has represented to have the personnel, expertise, training, capacity and qualifications to perform the Project contemplated in the Project Manual, and has responded to the Project Manual with its Bid dated _____, including the Post Bid Meeting Documents dated _____ ("Contractor's Bid"), attached hereto as **Exhibit A**; and

WHEREAS, the Owner and Contractor desire to enter into this Agreement to authorize and require the Contractor to perform the obligations identified in the Project Manual, Contractor's Bid, Contract Documents and any other duties identified herein.

NOW THEREFORE, in consideration of the mutual promises and benefits contained herein, the Parties agree as follows:

SECTION 1 – INCORPORATION OF DOCUMENTS

1.1 The object of this Agreement is to formalize in one document the complete agreement between the Parties relative to the Project. Accordingly, the Project Manual and Contractor's Bid are incorporated herein by this reference as if fully restated herein. In the event of any inconsistency between or among the Project Manual, Contractor's Bid, Project Specifications, Drawings, this Agreement or any other Contract Document, the provision that is more beneficial to the Owner (as determined in the Owner's sole discretion) shall be deemed to control. However, the Parties also agree that where there is not a conflict between any of the terms and conditions contained in the Contract Documents, all of the Contract Documents shall be binding upon both Parties, except to the extent the exceptions contained in the Contractor's Bid are not expressly accepted by the Owner in writing and incorporated into this Agreement.

SECTION 2 – DESCRIPTION OF SERVICES / RELATIONSHIP OF PARTIES

2.1 Contractor shall provide the services described in the Contract Documents identified in Section 1, as required by law, as may otherwise be subsequently agreed to by the Parties in writing via change order, and/or as otherwise may be directed by the Owner via construction change directive when a change order cannot be timely agreed upon ("Services" or "Work"). Without limiting the breadth of the foregoing, the Services shall include, but not be limited to, any and all equipment, components, materials, documentation, labor, services and support, testing, and software reasonably necessary to install the agreed-upon Project which will constitute a fully operational

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solution as contemplated by the Contract Documents, as well as all required training, services and support, warranties on all equipment and Services required for a minimum two (2) years (in addition to assigning all applicable manufacturer's warranties), and a minimum of two (2) years of maintenance on material and labor.

2.2 Contractor agrees that the individuals assigned to provide Services under this Agreement will adhere to professional standards and will perform all Services in a manner consistent with generally accepted proficiency and competency for the type and nature of Work rendered. Contractor further agrees that the equipment installed pursuant to this Agreement shall be new and of good working order.

2.3 In the performance of Services under this Agreement, Contractor (its agents, subcontractors and employees) shall be regarded at all times as performing Services as an independent contractor of the Owner. Contractor shall be regarded, designated and considered to be the employer with respect to all individuals whom Contractor may select and assign to provide Services under this Agreement.

2.4 Contractor, its employees, subcontractors, consultants and agents assigned to provide Services shall be fully certified, licensed and approved as necessary to lawfully perform the Services, and Contractor, its employees, subcontractors, consultants and agents shall at all times comply with all federal, state and local laws, statutes ordinances, rules, regulations, and Owner policies applicable to the Project.

2.5 Contractor is expected to coordinate the timing, location, and performance of Services with the Owner's Technology Designer, the Owner's representative, and/or any other Owner administrator identified to the Contractor in writing. The intent of this section is not to direct the Contractor's Work, but only to ensure the efficient and smooth performance of same in light of the Owner's ongoing operations. The Contractor shall cooperate and coordinate with other contractors working on the Owner's overall technology improvement project, including both technology contractors and non-technology contractors, to ensure a seamless and efficient installation of improvements.

2.6 Contractor designates _____ as its on-site Project Manager for the duration of the Project, who shall have the authority to act on behalf of the Contractor on all matters pertaining to this Agreement.

SECTION 3 – FEES, INVOICE AND PAYMENT

3.1 In consideration of Services properly provided by Contractor under this Agreement, the Owner will pay to Contractor a Lump Sum Fee of _____ and 00/100 Dollars (\$ _____) which amount is consistent with the Contractor's Bid including any alternates accepted by the Owner.

3.2 Invoices shall be submitted no more frequently than monthly and shall coincide with the value of Work performed. The Owner will remit payment on undisputed invoices or undisputed portions of invoices within thirty (30) days of receiving the invoice, but in no event shall a payment be made if such payment will result in the Contractor receiving an amount that exceeds the value of Services performed to date.

3.3 Without regard to Section 3.2, the Owner shall be entitled to retain ten percent (10%) of any amounts paid until the Contractor has successfully and finally completed its Services.

3.4 Disputes regarding requests for payments will be communicated to Contractor by Owner, in writing, within thirty (30) days of the receipt of invoice. Payments will not be delayed unless Contractor is unable to resolve the matter to Owner's satisfaction ten (10) days prior to payment due date.

SECTION 4 – INDEMNIFICATION, INSURANCE AND BONDS

4.1 Contractor shall indemnify, defend and hold harmless the Owner, its Board of Education, its Board Members, in their official and individual capacities, its administrators, employees, agents, contractors, Technology Designer, Owner Representative Consultant, successors and assigns (collectively "Indemnities"), from and against any and all claims, suits, debts, demands, actions, judgments, liens, costs, expenses, damages, losses, injuries and liabilities, expenses, including but not limited to, actual attorneys' fees and actual expert witness fees arising out of or in connection with Contractor's resulting from performance of the Work pursuant to this Agreement and/or from Contractor's violation of any of the terms of this Agreement, including, but not limited to: (1) the

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negligent acts or willful misconduct of the Contractor, its officers, directors, employees, successors, assigns, subcontractors, consultants and agents; (2) any breach of the terms of this Agreement by the Contractor, its officers, directors, employees, successors, assigns, subcontractors, consultants and agents; (3) any violation or breach of any Federal, State or local law, rule, regulation, ordinance, policy and/or licensing and permitting requirements applicable to providing the services; or (4) any breach of any representation or warranty by the Contractor, its officers, directors, employees, successors, assigns, subcontractors, consultants and agents under this Agreement. The Contractor shall notify the Owner by certified mail, return receipt requested, immediately upon actual knowledge of any claim, suit, action, or proceeding for which the Owner may be entitled to indemnification under this Agreement. This Section shall survive the expiration or earlier termination of this Agreement and shall not be limited by the Contractor's insurance obligations contained in this Agreement.

4.2 Contractor agrees to indemnify, defend and hold harmless, at its sole cost and expense, the Owner, its Board of Education, its Board Members, in their official and individual capacities, its administrators, employees, agents, contractors, Technology Designer, Owner Representative Consultant, successors and assigns, from any claim or suit brought against the Owner arising from claims of violation of United States patents or copyrights or claims of misappropriation or misuse of trade secrets by any third party resulting from the Contractor's or the Owner's use of any equipment, systems, software, technology, documentation, and/or data developed in connection with the Work, Services and Project described in this Agreement. The Owner will provide the Contractor with a written notice of any such claim or suit. The Owner will also assist the Contractor, in all reasonable ways, but without any additional expense, in the preparation of information helpful to the Contractor in defending the Owner against this suit.

In the event that the Owner is required to pay monies, in defending such claims, resulting from the Contractor being uncooperative or unsuccessful in representing the Owner's interest, or in the event that the Owner is ordered to pay damages as a result of a judgment arising out of an infringement of patents and/or copyrights, Contractor agrees to fully reimburse for all monies expended in connection with these matters. The Owner retains the right to offset against any amounts owed Contractor any such monies expended by the Owner in defending itself against such claims.

Should a court order be issued against the Owner restricting the Owner's use of any product or Project and should the Contractor determine not to further appeal the claim issue, at the Owner's sole option the Contractor shall provide, at the Contractor's sole expense, the following:

- (a) Procure for the Owner the right to continue using the alleged infringing product(s) or Project, or
- (b) Provide substitute products or Project to the Owner which are, in the Owner's sole opinion, of equal or greater quality.

If (a) or (b) are not commercially feasible, Contractor will refund all monies paid to the Contractor for the product(s) or Project subject to the court action. The Contractor shall also pay to the Owner all reasonable related losses related to the product(s) or Project and for all reasonable expenses related to the installation and conversion to the new product(s) or Project.

4.3 Contractor agrees to procure and maintain insurance coverage in types and amounts required by the Project Manual. Contractor agrees to provide the Owner certificates of insurance evidencing such coverage prior to commencing any Services hereunder, attached hereto as **Exhibit B**. Such Certificate of Liability Insurance must be endorsed to include the Owner as an additional insured on both the commercial general liability and automobile policies and must provide that the Owner will be given at least thirty (30) days' notice of cancellation or change in insurance coverage. The additional insured coverage shall be primary and non-contributory to any of the Owner's insurance policies and shall apply to both ongoing and completed operations.

The following insurance shall be maintained by each Contractor for the duration of this Agreement.

.1 Comprehensive General Liability with policy limits of not less than One Million Dollars (\$1,000,000) for each occurrence and Two Million Dollars (\$2,000,000) in the aggregate for bodily injury and property damage.

.2 Automobile Liability covering owned and rented vehicles operated by the Contractor with policy limits of not less than One Million Dollars (\$1,000,000) combined single limit and One Million Dollars

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(\$1,000,000) aggregate for bodily injury and property damage.

.3 Umbrella or excess liability insurance to achieve the required coverage for Comprehensive General Liability and Automobile Liability, provided that such umbrella or excess insurance results in the same type of coverage as required for the individual policies. The Contractor shall provide umbrella coverage with a policy limit of not less than Two Million Dollars (\$2,000,000).

.4 Workers' Compensation at statutory limits and Employers Liability with a policy limit of not less than Five Hundred Thousand Dollars (\$500,000).

.5 A Pollution liability insurance policy providing One Million Dollars (\$1,000,000) per job site pollution event and One Million Dollars (\$1,000,000.00) policy aggregate. Coverage may be provided on a "Claims made" or "occurrence" basis. However, if "Claims made" Contractor must agree to keep coverage in force for five (5) years after Project completion or until the statute of limitation runs, whichever is longer. *This requirement applies to the Contractors which have fueled equipment onsite for operations such as sitework, excavation, foundations, flatwork, masonry, steel erection, roofing, mechanical and electrical.*

Contractors shall provide the insurance indicated above or an amount equal to 20% of the Contract Sum, whichever is greater, for General Liability and Excess Umbrella Liability.

4.4 Upon award of this Agreement, Contractors whose Contractor's Bid are \$50,000.00 or more will be required to furnish a Performance Bond and a Labor and Material Payment Bond, in forms satisfactory to the Owner, in the amount of 100% of its Contractor's Bid by a Treasury listed Surety licensed to do business in the State of Michigan, and the attorney-in-fact who executed the Performance and Labor and Material Payment Bonds on behalf of the Contractor shall attach a certified, current copy of its power of attorney. The cost of the Bonds shall be included in each Contractor's Bid and the Purchase Price contained herein. The Bonds shall, at a minimum, remain in effect for a period of two (2) years from Substantial Completion of the Work. The Contractor shall submit both the Performance Bond and Labor and Material Payment Bond to the Owner's Technology Designer within three (3) days of the Effective Date of this Agreement or prior to the start of the Work, whichever comes first.

SECTION 5 – EMPLOYEES AND SUBCONTRACTING

5.1 The Owner reserves the right to approve the identity of representatives and employees of the Contractor and any subcontractors. The Owner shall have the right to have any employee of the Contractor or a subcontractor removed from the Project at the Owner's direction upon two (2) weeks' written notice, subject to Contractor's status as employer.

5.2 In the performance of this Agreement it may be necessary for Contractor to sublet part of the Work to others. The Contractor will inform the Owner as to which subcontractors will be used. Subcontractor use shall be subject to the approval of the Owner. The Contractor will be fully responsible to the Owner for the acts and omissions of subcontractors and of all persons whether directly or indirectly employed by the Contractor. Nothing in this Agreement shall create any contractual relationship between any subcontractor and the Owner. The Contractor shall not assign, transfer, convey, or otherwise dispose of this Agreement, or any part thereof, or the Contractor's right, title, or interest in same without the prior written consent of the Owner. The Contractor shall not assign any of the monies due or to become due and payable under this Agreement without prior written consent of the Owner.

SECTION 6 – OWNER'S RIGHT TO CORRECT DEFICIENCIES AND TERMINATION

6.1 If the Contractor shall neglect to perform the Work properly, or should it refuse to remedy any defects in the Work due to inferior quality or workmanship or material, or should it in any manner fail to perform any provision of this Agreement, the Owner, after seven (7) days' written notice to the Contractor, may correct such deficiencies at Contractor's cost and may deduct the cost thereof from any payment due the Contractor or terminate the Agreement. The remedy described in this section is not exclusive and shall have no effect on the Owner's ability to seek recovery for, among others, breach of contract, breach of warranty, and/or performance bond claims. If the Owner terminates this Agreement, the Contractor shall not be entitled to receive further payment until the Work is finished and determination of the sum due pursuant to this Agreement. If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid

APPENDIX A

balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of this Agreement.

6.2 Each Party shall have, in addition to all other remedies available to it, the right to terminate this Agreement immediately upon written notice to the other Party that the other Party has committed a material breach of any of its obligations herein and such material breach shall not have been cured or corrected within ten (10) days following written notice of the same. Furthermore, in addition to the rights of the Owner under this Paragraph if the Owner must regularly request that the Contractor to cure breaches of this Agreement, such circumstances shall be grounds for termination of this Agreement for cause, even if each breach on its own would not be material.

6.3 Upon termination of this Agreement by the Owner for breach or default of the Contractor, the Owner shall be entitled to exercise any other right, remedy or privilege which may be available to it under applicable law or proceed by appropriate court action to enforce the terms of this Agreement or to recover damages for the breach of this Agreement. If this Agreement is terminated in accordance with any of the provisions contained herein, all rights of the Contractor under this Agreement shall cease. Regardless of the basis for termination, the Owner shall neither be liable to, nor obligated to pay, the Contractor for any incidental or consequential damages or lost profits, or costs incurred for Work not actually performed.

SECTION 7 – TIME FOR PERFORMANCE

7.1 Time is of the essence of this Agreement. The Contractor acknowledges and agrees that the performance of Services shall commence on or before _____ and shall be finally and sufficiently completed on or before _____. For any alleged delay in performance caused by the Owner, the Contractor's sole remedy shall be an extension in the deadline for performance.

SECTION 8 – ALTERNATIVE DISPUTE RESOLUTION

8.1 Within ten (10) business days of receipt of a written notice of claim, the Parties to a claim shall attempt in good faith to resolve it promptly by escalating the claim to persons who have authority to settle the controversy and who are at a higher level of management than the persons with direct responsibility for administration of this Agreement (Negotiation). If the Parties agree on the method of resolving such claim, such method shall be embodied in a written agreement signed by the Owner and the Contractor. Any claim, dispute, or other matter in question arising out of or related to this Agreement and not resolved by Negotiation shall be subject to Alternative Dispute Resolution (ADR) as a condition precedent to binding dispute resolution, pursuant to Section 8.1. On those occasions when Negotiation does not resolve the claim, the Parties to this Agreement shall be compelled to seek an alternative means of resolving the dispute as a condition precedent to litigation. Therefore, the Parties agree to the following terms and conditions:

- (a) The Parties shall designate, by mutual agreement, an independent mediator who shall convene a meeting of the Parties within a period of fourteen (14) days of the later of the initial meeting between the Parties or the date notice was given pursuant to Section 8.1. The mediator shall render his/her decision within fourteen (14) days of said meeting;
- (b) The purpose of the mediation is to attempt to resolve the dispute between the Parties. The mediator shall not be empowered with the authority to render a binding opinion or award; the confidentiality of mediation shall be governed by the Michigan Court Rules and the Michigan Rules of Evidence;
- (c) In the event the independent mediator's attempt to resolve the dispute between the Parties fails, then each Party will be free to pursue recovery of claims at law;
- (d) During the pendency of this alternative dispute resolution process, the Parties agree that the statute(s) of limitations applicable to all claims that are the subject of this process shall be tolled;
- (e) Should a Party's claim also concern claims against or by the Technology Designer then Owner may include the Technology Designer in the alternative dispute resolution process; and
- (f) Contractor shall continue providing all services during any dispute, including during the alternative dispute resolution process.

APPENDIX A

8.2 The Parties shall share the mediator's fee. The Alternative Dispute Resolution shall be held in the place where the Owner is located, as indicated on page one of this Agreement, unless another location is mutually agreed upon.

SECTION 9 -- MISCELLANEOUS

9.1 Neither Party shall assign this Agreement nor its rights and duties hereunder nor any interest herein without prior written consent from the other.

9.2 This Agreement constitutes the entire agreement between the Parties regarding its subject matter and supersedes any prior or contemporaneous understandings or agreements with respect to the Services contemplated.

9.3 None of the terms and provisions of this Agreement may be modified or amended in any way except by written amendment, change order, or construction change directive.

9.4 Failure by either Party at any time to require performance by the other Party or to claim breach of any provision of this Agreement shall not be construed as a waiver of any subsequent breach nor affect the validity and operation of this Agreement, nor prejudice either Party with regard to any subsequent action to enforce the terms of this Agreement.

9.5 This Agreement shall be interpreted and enforced under the laws of the State of Michigan. The Parties hereby agree to the exclusive jurisdiction and venue of courts sitting in Wayne County, Michigan.

9.6 If any provision of this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this Agreement shall not in any way be affected, impaired or prejudiced thereby.

9.7 The Contractor assumes all risk of loss or damage to the equipment prior to acceptance. Title to the equipment will pass at that time.

9.8 This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which constitute one and the same agreement.

9.9 As a part of its services, the Contractor shall conduct a post-occupancy audit at eleven (11) and twenty three (23) months following the Date of Substantial Completion and thereafter provide call-back services for a period of twenty four (24) months following the Date of Substantial Completion.

9.10 Notwithstanding any provisions within the Contract Documents, nothing shall be deemed a waiver of any immunity granted to Owner by law or statute, including but not necessarily limited to, governmental immunity under MCL 691.1407.

9.10.1 It is hereby understood and agreed that no product and/or material containing asbestos including chrysolite, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any combination of these materials that have been chemically treated and/or altered shall be installed or introduced into the Work by the Contractor or its employees, agents, subcontractors, or other individuals or entities over whom the Contractor has control. If applicable, the Contractor shall be required to provide a signed certification statement ensuring that all products or materials installed or introduced into the Work will be asbestos-free.

9.10.2 The Contractor also shall be required to furnish certified statements from the manufacturers of supplied materials used during construction verifying their products to be asbestos-free in accordance with the requirements of Section 9.10.1.

9.10.3 The Contractor shall complete and submit to the Owner a certification evidencing asbestos-free product installation prior to issuance of the final Certificate for Payment in a form acceptable to Owner.

APPENDIX A

SECTION 10 – AUTHORIZATION

10.1 This Agreement has been duly authorized, executed and delivered by the Parties and constitutes a legal, valid and binding obligation upon each of them, enforceable in accordance with its terms. Each person placing his/her signature below represents and warrants that he/she is the signatory duly authorized to execute this Agreement on behalf of the Owner or Contractor, as is respectively applicable.

SOUTHFIELD PUBLIC SCHOOLS

By: _____

By: _____

Print: _____

Print: _____

Its: _____

Its: _____

Date: _____

Date: _____

221721812.2 21979/313082

APPENDIX A

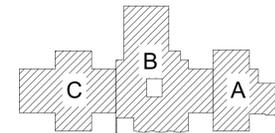
EXHIBIT A

CONTRACTOR'S BID

APPENDIX A

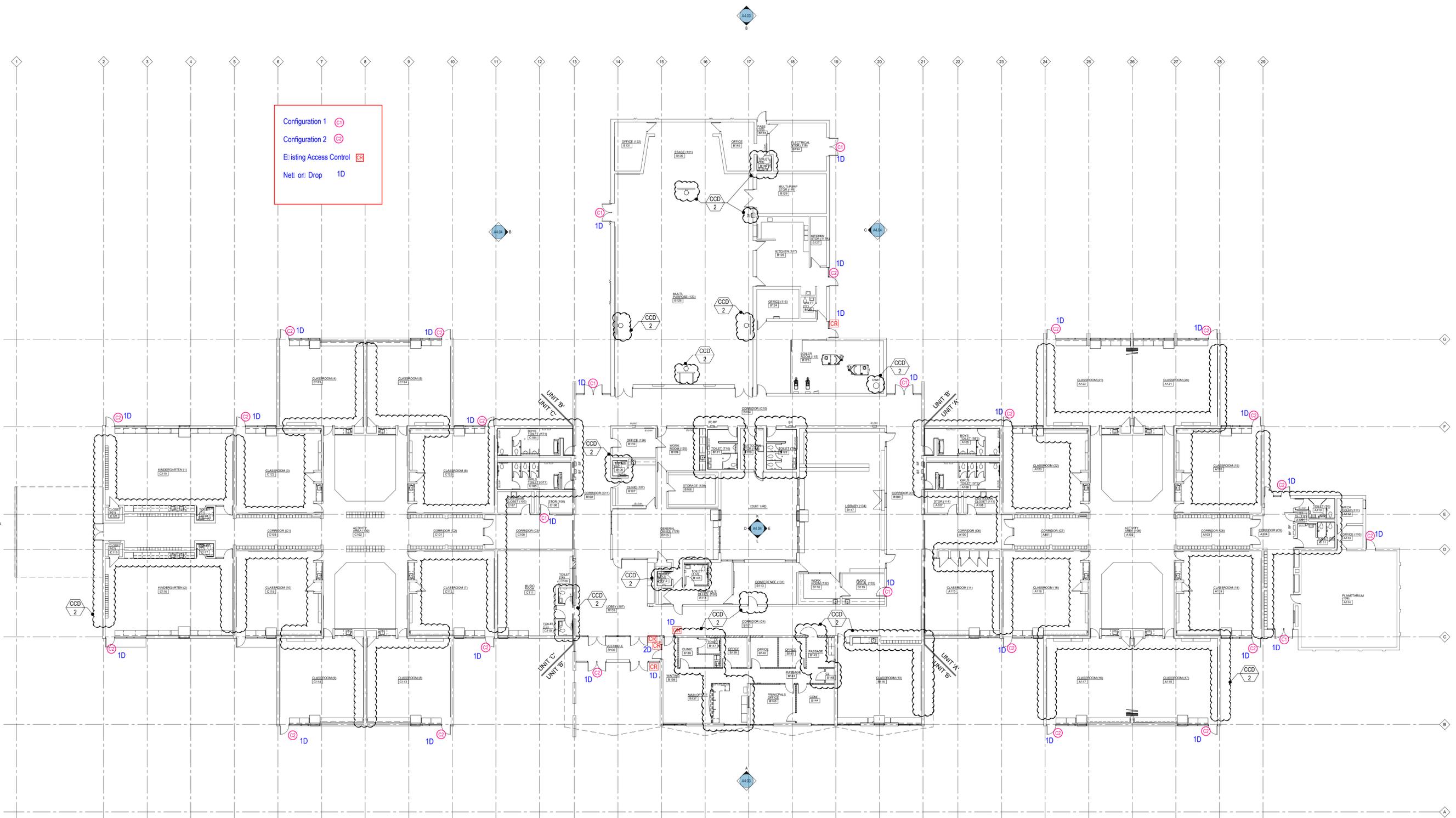
EXHIBIT B

CONTRACTOR'S CERTIFICATE OF INSURANCE



APPENDIX B

- Configuration 1 (C1)
- Configuration 2 (C2)
- Existing Access Control (CA)
- Net(s) or Drop (1D)



PROJECT
 Southfield Public Schools
 Moris Adler ES
 Renovations

Southfield,
 Michigan

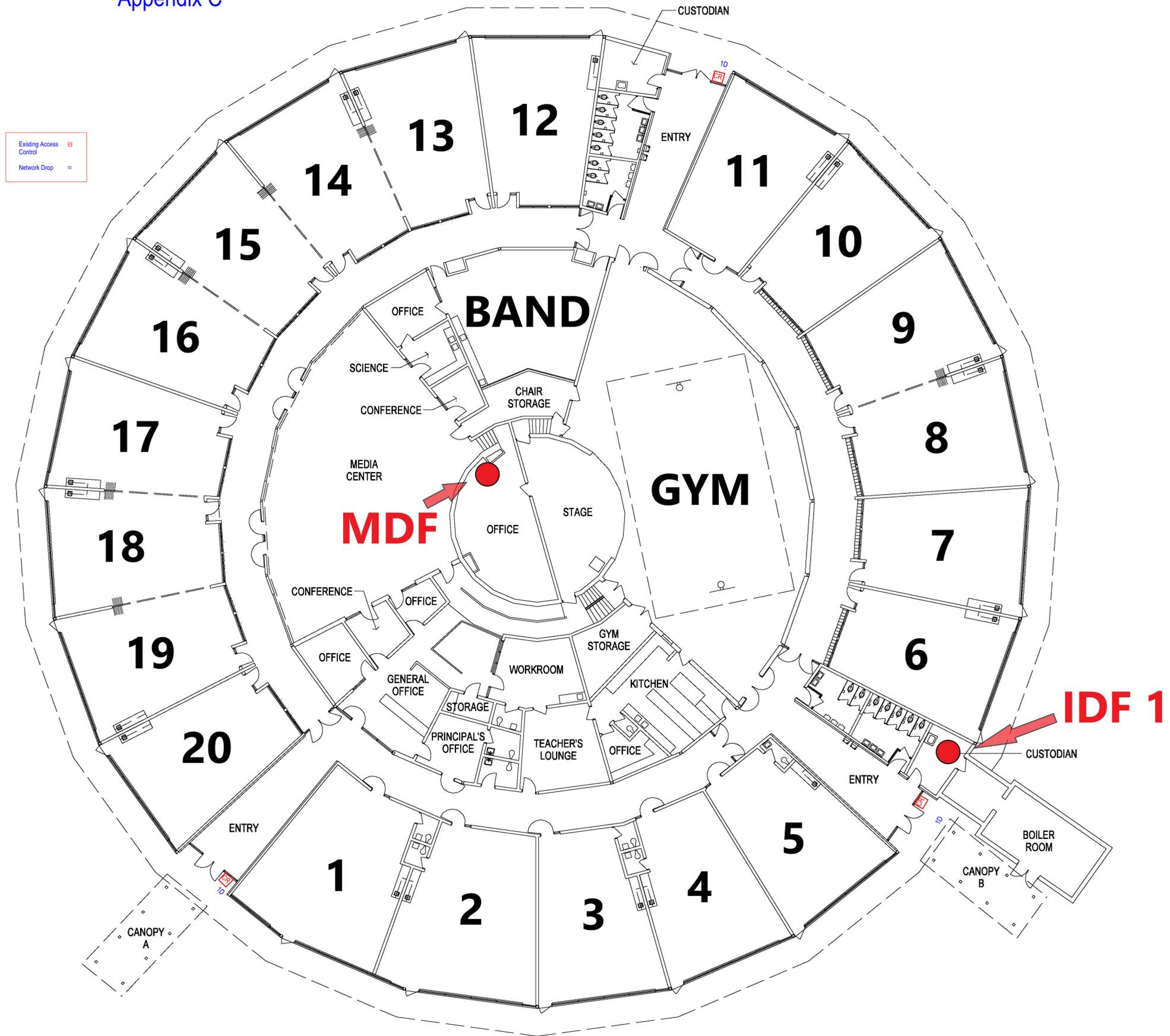
SHEET
 Composite
 Floor Plan

PROJECT NUMBER
 2023-019

SHEET NUMBER
 A2.10

COMPOSITE FLOOR PLAN
 SCALE: 1/16" = 1'-0"

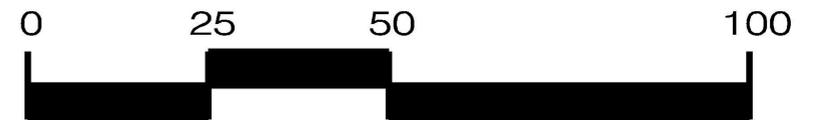
Appendix C



Bussey Center

47,760 sq.ft.

November 2, 2007



Existing Access Control

CR

Network Drop

1D

- MDF
- IDF1
- IDF2

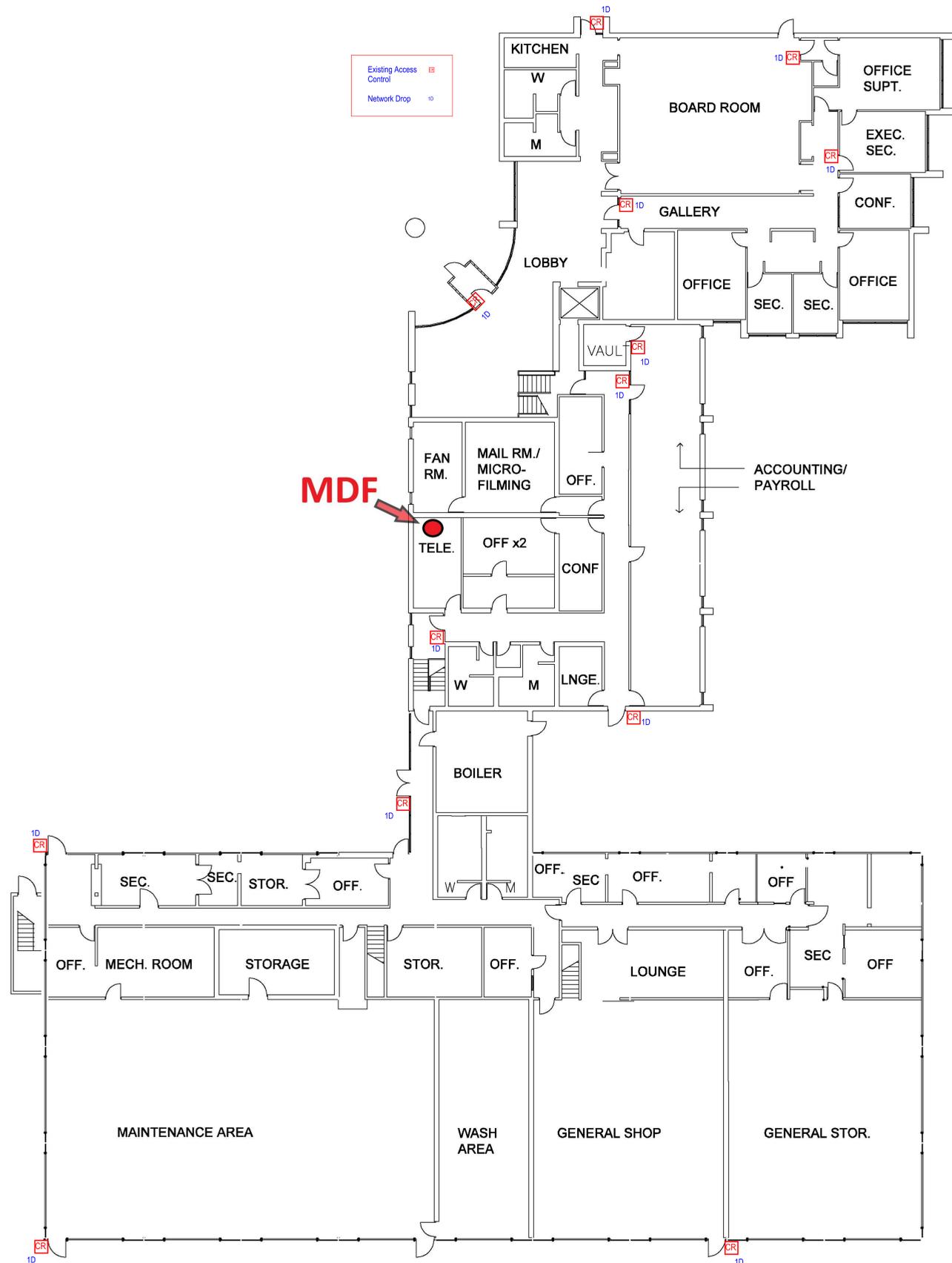


Eisenhower Elementary School

54,780 sq. ft.

November 2, 2007

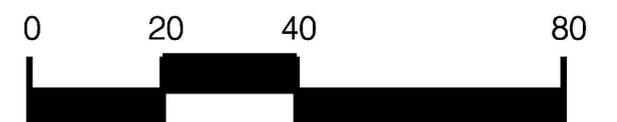




First Floor



JWE Building
24,874 sq.ft.
November 8, 2007

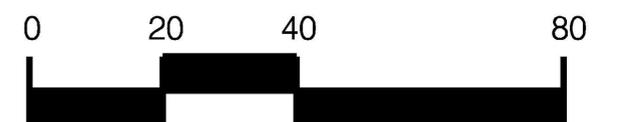




Second Floor



JWE Building
 4,144 sq.ft.
 November 8, 2007

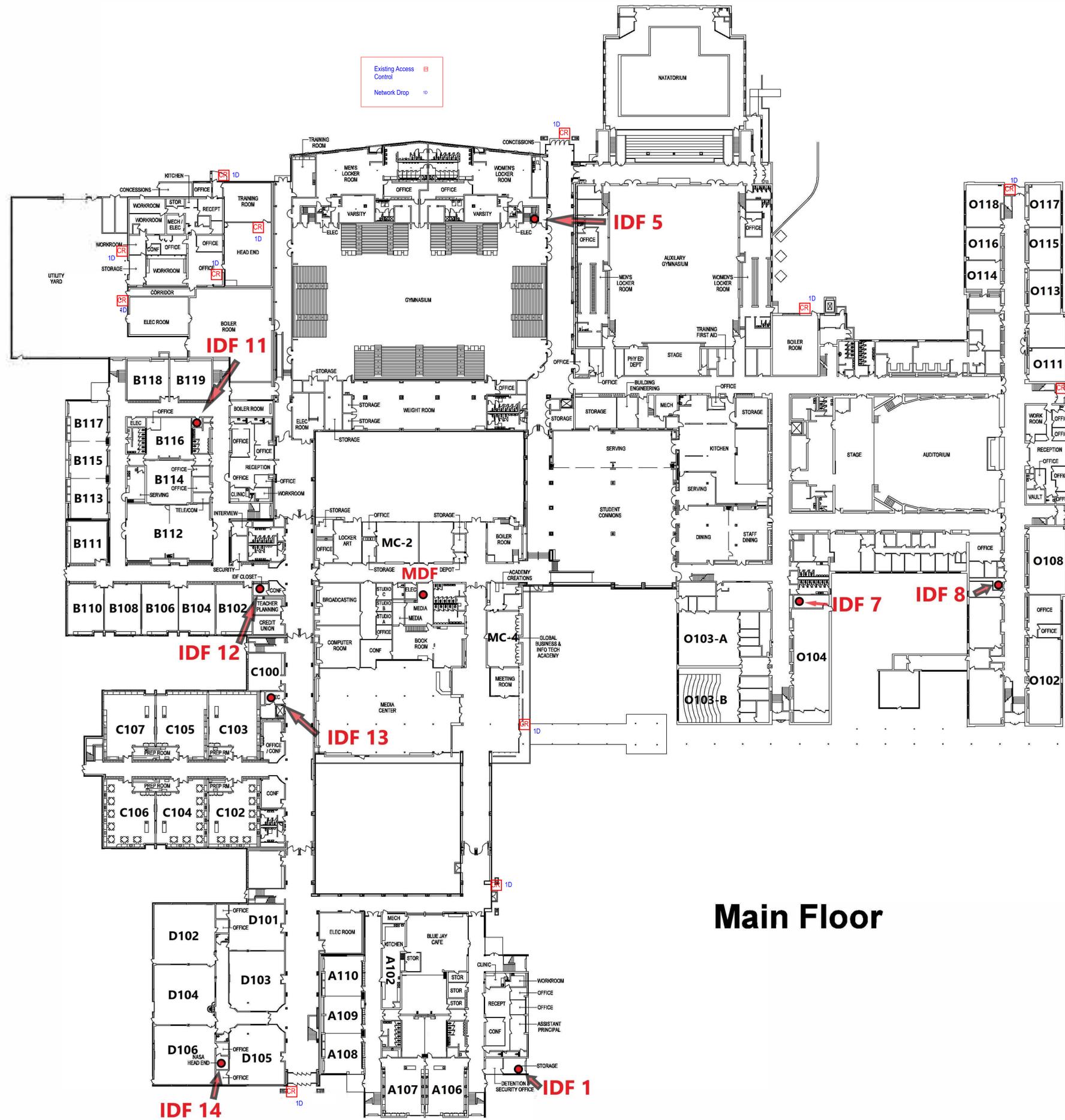


Existing Access Control CR
 Network Drop 1D

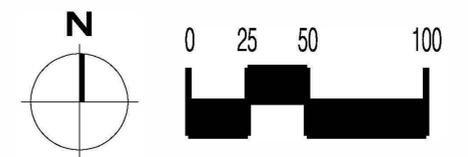


Kennedy Elementary School
 65,340 sq.ft.
 November 2, 2007





Southfield High School
113,581 sq.ft.



APPENDIX D

Hardware Group No. 01

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|---------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 | | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 | | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC | | ⚡ 630 | LOC |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | | 689 | LCN |
| 1 | EA | WALL STOP | WS33(X) | | 626 | IVE |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC | | ⚡ BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 02

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|---------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 | | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 | | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC | | ⚡ 630 | LOC |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S | | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC | | ⚡ BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 03

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|---------------------|----------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-EO |  ⚡ | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S |  | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 04

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|---------------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY |  | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO |  | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 |  | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC |  ⚡ | 630 | LOC |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S |  | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 05

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|-------------------|---------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4854B STAB | | 689 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | | 626 | VON |
| 2 | EA | MORTISE CYLINDER | 20-002 | | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 | | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC | | ⚡ 630 | LOC |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S | | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | | 689 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA | | BK | ZER |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC | | ⚡ BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 06

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|---------------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | STOREROOM LOCK | L9080P6 LLL 03A L283-150 | | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6400 FSE LM 12/24 VAC/VDC | | ⚡ 630 | VON |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP & HOLDER | 100H | | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC | | ⚡ BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 07

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|---------------------|---------------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-EO |  ⚡ | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S |  | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC |  ⚡ | BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 08

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|------------------------------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY |  | 628 | IVE |
| 1 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 2 | EA | SURFACE BOLT | SB453 8" TB |  | 652 | IVE |
| 1 | EA | STOREROOM LOCK | L9080P6 LLL 03A L283-150 |  | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6223 FSE DS 12/16/24/28 VAC/VDC |  ⚡ | 630 | VON |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 2 | EA | OH STOP & HOLDER | 100H |  | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI |  | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 2 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC |  ⚡ | BLK | SCE |
| 2 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 09

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|--------------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | STOREROOM LOCK | L9080P6 LLL 03A L283-150 | | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP & HOLDER | 100H | | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC | | ⚡ BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

SEE INACTIVE LEAF

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 10

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|------------------|------------------------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY TWP | | ⚡ 628 | IVE |
| 2 | EA | SURFACE BOLT | SB453 8" TB | | 652 | IVE |
| 1 | EA | ELECTRIC STRIKE | 6223 FSE DS 12/16/24/28 VAC/VDC | | ⚡ 630 | VON |
| 1 | EA | OH STOP & HOLDER | 100H | | 630 | GLY |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

SEE ACTIVE LEAF

Hardware Group No. 11

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|----------------------|---------------------|---|--------|-----|
| 2 | EA | CONT. HINGE | 112XY |  | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4854B |  | 689 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO |  | 626 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD |  | 626 | VON |
| 3 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 |  | 626 | SCH |
| 2 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC |  | ⚡ 630 | LOC |
| 2 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S |  | 630 | GLY |
| 1 | EA | OH STOP | 100SE |  | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | EA | SURF. AUTO OPERATOR | 4642 WMS 120 VAC |  | ⚡ 689 | LCN |
| 1 | EA | WEATHER RING | 8310-801 |  | PLA | LCN |
| 2 | EA | ACTUATOR, WALL MOUNT | 8310-853T |  | ⚡ 630 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA |  | BK | ZER |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 2 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC |  | ⚡ BLK | SCE |
| 2 | EA | DOOR CONTACT | 679-05 |  | ⚡ BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 12

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|----------------------|---------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 | | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 | | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC | | ⚡ 630 | LOC |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100SE | | 630 | GLY |
| 1 | EA | SURF. AUTO OPERATOR | 4642 WMS 120 VAC | | ⚡ 689 | LCN |
| 1 | EA | WEATHER RING | 8310-801 | | PLA | LCN |
| 2 | EA | ACTUATOR, WALL MOUNT | 8310-853T | | ⚡ 630 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC | | ⚡ BLK | SCE |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 13

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|----------------------|---------------------------|--|--------|-----|
| 1 | EA | CONT. HINGE | 112XY | | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 | | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 | | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC | | ⚡ 630 | LOC |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100SE | | 630 | GLY |
| 1 | EA | SURF. AUTO OPERATOR | 4642 WMS 120 VAC | | ⚡ 689 | LCN |
| 1 | EA | WEATHER RING | 8310-801 | | PLA | LCN |
| 2 | EA | ACTUATOR, WALL MOUNT | 8310-853T | | ⚡ 630 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | | A | ZER |
| 1 | EA | DOOR CONTACT | 679-05 | | ⚡ BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | | ⚡ | VON |
| 1 | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | | |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 14

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|---------------------|------------------------|---|--------|-----|
| 2 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4954 STAB |  | 689 | VON |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-EO |  ⚡ | 626 | VON |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-NL-OP-110MD |  ⚡ | 626 | VON |
| 3 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 |  | 626 | SCH |
| 2 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 2 | EA | OH STOP | 100S |  | 630 | GLY |
| 2 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA |  | BK | ZER |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 2 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 2 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 15

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|---------------------|------------------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4954 STAB |  | 689 | VON |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-NL-OP-110MD |  ⚡ | 626 | VON |
| 2 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 |  | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | OH STOP | 100S |  | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA |  | BK | ZER |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 16

EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|---------------------|----------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-EO |  ⚡ | 626 | VON |
| 1 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | EA | WALL STOP | WS33X |  | 626 | IVE |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 1 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

Hardware Group No. 17

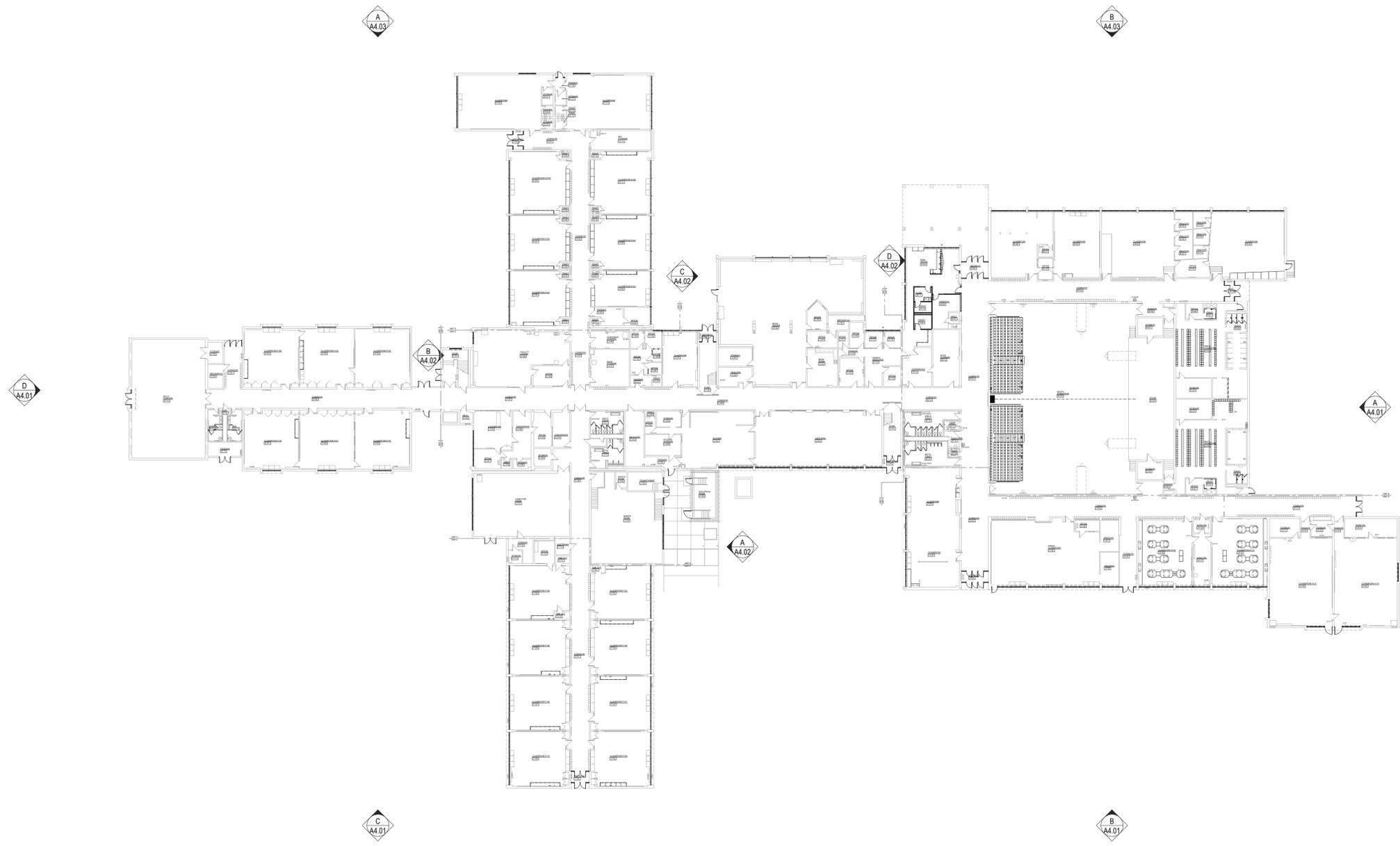
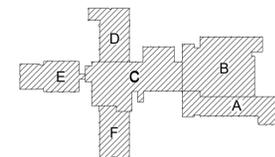
EACH TO HAVE:

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|-----|-----|---------------------|---------------------|---|--------|-----|
| 1 | EA | CONT. HINGE | 112XY |  | 628 | IVE |
| 1 | EA | CONT. HINGE | 112XY TWP |  ⚡ | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4854B STAB |  | 689 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD |  | 626 | VON |
| 1 | EA | ELEC PANIC HARDWARE | CDSI-RX-98-EO |  ⚡ | 626 | VON |
| 3 | EA | MORTISE CYLINDER | 20-002 |  | 626 | SCH |
| 1 | EA | RIM CYLINDER | 20-057 |  | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | RS300-LBM 12/24 VDC |  ⚡ | 630 | LOC |
| 2 | EA | RECESSED PULL | (BY DOOR MFR) | | | |
| 2 | EA | OH STOP | 100S |  | 630 | GLY |
| 2 | EA | SURFACE CLOSER | 4111 EDA MC |  | 689 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA |  | BK | ZER |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | | |
| 2 | EA | DOOR SWEEP | 39A |  | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 |  | A | ZER |
| 1 | EA | MULTITECH READER | MTB11/15 5VDC-28VDC |  ⚡ | BLK | SCE |
| 2 | EA | DOOR CONTACT | 679-05 |  ⚡ | BLK | SCE |

PRESENTING AN AUTHORIZED CREDENTIAL WILL ENERGIZE THE ELECTRIC STRIKE TO ALLOW ACCESS. FREE EGRESS IS ALWAYS ALLOWED.

COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT AND ALL RELATED TRADES.

END OF SECTION



PROJECT
**Birney K-8
 Renovations
 BP17**
 Southfield Public Schools
 Southfield,
 Michigan

SHEET
**Composite
 First Floor Plan**

PROJECT NUMBER
2023-089.2

SHEET NUMBER
A2.10

 **COMPOSITE FIRST FLOOR PLAN**
 SCALE: 1/32" = 1'-0"

DOOR SCHEDULE - UNIT F

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN./ LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| F100A | 3'-0" x 7'-0" | N | FRP | PREF | WS | ALUM | PREF | A | B | 03 | - | EX | 1 |
| F100B | 3'-0" x 7'-0" | N | FRP | PREF | WS | ALUM | PREF | A | B | 02 | - | EX | - |
| F101A | 3'-0" x 7'-0" | N | FRP | PREF | WS | ALUM | PREF | A | B | 18 | - | EX | - |
| F101B | 3'-0" x 7'-0" | N | FRP | PREF | WS | ALUM | PREF | A | B | 18 | - | EX | - |

DOOR SCHEDULE - UNIT A

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN./ LABEL | LINTEL MAT. | REMARKS |
|----------|----------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| A100A | 3'-0" x 7'-0" | N | FRP | PREF | W9 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| A100B | 3'-0" x 7'-0" | N | FRP | PREF | W9 | ALUM | PREF | A | B | TBD | - | EX | - |
| A100C | 3'-0" x 7'-0" | N | FRP | PREF | W9 | ALUM | PREF | A | B | TBD | - | EX | - |
| A101A | 3'-0" x 7'-0" | N | FRP | PREF | W9 | ALUM | PREF | A | B | TBD | - | EX | - |
| A101B | 3'-0" x 7'-0" | N | FRP | PREF | W9 | ALUM | PREF | A | B | TBD | - | EX | - |
| A101C | 3'-0" x 7'-0" | N | FRP | PREF | W9 | ALUM | PREF | A | B | TBD | - | EX | - |
| A105 | 3'-0" x 7'-0" | FG | FRP | PREF | W13 | ALUM | PREF | A | B | 07 | - | EX | 1, 3, 4 |
| A109A | 2'-10" x 7'-0" | F | FRP | PREF | W8 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| A109B | 2'-10" x 7'-0" | F | FRP | PREF | W8 | ALUM | PREF | A | B | TBD | - | EX | - |
| A114A | 3'-0" x 7'-0" | N | FRP | PREF | W10 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| A114B | 3'-0" x 7'-0" | N | FRP | PREF | W10 | ALUM | PREF | A | B | TBD | - | EX | - |
| A116A | 4'-0" x 7'-0" | F | FRP | PREF | W12 | ALUM | PREF | - | - | TBD | - | EX | 3, 4 |
| A120A | 4'-0" x 7'-0" | F | FRP | PREF | W12 | ALUM | PREF | - | - | TBD | - | EX | 3, 4 |

DOOR SCHEDULE - UNIT B

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN./ LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| B100A | 3'-0" x 7'-0" | N | FRP | PREF | W1 | ALUM | PREF | A | B | 12 | - | EX | 1, 2, 6 |
| B100A | 3'-0" x 7'-0" | N | FRP | PREF | W1 | ALUM | PREF | A | B | 19 | - | EX | 6 |
| B100B | 3'-0" x 7'-0" | N | FRP | PREF | W1 | ALUM | PREF | A | B | 04 | - | EX | 6 |
| B100B | 3'-0" x 7'-0" | N | FRP | PREF | W1 | ALUM | PREF | A | B | 20 | - | EX | 6 |
| B100C | 3'-0" x 7'-0" | N | FRP | PREF | W1 | ALUM | PREF | A | B | 20 | - | EX | 6 |
| B100C | 3'-0" x 7'-0" | N | FRP | PREF | W1 | ALUM | PREF | A | B | 04 | - | EX | 6 |
| B102A | 3'-0" x 7'-0" | N | FRP | PREF | W10 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| B102B | 3'-0" x 7'-0" | N | FRP | PREF | W10 | ALUM | PREF | A | B | TBD | - | EX | - |
| B103A | 3'-0" x 7'-0" | G | WD | PREF | EX | EX | PTD | - | - | TBD | 45 | EX | - |
| B103B | 3'-0" x 7'-0" | G | WD | PREF | - | - | PTD | - | - | TBD | 45 | EX | - |
| B132B | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 07 | - | EX | 3, 4 |
| B133A | 3'-0" x 7'-0" | N | FRP | PREF | W10 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| B133B | 3'-0" x 7'-0" | N | FRP | PREF | W10 | ALUM | PREF | A | B | TBD | - | EX | - |
| B140 | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |

DOOR SCHEDULE - UNIT C

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN./ LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| C101A | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 18 | - | EX | - |
| C101B | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 18 | - | EX | - |
| C102A | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| C102B | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 02 | - | EX | - |
| C109A | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| C122C | 3'-0" x 7'-0" | F | FRP | PREF | W7 | ALUM | PREF | A | B | 07 | - | EX | 1 |
| C129A | 3'-0" x 7'-0" | N | FRP | PREF | W11 | ALUM | PREF | A | B | 02 | - | EX | - |
| C129B | 3'-0" x 7'-0" | N | FRP | PREF | W11 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| C130A | 3'-0" x 7'-0" | N | FRP | PREF | W11 | ALUM | PREF | A | B | 18 | - | EX | - |
| C130B | 3'-0" x 7'-0" | N | FRP | PREF | W11 | ALUM | PREF | A | B | 18 | - | EX | - |
| C141C | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | - |
| C141D | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| C151C | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | 3, 4 |
| C151D | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 15 | - | EX | - |
| C152B | 3'-0" x 7'-0" | F | FRP | PREF | W15 | ALUM | PREF | A | B | 06 | - | EX | 1 |
| C153A | 3'-0" x 7'-0" | F | FRP | PREF | W15 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| C155A | 3'-0" x 7'-0" | F | FRP | PREF | W14 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| C155B | 4'-0" x 7'-0" | F | FRP | PREF | W14 | ALUM | PREF | A | B | 03 | - | EX | - |

DOOR SCHEDULE - UNIT D

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN./ LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| D101A | 3'-0" x 7'-0" | N | FRP | PREF | W5 | ALUM | PREF | A | B | 18 | - | EX | - |
| D101B | 3'-0" x 7'-0" | N | FRP | PREF | W5 | ALUM | PREF | A | B | 18 | - | EX | - |
| D102A | 3'-0" x 7'-0" | N | FRP | PREF | W5 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| D102B | 3'-0" x 7'-0" | N | FRP | PREF | W5 | ALUM | PREF | A | B | 02 | - | EX | - |
| D116A | 3'-0" x 7'-0" | F | FRP | PREF | W4 | ALUM | PREF | A | B | 02 | - | EX | 1 |

DOOR SCHEDULE - UNIT E

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN./ LABEL | LINTEL MAT. | REMARKS |
|----------|----------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| E100A | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | - |
| E100B | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| E100C | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| E101A | 3'-0" x 7'-0" | N | FRP | PREF | W3 | ALUM | PREF | A | B | 02 | - | EX | - |
| E101B | 3'-0" x 7'-0" | N | FRP | PREF | W3 | ALUM | PREF | A | B | 03 | - | EX | - |
| E101C | 3'-0" x 7'-0" | N | FRP | PREF | W3 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| E113C | 3'-0" x 7'-0" | F | FRP | PREF | W6 | ALUM | PREF | A | B | 03 | - | EX | 3, 4 |
| E113D | 3'-0" x 7'-0" | F | FRP | PREF | W6 | ALUM | PREF | A | B | 07 | - | EX | - |
| E114A | 2'-11" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 10 | - | EX | 5 |
| E114B | 2'-11" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 09 | - | EX | 5 |

KEY PLAN

PROJECT

**Birney K-8
Renovations
BP17
Southfield Public Schools**
Southfield,
Michigan

SHEET

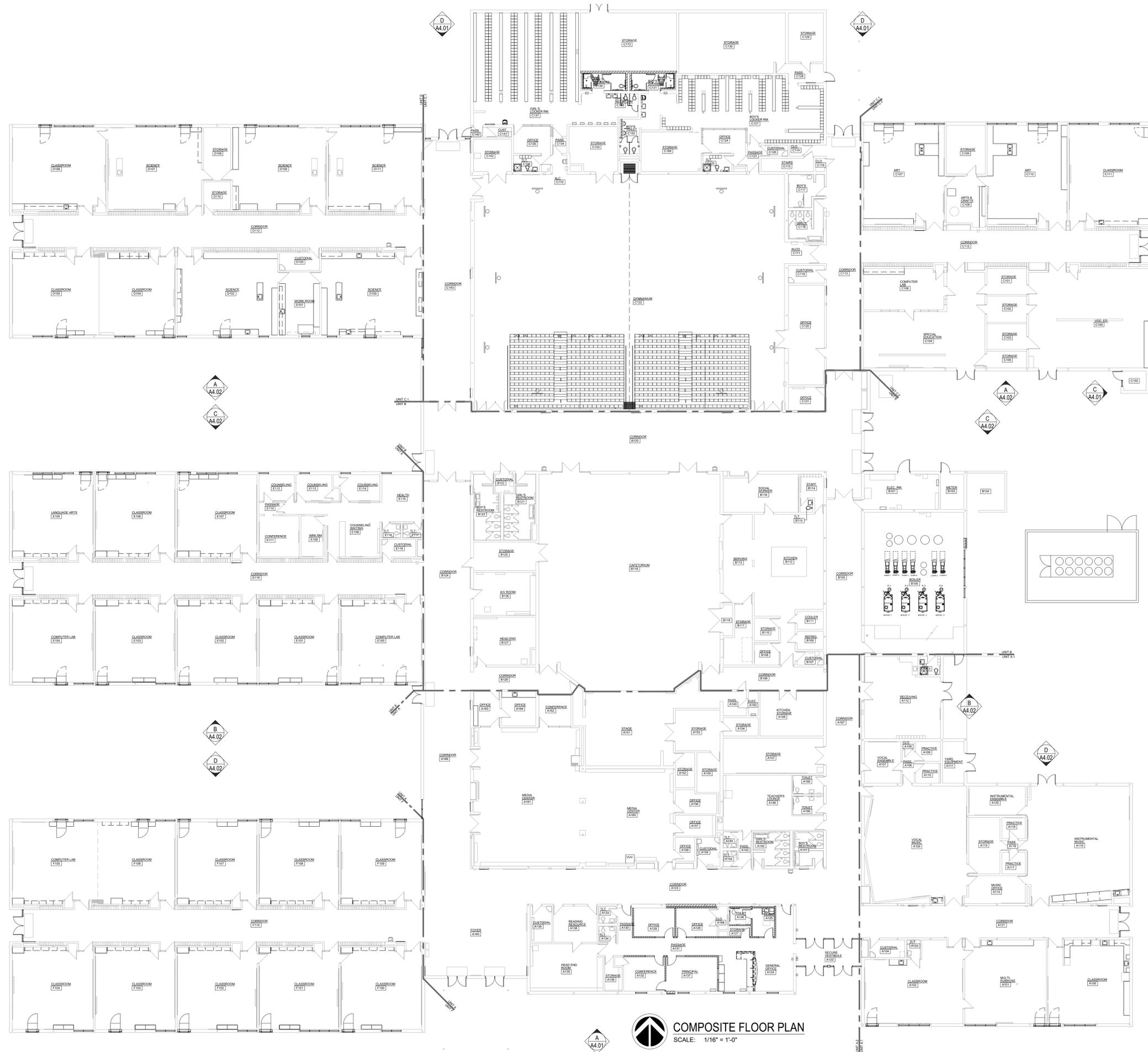
**Door Schedules
and Information**

PROJECT NUMBER

2023-089.2

SHEET NUMBER

A3.01A



E
A4.01

A
A4.02

C
A4.02

B
A4.02

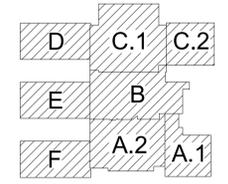
D
A4.02

A
A4.01



COMPOSITE FLOOR PLAN
SCALE: 1/16" = 1'-0"

KEY PLAN



PROJECT
Levey Middle School
Renovations
BP18
Southfield Public Schools
Southfield
Michigan

SHEET
Composite
Floor Plan

PROJECT NUMBER
2023-091.3

SHEET NUMBER
A2.10

2023-091.3 SOUTHFIELD PUBLIC SCHOOLS LEVEY MIDDLE SCHOOL EXTERIOR DOORS AND WINDOWS BP18

DOOR SCHEDULE GENERAL NOTES

- A. SEE SHEET A0.01 FOR ABBREVIATIONS.
- B. NOT ALL DOOR STYLES ARE USED. REFER TO DOOR SCHEDULE.
- C. NOT ALL FRAME STYLES ARE USED. REFER TO DOOR SCHEDULE.
- D. REFER TO THE GLAZING SCHEDULE IN THE SPECIFICATIONS FOR THE GLAZING TYPES
- E. FRAME DETAILS ARE NOTED ON SHEET A3.02 UNLESS NOTED OTHERWISE.
- F. DOOR UNDERCUTS FOR MECHANICAL REQUIREMENTS ARE LIMITED TO 5/8" MAX. CLEAR DISTANCE MEASURED FROM THE TOP OF THE FINISHED FLOOR MATERIAL OR THRESHOLD TO THE BOTTOM EDGE OF THE DOOR. STANDARD TOLERANCES OF UNDERCUTTING OF DOORS FOR THRESHOLDS AND OTHER FLOOR COVERING MATERIALS ARE NOT NOTED AND MUST BE CONSIDERED IN DETERMINING THE ACTUAL OVERALL HEIGHT OF THE DOOR. COORDINATE WITH AFFECTED TRADES.
- G. FIRE RATED DOORS AND FRAMES ARE LISTED IN MINUTES.
- H. ALL FIRE RATED HOLLOW METAL DOOR FRAMES SHALL BE CEMENT GROUTED SOLID UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE CAVITY LOCATIONS FOR SCHEDULED HARDWARE.
- I. ALL WOOD DOORS SHALL BE SOLID CORE.
- J. MANUFACTURE'S NOTE: FOR WOOD DOORS WITH MORTISE LOCKS - PROVIDE THE MINIMUM SIZE STILL AVAILABLE WHILE MAINTAINING WARRANTY
- K. VERIFY SIZE OF EXISTING DOOR AND FRAME IN FIELD PRIOR TO FABRICATION. MATCH EXISTING DOOR SIZE. EXISTING FRAME TO REMAIN.
- L. REMOVE EXISTING DOOR HARDWARE AND DOOR SLAB. EXISTING FRAME TO REMAIN. SEE DOOR HARDWARE SPECIFICATIONS.
- M. PAINT EXISTING DOOR FRAME P1SG-B BOTH SIDES.

DOOR SCHEDULE REMARKS

1. ACCESS CONTROL
2. ADA OPERATOR
3. DOOR POSITION SENSOR (DPS)
4. REQUEST TO EXIT DEVICE (RX)
5. TBD, COORDINATE WITH TECHNOLOGY
6. REMOTE LOCK/UNLOCK
7. RIGHT HAND LEAF

DOOR SCHEDULE - UNIT A.1/A.2

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS | | |
|----------|------------------|------|------|------|-------|------|------|----------|-------------|-------------|---------|--------|--------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | | | | | JAMB * | HEAD * |
| A111 | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 5 |
| A112B | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| A119B | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 3,4,7 |
| A121A | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | - | - | TBD | - | EX | - |
| A121B | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | - | - | TBD | - | EX | - |
| A122A | 3'-0" x 7'-0" | FG | FRP | PREF | W3 | ALUM | PREF | - | - | TBD | - | STL | - |
| A122B | 3'-0" x 7'-0" | FG | FRP | PREF | W3 | ALUM | PREF | - | - | TBD | - | STL | - |
| A122C | 3'-0" x 7'-0" | FG | FRP | PREF | W3 | ALUM | PREF | - | - | TBD | - | STL | - |
| A122D | 3'-0" x 7'-0" | FG | FRP | PREF | W3 | ALUM | PREF | - | - | TBD | - | STL | - |
| A122E | 3'-0" x 7'-0" | FG | FRP | PREF | W3A | ALUM | PREF | - | - | TBD | - | STL | - |
| A122F | 3'-0" x 7'-0" | FG | FRP | PREF | W3A | ALUM | PREF | - | - | TBD | - | STL | - |
| A122G | 3'-0" x 7'-0" | FG | FRP | PREF | W3A | ALUM | PREF | - | - | TBD | - | STL | - |
| A122H | 3'-0" x 7'-0" | FG | FRP | PREF | W3A | ALUM | PREF | - | - | TBD | - | STL | - |
| A124A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A125A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A126A | 3'-0" x 7'-0" | F | WD | WD1 | 1 | HM | PTD | C | D | TBD | - | MSF | - |
| A127A | 3'-0" x 7'-0" | F | WD | WD1 | 1 | HM | PTD | C | D | TBD | - | MSF | - |
| A128A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A128A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A128A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A128A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A130A | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | TBD | 45 | STL | - |
| A132A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A132B | 3'-0" x 7'-0" | B | WD | WD1 | 1 | HM | PTD | C | D | TBD | - | MSF | - |
| A137A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | C | D | TBD | - | MSF | - |
| A140A | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | - | - | TBD | - | EX | 6 |
| A140B | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | - | - | TBD | - | EX | 6 |
| A140C | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | - | - | TBD | - | EX | 6 |
| A140D | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | - | - | TBD | - | EX | 1,6 |
| A168E | PR 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | - | - | TBD | - | EX | 1,7 |

DOOR SCHEDULE - UNIT B

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS | | |
|----------|------------------|------|------|------|-------|------|------|----------|-------------|-------------|---------|--------|--------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | | | | | JAMB * | HEAD * |
| B100B | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| B101B | 4'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| B103 | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| B120A | PR 3'-0" x 7'-0" | N | FRP | PREF | W6 | ALUM | PREF | A | B | TBD | - | EX | - |
| B120B | PR 3'-0" x 7'-0" | N | FRP | PREF | W6 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| B120C | PR 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | A | B | TBD | - | EX | 1,7 |

DOOR SCHEDULE - UNIT C.1/C.2

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS | | |
|----------|------------------|------|------|------|-------|------|------|----------|-------------|-------------|---------|--------|--------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | | | | | JAMB * | HEAD * |
| C100A | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 3,4 |
| C104A | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 3,4 |
| C112A | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | - | - | TBD | - | EX | - |
| C112B | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | - | - | TBD | - | EX | - |
| C113A | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| C113B | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | A | B | TBD | - | EX | - |
| C128 | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| C140 | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | TBD | - | EX | 1 |
| C143A | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | A | B | O2 | - | EX | 1 |
| C143B | 3'-0" x 7'-0" | FG | FRP | PREF | W6 | ALUM | PREF | A | B | O3 | - | EX | - |
| C150A | 3'-0" x 7'-0" | FG | FRP | PREF | W7 | ALUM | PREF | - | - | TBD | - | - | 5 |
| C172A | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | G | H | TBD | - | STL | - |

DOOR SCHEDULE - UNIT D

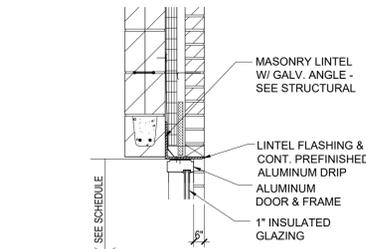
| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS | | |
|----------|---------------|------|------|------|-------|------|------|----------|-------------|-------------|---------|--------|--------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | | | | | JAMB * | HEAD * |
| D112A | 3'-0" x 7'-0" | FG | FRP | PREF | W8 | ALUM | PREF | - | - | TBD | - | EX | 1 |
| D112B | 3'-0" x 7'-0" | FG | FRP | PREF | W8 | ALUM | PREF | - | - | TBD | - | EX | - |

DOOR SCHEDULE - UNIT E

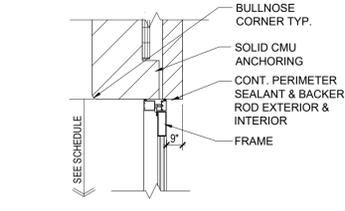
| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS | | |
|----------|---------------|------|------|------|-------|------|------|----------|-------------|-------------|---------|--------|--------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | | | | | JAMB * | HEAD * |
| E119A | 3'-0" x 7'-0" | FG | FRP | PREF | W8 | ALUM | PREF | - | - | TBD | - | EX | - |
| E119B | 3'-0" x 7'-0" | FG | FRP | PREF | W8 | ALUM | PREF | - | - | TBD | - | EX | 1 |

DOOR SCHEDULE - UNIT F

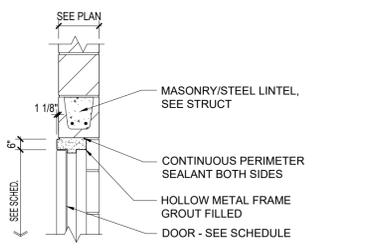
| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS | | |
|----------|---------------|------|------|------|-------|------|------|----------|-------------|-------------|---------|--------|--------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | | | | | JAMB * | HEAD * |
| F110A | 3'-0" x 7'-0" | FG | FRP | PREF | W8 | ALUM | PREF | - | - | TBD | - | EX | 1 |
| F110B | 3'-0" x 7'-0" | FG | FRP | PREF | W8 | ALUM | PREF | - | - | TBD | - | EX | - |



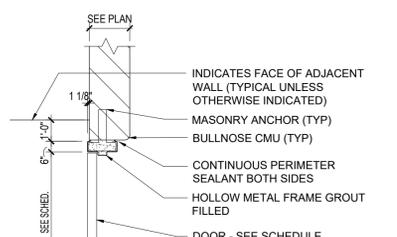
H HEAD DETAIL
SCALE: 3/4" = 1'-0"



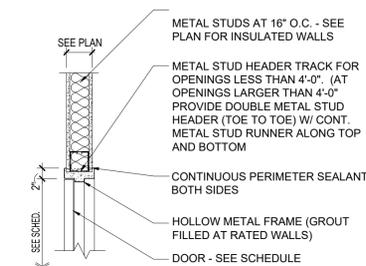
G JAMB DETAIL
SCALE: 3/4" = 1'-0"



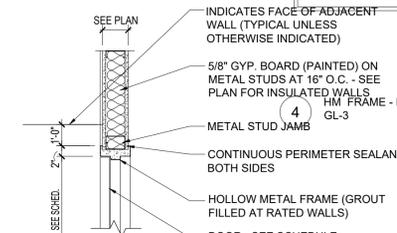
F HEAD DETAIL
SCALE: 3/4" = 1'-0"



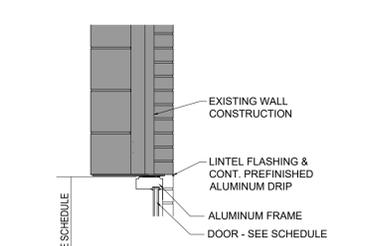
E JAMB DETAIL
SCALE: 3/4" = 1'-0"



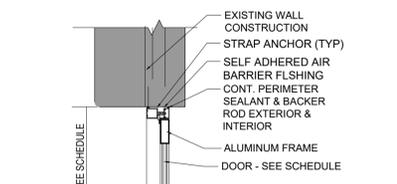
D HEAD DETAIL
SCALE: 3/4" = 1'-0"



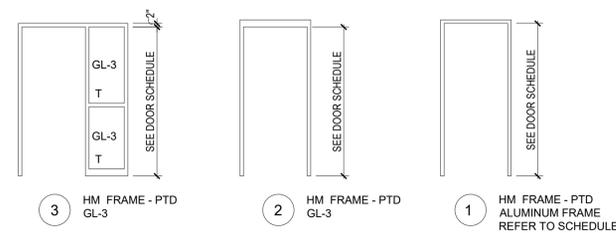
C JAMB DETAIL
SCALE: 3/4" = 1'-0"



B HEAD DETAIL
SCALE: 3/4" = 1'-0"

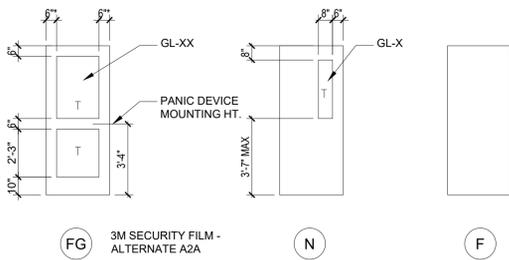


A JAMB DETAIL
SCALE: 3/4" = 1'-0"



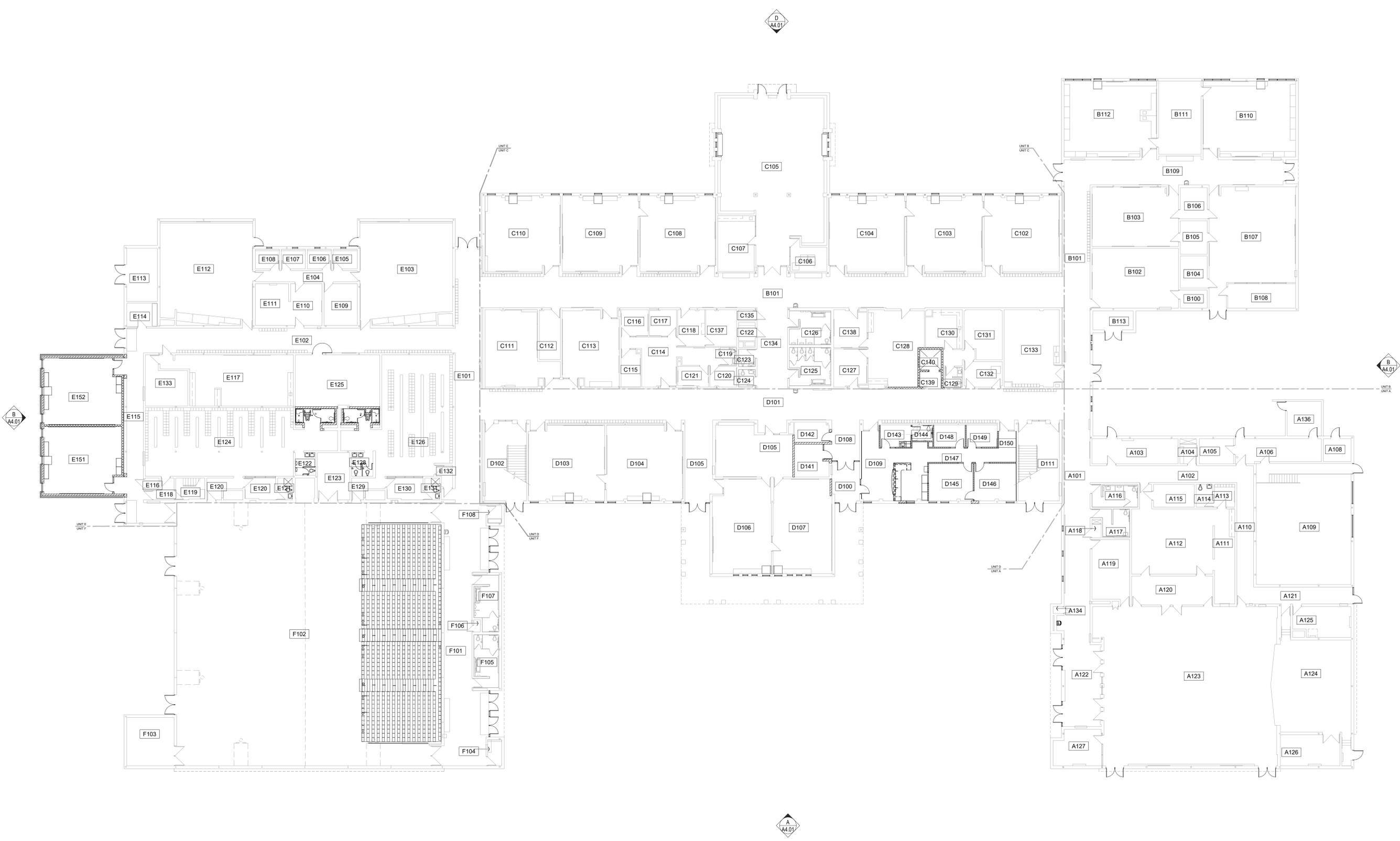
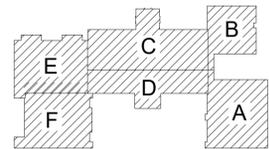
FRAME TYPES

FOR REPLACEMENT FRAMES
VERIFY IN FIELD DIMENSIONS



DOOR TYPES

FOR REPLACEMENT DOOR
VERIFY IN FIELD DIMENSIONS



PROJECT
 Thompson International
 K-8 Renovations
 BP16
 Southfield Public Schools
 Southfield
 Michigan

SHEET
 Composite
 First Floor
 Plan

PROJECT NUMBER
 2023-090.3

SHEET NUMBER
 A2.10

DOOR SCHEDULE GENERAL NOTES

- A. SEE SHEET A0.01 FOR ABBREVIATIONS.
- B. NOT ALL DOOR STYLES ARE USED. REFER TO DOOR SCHEDULE.
- C. NOT ALL FRAME STYLES ARE USED. REFER TO DOOR SCHEDULE.
- D. REFER TO THE GLAZING SCHEDULE IN THE SPECIFICATIONS FOR THE GLAZING TYPES
- E. FRAME DETAILS ARE NOTED ON SHEET A3.02 UNLESS NOTED OTHERWISE.
- F. DOOR UNDERCUTS FOR MECHANICAL REQUIREMENTS ARE LIMITED TO 5/8" MAX. CLEAR DISTANCE MEASURED FROM THE TOP OF THE FINISHED FLOOR MATERIAL OR THRESHOLD TO THE BOTTOM EDGE OF THE DOOR. STANDARD TOLERANCES OF UNDERCUTTING OF DOORS FOR THRESHOLDS AND OTHER FLOOR COVERING MATERIALS ARE NOT NOTED AND MUST BE CONSIDERED IN DETERMINING THE ACTUAL OVERALL HEIGHT OF THE DOOR. COORDINATE WITH AFFECTED TRADES.
- G. FIRE RATED DOORS AND FRAMES ARE LISTED IN MINUTES.
- H. ALL FIRE RATED HOLLOW METAL DOOR FRAMES SHALL BE CEMENT GROUTED SOLID UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE CAVITY LOCATIONS FOR SCHEDULED HARDWARE.
- I. ALL WOOD DOORS SHALL BE SOLID CORE.
- J. MANUFACTURE'S NOTE: FOR WOOD DOORS WITH MORTISE LOCKS - PROVIDE THE MINIMUM SIZE STILL AVAILABLE WHILE MAINTAINING WARRANTY
- K. VERIFY SIZE OF EXISTING DOOR AND FRAME IN FIELD PRIOR TO FABRICATION. MATCH EXISTING DOOR SIZE. EXISTING FRAME TO REMAIN.
- L. REMOVE EXISTING DOOR HARDWARE AND DOOR SLAB. EXISTING FRAME TO REMAIN. SEE DOOR HARDWARE SPECIFICATIONS.
- M. PAINT EXISTING DOOR FRAME P15G-B BOTH SIDES.

DOOR SCHEDULE REMARKS

1. ACCESS CONTROL
2. ADA OPERATOR
3. DOOR POSITION SENSOR (DPS)
4. REQUEST TO EXIT DEVICE (RX)
5. TBD, COORDINATE WITH TECHNOLOGY
6. REMOTE LOCK/UNLOCK
7. RIGHT HAND LEAF

DOOR SCHEDULE - UNIT A

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| A103B | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 06 | - | EX | 1,5 |
| A106B | 3'-0" x 7'-0" | F | FRP | PREF | W7 | ALUM | PREF | A | B | 02 | - | EX | 1,5 |
| A106C | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | 1,5 |
| A108A | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 06 | - | EX | 1,5 |
| A109A | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| A121A | 3'-0" x 7'-0" | F | FRP | PREF | W5 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| A122A | 3'-0" x 7'-0" | FG | FRP | PREF | W4 | ALUM | PREF | A | B | 03 | - | EX | - |
| A122B | 3'-0" x 7'-0" | FG | FRP | PREF | W4 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| A122C | 3'-0" x 7'-0" | FG | FRP | PREF | W4 | ALUM | PREF | A | B | 03 | - | EX | - |
| A122D | 3'-0" x 7'-0" | FG | FRP | PREF | W4 | ALUM | PREF | A | B | 03 | - | EX | - |
| A123E | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | - |
| A123F | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | - |
| A123G | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | - |
| A123H | 3'-0" x 7'-0" | FG | FRP | PREF | W2 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| A124B | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 02 | - | EX | 1 |

DOOR SCHEDULE - UNIT B

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS |
|----------|------------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| B101A | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 17 | - | EX | 1,7 |
| B107B | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 14 | - | EX | 3,4,7 |
| B109A | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | - |
| B109B | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| B109C | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 02 | - | EX | - |
| B109D | 3'-0" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | 1 |
| B113 | PR 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 08 | - | EX | 1,5 |

DOOR SCHEDULE - UNIT C

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| C105B | 3'-0" x 7'-0" | N | FRP | PREF | W6 | ALUM | PREF | A | B | 03 | - | EX | - |
| C105C | 3'-0" x 7'-0" | N | FRP | PREF | W6 | ALUM | PREF | A | B | 02 | - | EX | 1 |

DOOR SCHEDULE - UNIT D

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS |
|----------|------------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| D100A | PR 3'-0" x 7'-0" | FG | FRP | PREF | W3 | ALUM | PREF | A | B | 11 | - | EX | 1,2,6,7 |
| D102A | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | 1 |
| D102B | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |
| D105A | PR 3'-0" x 7'-0" | FG | FRP | PREF | W3 | ALUM | PREF | A | B | 11 | - | EX | 1,2,6,7 |
| D111A | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | 1 |
| D111B | 3'-0" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |

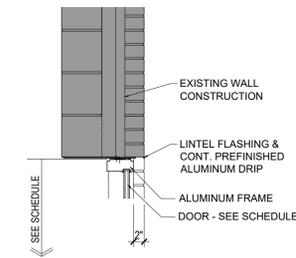
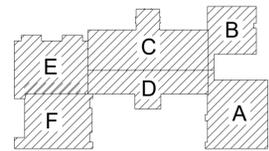
DOOR SCHEDULE - UNIT E

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS |
|----------|---------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| E101A | 3'-4" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 03 | - | EX | - |
| E101B | 3'-4" x 7'-0" | N | FRP | PREF | W2 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| E102A | 3'-4" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |
| E102B | 3'-4" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | 1 |
| E103B | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 16 | - | EX | 3,4 |
| E112B | 3'-0" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 16 | - | EX | 3,4 |
| E113A | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 10 | - | EX | 1,5 |
| E113B | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 09 | - | EX | 5 |
| E115A | 3'-4" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |
| E115B | 3'-4" x 7'-0" | N | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | 1 |

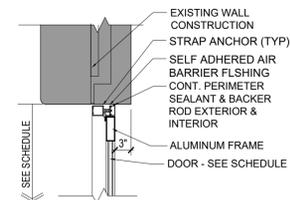
DOOR SCHEDULE - UNIT F

| DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | | H.W. NO. | MIN / LABEL | LINTEL MAT. | REMARKS |
|----------|--------------------|------|------|------|-------|------|------|--------|--------|----------|-------------|-------------|---------|
| | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | HEAD * | | | | |
| F101A | 3'-0" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| F101B | 2'-11 3/4" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F101C | 3'-0" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F101D | 2'-11 3/4" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | C | D | 03 | - | EX | - |
| F101E | 3'-0" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 02 | - | EX | 1 |
| F101F | 2'-11 3/4" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F101G | 3'-0" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F101H | 2'-11 3/4" x 7'-0" | FG | FRP | PREF | W1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F102A | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F102B | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 05 | - | EX | 1 |
| F102C | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |
| F102D | 3'-4" x 7'-0" | F | FRP | PREF | 1 | ALUM | PREF | A | B | 03 | - | EX | - |

KIRKPATRICK



B HEAD DETAIL
A3.01A SCALE: 3/4" = 1'-0"



A JAMB DETAIL
A3.01A SCALE: 3/4" = 1'-0"

PROJECT

Thompson International
K-8 Renovations
BP16
Southfield Public Schools

Southfield
Michigan

SHEET

Door Schedule

PROJECT NUMBER

2023-090.3

SHEET NUMBER

A3.01A

APPENDIX E

SECTION 08 7200 – DOOR HARDWARE

GENERAL

- 1.1 Refer to "General and Special Conditions", and "Instructions to Bidders", Division 1 of Specifications. Requirements of these Sections and the project drawings shall govern work in this section.

- 1.2 Work Included:
 - A. Furnish all items of Finish Hardware specified, scheduled, shown or required herein except those items specifically excluded from this section of the specification.

 - B. Related work:
 1. Division 00 00 00 – Procurement and Contracting Requirements
 2. Division 01 00 00 – General Requirements
 3. Division 06 00 00 – Wood, Plastics, and Composites
 4. Division 08 00 00 – Openings
 5. Division 10 00 00 – Specialties
 6. Division 11 00 00 – Equipment
 7. Division 26 00 00 – Electrical
 8. Division 27 00 00 – Communications
 9. Division 28 00 00 – Electronic Safety and Security

 - C. Specific Omissions: Hardware for the following is specified or indicated elsewhere, unless specifically listed in the hardware sets:
 1. Cabinet Hardware.
 2. Signs, except as noted.
 3. Folding partitions, except cylinders where detailed.
 4. Sliding aluminum doors
 5. Chain link and wire mesh doors and gates
 6. Access doors and panels
 7. Overhead and Coiling doors

- 1.3 Quality Assurance
 - A. Requirements of Regulatory Agencies:
 1. Furnish finish hardware to comply with the requirements of laws, codes, ordinances, and regulations of the governmental authorities having jurisdiction where such requirements exceed the requirements of the Specifications.
 2. Furnish finish hardware to comply with the requirements of the regulations for public building accommodations for physically handicapped persons of the governmental authority having jurisdiction and to comply with Americans with Disabilities Act.
 3. Provide hardware for fire-rated openings in compliance with NFPA 80 and state and local building code requirements. Provide only hardware that has been tested and listed by UL for types and sizes of doors required and complies with requirements of door and door frame labels.

B. Hardware Supplier:

1. Shall be an established firm dealing in contract builders' hardware. He must have adequate inventory, qualified personnel on staff and be located within 100 miles of the project. The distributor must be a factory-authorized dealer for all materials required. The supplier shall be or have in employment an Architectural Hardware Consultant (AHC).

C. Electrified Door Hardware Supplier:

1. Shall be an experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials.
2. Shall prepare data for electrified door hardware, including shop drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this project.
3. Shall have experience in providing consulting services for electrified door hardware installations.

D. Pre-installation Meeting:

1. Before hardware installation, General Contractor/Construction Manager will request a hardware installation meeting be conducted on the installation of hardware; specifically that of locksets, closers, exit devices, overhead stops and coordinators. Manufacturer's representatives of the above products, in conjunction with the hardware supplier for the project, shall conduct the meeting. Meeting to be held at job site and attended by installers of hardware for aluminum, hollow metal and wood doors. Meeting to address proper coordination and installation of hardware, per finish hardware schedule for this specific project, by using installation manuals, hardware schedule, templates, physical product samples and installation videos.
2. When any electrical or pneumatic hardware is specified this meeting shall also include the following trades/installers: Electrical, Security, Alarm systems and Architect.
3. Convene one week or more prior to commencing work of this Section.
4. The Hardware Supplier shall include the cost of this meeting in his proposal.

E. Manufacturer:

1. Obtain each type of hardware (latch and locksets, hinges, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.
2. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.
3. **Basis of Series Design:**
 - a. **Closers: LCN 4000 Series**
 - b. **Panic: Von Duprin 98 Series**
 - c. **Lock Set: Schlage L9000 Series**
 - d. **Or Approved Equal**

1.4 Submittals:

A. Hardware Schedule

1. Submit number of Hardware Schedules as directed in Division 1.

2. Follow guidelines established in D
Format for the Hardware Schedule unless noted otherwise.
3. Schedule will include the following:
 - a. Door Index including opening numbers and the assigned Finish Hardware set.
 - b. Preface sheet listing category only and manufacturer's names of items being furnished as follows:

| CATEGORY | SPECIFIED | SCHEDULED |
|-------------|----------------|----------------|
| Hinges | Manufacturer A | Manufacturer B |
| Lock sets | Manufacturer X | Manufacturer X |
| Kick Plates | Open | Manufacturer Z |

- c. Hardware Locations: Refer to Article 3.1 B.2 Locations.
- d. Opening Description: Single or pair, number, room locations, hand, active leaf, degree of swing, size, door material, frame material, and UL listing.
- e. Hardware Description: Quantity, category, product number, fasteners, and finish.
- f. Headings that refer to the specified Hardware Set Numbers.
- g. Scheduling Sequence shown in Hardware Sets.
- h. Product data of each hardware item, and shop drawings where required, for special conditions and specialty hardware.
- i. Electrified Hardware system operation description.
- j. "Vertical" scheduling format only. "Horizontal" schedules will be returned "Not Approved."
- k. Typed Copy.
- l. Double-Spacing.
- m. 8-1/2 x 11 inch sheets
- n. U.S. Standard Finish symbols or BHMA Finish symbols.

B. Product Data:

1. Submit, in booklet form Manufacturers Catalog cut sheets of scheduled hardware.
2. Submit product data with hardware schedule.

C. Samples:

1. Prior to submittal of the final hardware schedule and prior to final ordering of finish hardware, submit one sample, if required, of each type of exposed hardware unit, finished as required and tagged with full description for coordination with schedule.
2. Samples will be returned to the supplier. Units, which are acceptable and remain undamaged through submittal, review and field comparison procedures may, after final check of operation, be used in the work, within limitations of keying coordination requirements.

D. Key Schedule:

1. Submit detailed schedule indicating clearly how the Owner's final keying instructions have been followed.
2. Submit as a separate schedule.

E. Electrified Hardware Drawings:

1. Submit elevation drawings showing relationship of all electrical hardware components to door and frame. Indicate number and gage of wires required.
 - a. Include wiring drawing showing point to point wire hook up for all components.

- b. Include system operations descriptions for each type of opening; describe each possible condition.
- F. Submit to General Contractor/Construction Manager, the factory order acknowledgement numbers for the various hardware items to be used on the project. The factory order acknowledgement numbers shall help to facilitate and expedite any service that may be required on a particular hardware item. General Contractor/Construction Manager shall keep these order acknowledgement numbers on file in the construction trailer.

1.5 MOCKUPS

- A. **Provide wall mockups – sizes as indicated on drawings.**

1.6 Product Delivery, Storage, and Handling:

- A. Label each item of hardware with the appropriate door number and Hardware Schedule heading number, and deliver to the installer so designated by the contractor.

1.7 Existing Conditions:

- A. **Where existing doors, frames and/or hardware are to remain, conditions, preparations and functions shall be field verified to confirm compatibility with specified hardware. Where any incompatibility is discovered, notify the contractor or construction manager immediately and provide a suggested solution based on industry standard business practices.**

1.8 Warranties:

- A. Refer to Division 1 for warranty requirements.
- B. Special Warranty Periods:
 - 1. Closers shall carry manufacturer's 30-year warranty against manufacturing defects and workmanship.
 - 2. Locksets shall carry manufacturer's 3-year warranty against manufacturing defects and workmanship.
 - 3. Exit Devices shall carry manufacturer's 3-year warranty against manufacturing defects and workmanship.
 - 4. Continuous gear hinges shall carry manufacturer's lifetime warranty to be free from defects in material and workmanship.
 - 5. Balance of items shall carry a manufacturer's 1-year warranty against manufacturing defects and workmanship.
- C. During the warranty period, replace defective work, including labor, materials and other costs incidental to the work.

PART 2 - PRODUCT

2.1 Furnish each category with the products of only one manufacturer unless specified otherwise; this requirement is mandatory whether various manufacturers are listed or not.

2.2 Provide the products of manufacturer designated or if more than one manufacturer is listed, the comparable product of one of the other manufacturers listed. Where only one manufacturer or product is listed, it is understood that this is the owner's Building Standard and "no substitution" is allowed.

A. Hinges:

1. Furnish hinges of class and size as listed in sets or as required to match existing conditions.
2. Numbers used are Ives (IVE).
3. Equal products from Hager, McKinney and Stanley will be accepted.

B. Continuous Gear Hinge:

1. 6063-T6 aluminum alloy, anodized finish (cap on entire hinge painted if specified). Manufacture to template, uncut hinges non-handed, pinless assembly, three interlocking extrusions, full height of door and frame, fasteners 410 stainless steel plated and hardened. Anodizing of material shall be done after fabrication of components so that all bearing slots are anodized.
2. Length: 1" less than door opening height. Fastener 12-24 x 1/2" #3 Phillips keen form stainless steel self-tapping at aluminum and hollow metal doors, 12- 1/2" #3 Philips, flathead full thread at wood doors.
3. Furnish fire rated hinges "FR" at labeled openings.
4. Numbers used are Ives.
 - a. For hollow metal frames;
 - 1) Ives 224XY
 - 2) Equal products by Pemko & Select will also be accepted.
 - b. For Aluminum frames;
 - 1) Ives 112XY
 - 2) Equal products by Pemko & Select will also be accepted.

C. Flush Bolts:

1. Constant Latching: metal doors:
 - a. Ives FB50 Series
 - b. Equal product of any B.H.M.A. member.
2. Constant Latching: wood doors:
 - a. Ives FB60 Series
 - b. Equal product of any B.H.M.A. member.
3. Manual – wood and metal doors:
 - a. Ives FB458 Series
 - b. Equal product of any B.H.M.A. member.
4. Dust Proof Strikes - furnish with all flush bolts, except at openings having thresholds:
 - a. Ives DP2
 - b. Equal product of any B.H.M.A. member.

D. Locksets and Latchsets - Mortise Type:

1. Locksets shall be manufactured from heavy gauge steel, minimum lockcase thickness 1/8", containing components of steel with a zinc dichromate plating for corrosion resistance.

2. Locks are to have a standard 2 3/4" backset with a full 3/4" throw two-piece stainless steel mechanical anti-friction latchbolt. Deadbolt shall be a full 1" throw, constructed of stainless steel.
3. Lockcase shall be easily handed without chassis disassembly by removing handing screw on lockcase and installing in opposite location on reverse side. Changing of door hand bevel from standard to reverse hand shall be done by removing the lockcase scalp plate, and pulling and rotating the latchbolt 180 degrees.
4. Lock trim shall be through-bolted to the door to assure correct alignment and proper operation. Lever trim shall have external spring cage mechanism to assist in support of the lever weight.
5. Function numbers are Schlage.
 - a. Schlage L9000
6. Lockset Trim:
 - a. Schlage 03N
7. Provide strikes with extended lips where required to protect trim from being marred by latch bolt. Provide strike lips that do not project more than 1/8" beyond door frame trim at single doors and have 7/8" lip to center at pairs of 1-3/4" doors.
8. Provide strikes as required to match existing conditions and preparations at existing openings.

E. Exit Devices:

1. Exit devices shall be touchpad style, fabricated of brass, bronze, stainless steel, or aluminum, plated to the standard architectural finishes to match the balance of the door hardware.
2. All exit devices shall incorporate a fluid damper, which decelerates the touchpad on its return stroke and eliminates noise associated with exit device operation. Touchpad shall extend a minimum of one half of the door width. All latchbolts to be deadlatching type, with a self-lubricating coating to reduce wear.
3. End-cap will be sloped to deflect any impact from carts and they shall be flush with the external mechanism case. End caps that overlap and project above the mechanism case are unacceptable. End cap shall utilize a two-point attachment to the mounting bracket.
4. Touchpad shall match exit device finish, and shall be stainless steel for US26, US26D, US28, US32, and US32D finishes. Only compression springs will be used in devices, latches, and outside trims or controls.
5. Plastic templates shall be included with each exit device to facilitate a quick, easy and accurate installation.
6. Strikes shall be roller type and come complete with a locking plate to prevent movement.
7. All rim and vertical rod exit devices shall have passed a 5 million(5,000,000) cycle test based on ANSI A156.3, 1994, Grade 1 test standards and certified by an independent testing lab.
8. All mortise exit devices shall have passed a 10 million(10,000,000)cycle test based on ANSI A156.3, 1994, Grade 1 test standards and certified by an independent testing lab.
9. Provide cylinder dogging on panic exit hardware where noted in hardware sets.
10. Exit devices shall be UL listed panic exit hardware. All exit devices for fire rated openings shall be UL labeled fire exit hardware.
11. Lever trim for exit devices shall be vandal-resistant type, which will travel to a 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set.
12. Von Duprin 98 and 35A Series. Series and function numbers as listed in sets.
13. Trim:
 - a. As specified in sets.
 - b. Levers to match lockset design where specified.

F. Electric Strike:

1. Electric strikes shall provide remote release of latchbolts. They shall be designed for use with the type locks shown at each opening where required. Strikes will be UL Listed for Burglary-Resistant Electric Door Strike, and where required, shall be UL listed as electric strikes for Fire Doors or Frames. Faceplates shall be stainless steel with finish as specified for each opening. The locking components shall be stainless steel to resist damage and abuse.
2. Solenoids shall be of the continuous duty type for the voltage specified. Plug connectors will be furnished. Strikes shall have an adjustable backbox to compensate for misalignment of door and frame.
3. Numbers used in sets are Von Duprin.
 - a. Von Duprin 6000 series

G. Closers:

1. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder. Cylinder body shall be 1 ½" in diameter, and double heat treated pinion shall be 11/16" in diameter with double D slab drive arm connection.
2. Hydraulic fluid shall be of a type requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
3. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and backcheck.
4. All closers shall have solid forged steel main arms (and forged forearms for parallel arm closers).
5. All surface mounted mechanical closers shall be certified to exceed ten million (10,000,000) full load cycles by a recognized independent testing laboratory.
6. Closers will have Powder coating finish certified to exceed 100 hours salt spray testing by ETL, an independent testing laboratory used by BHMA for ANSI certification.
7. Refer to door and frame details and furnish accessories such as drop plates, panel adapters, spacers and supports as required to correctly install door closers. State degree of door swing in the hardware schedule.
8. LCN Series as listed in sets.

H. ADA Special Closers:

1. Where "Low Energy Power Operated Door" as defined by ANSI Standard A156.19 is indicated for doors required to be accessible to the disabled, provide electrically powered operators complying with the ADA requirements for opening force and time to close standards.
2. Full closing force shall be provided when the power or assist cycle ends.
3. Modular design, adjustments easily accessible from the front, UL listed for use on labeled doors.
4. Shall have "Second Chance" function to accommodate momentary resistance, "Breakaway" function in the electronically controlled clutch, "Soft Start" motor control function and "Maintain Hold-Open Switch" to hold the door open at 90 degree.
5. Shall have built in 12V and 24V power supply for actuators, card readers, electric strikes and magnetic door locks, inputs for both swing and stop side sensors and available to accept either 120VAC or 220VAC input power. All wiring connections between operator modules made by easy-to-handle electrical connectors. Shall comply with both UL and NEC requirements for Class 1 and Class 2 wiring by providing separate conduits for each.
6. Shall have seven independent electronic adjustments to tailor the operator for specific site conditions. Opening speed, holding force at 90 deg., sequential trigger and time delay, hold-open time at 90 deg., opening force, clutch "breakaway" force setting, electric strike trigger and time delay.

7. Shall have separate and independent adjustments for back check, main speed and latch speed.
8. LCN Series as listed in sets.
9. Furnish actuators and other controls as shown in Hardware Sets.

I. Overhead Holders and Stops:

1. Type, function and fasteners must be same as Glynn-Johnson specified. Size per manufacturer's selector chart. Plastic end caps, hold open mechanisms and shock blocks are not allowed. End caps must be finished same as balance of unit.
2. Manufacture products using base material of Brass/Bronze for US3, US4, & US10B finished products and 300 Stainless Steel for US32 & US32D finished products.
3. Type, function, and fasteners must be the same as Glynn-Johnson specified. Size per manufacturer's selector chart.
 - a. Glynn-Johnson

J. Kick Plates:

1. Furnish .050 inches thick, beveled four sides, countersunk fasteners, 10" high x door width less 2" at single doors and less 1" at pairs. Where glass or louvers prevent this height, supply with height equal to height of bottom rail less 2".
2. Any BHMA manufacturing product meeting above is acceptable.

K. Wall Stops:

1. Length to exceed projection of all other hardware. Provide with threaded studs and expansion shields for masonry wall construction. Install with slope on top.
 - a. Ives WS33(X)
 - b. BHMA L12011 or L12021

L. Thresholds:

1. 1/2" high - 5" wide. Cope at jambs.
2. Furnish full wall opening width when frames are recessed.
3. Cope in front of mullions if thresholds project beyond door faces.
4. Furnish with non-ferrous Stainless Steel Screws and Lead Anchors.
 - a. Zero as listed in sets
 - b. Equal of NGP or Reese

M. Door Sweeps:

1. Surface Sweeps:
 - a. Zero as listed in sets
 - b. Equal of NGP or Reese

N. Miscellaneous:

1. Furnish items not categorized in the above descriptions but specified by manufacturer's names in Hardware Sets.

O. Fasteners:

1. Furnish fasteners of the proper type, size, quantity and finish. Use machine screws and expansion shields for attaching hardware to concrete or masonry, and wall grip inserts at hollow wall construction. Furnish machine screws for attachment to reinforced hollow metal

doors and frames and reinforced aluminum doors and frames. Furnish full thread wood screws for attachment to solid wood doors and frames. "TEK" type screws are not acceptable.

2. **Sex bolts will not be permitted on reinforced metal doors or wood doors where blocking is specified.**

2.3 Finishes:

- A. Generally, Satin Chrome, US26D / BHMA 626. Provide finish for each item as indicated in sets.

2.4 Templates and Hardware Location:

- A. Furnish hardware made to template. Supply required templates and hardware locations to the door and frame manufacturers.
- B. Furnish metal template to frame/door supplier for continuous hinge.
- C. Refer to Article 3.1 B.2, Locations, and coordinate with templates.

2.5 Cylinders and Keying:

- A. All cylinders for this project will be supplied by one supplier regardless of door type and location.
- B. The Finish Hardware supplier will meet with Architect and/or Owner to finalize keying requirements and obtain keying instructions in writing.
 1. Supplier shall include the cost of this service in his proposal.
- C. Provide a cylinder for all hardware components capable of being locked.
- D. Provide cylinders master and grand master keyed to Schlage Everest ~~29T~~ 29R key system according to Owner's instructions. Provide two change keys for each cylinder, master and grand master keys as required by Owner.

PART 3 - EXECUTION

3.1 Installation

A. General:

1. Install hardware according to manufacturers installations and template dimensions. Attach all items of finish hardware to doors, frames, walls, etc. with fasteners furnished and required by the manufacture of the item.
2. Provide blocking/reinforcement for all wall mounted Hardware.
3. Reinforced hollow metal doors and frames and reinforced aluminum door and frames will be drilled and tapped for machine screws.
4. Solid wood doors and frames: full thread wood screws. Drill pilot holes before inserting screws.
5. Continuous gear hinges attached to hollow metal doors and frames and aluminum doors and frames: 12-24 x 1/2" #3 Phillips Keenform self-tapping. Use #13 or 3/16 drill for pilot.

6. Continuous Gear Hinges require continuous mortar guards of foam or cardboard 1/2" thick x frame height, applied with construction adhesive.

B. Locations:

1. Dimensions are from finish floor to center line of items.
2. Include this list in Hardware Schedule.

| <u>CATEGORY</u> | <u>DIMENSION</u> |
|----------------------|------------------------------|
| Hinges | Door Manufacturer's Standard |
| Flush Bolt Levers | 72" and 12" |
| Levers | Door Manufacturer's Standard |
| Exit Device Touchbar | Per Template |
| Wall Stops/holders | At Head |

C. Field Quality Inspection:

1. Inspect material furnished, its installation and adjustment, and instruct the Owner's personnel in adjustment, care and maintenance of hardware.
2. Locksets and exit devices shall be inspected after installation and after the HVAC system is in operation and balanced, to insure correct installation and proper operation.
3. Closers shall be inspected and adjusted after the HVAC system is in operation and balanced, to insure correct installation and proper operation.
4. A written report stating compliance, and also locations and kinds of noncompliance shall be forwarded to the Architect with copies to the Contractor, hardware distributor, hardware installer and building owner.

D. Technical and Warranty Information:

1. At the completion of the project, the technical and warranty information coalesced and kept on file by the General Contractor/Construction Manager shall be given to the Owner or Owner's Agent. In addition to both the technical and warranty information, all factory order acknowledgement numbers supplied to the General Contractor/Construction Manager during the construction period shall be given to the Owner or Owner's Agent. The warranty information and factory order acknowledgement numbers shall serve to both expedite and properly execute any warranty work that may be required on the various hardware items supplied on the project.
2. Submit to General Contractor/Construction Manager, two copies each of parts and service manuals and two each of any special installation or adjustment tools. Include for locksets, exit devices, door closers and any electrical products.

3.2 Hardware Sets:

Hardware Group No. -

| QTY | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|-------------|----------------|--------|-----|
|-----|-------------|----------------|--------|-----|

Hardware Group No. 01

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|---|---|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | <u>OFFICE/ENTRY LOCK W/ INSIDE INDICATOR</u> (OFFICE/ENTRY LOCK) | <u>L9050BDC 03N 09-544 IS-LOC</u> (L9050P6 03N 09-544 L283-711) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | OH STOP | 90S | 652 | GLY |
| 1 | EA | SURFACE CLOSER | 4011 MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 02

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|---|---|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | <u>OFFICE/ENTRY LOCK W/ INSIDE INDICATOR</u> (OFFICE/ENTRY LOCK) | <u>L9050BDC 03N 09-544 IS-LOC</u> (L9050P6 03N 09-544 L283-711) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 03

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|-------------------------------------|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| <u>2</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159</u> (20-057) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 04- Not Used

Hardware Group No. 05

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|---|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | <u>OFFICE/ENTRY LOCK W/ INSIDE INDICATOR</u> (OFFICE/ENTRY LOCK) | <u>L9050BDC 03N 09-544 IS-LOC</u> (L9050P6-03N 09-544 L283-711) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 06

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|-----------------------------------|------------|------------|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | FIRE EXIT HARDWARE | 98-L-F-2SI-03 | 626 | VON |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159</u> (20-057) | 626 | SCH |
| 1 | EA | RIM CYL THUMBTURN | XB13-379 | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 07

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|----------------------------|--|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | STOREROOM LOCK | <u>L9080BDC 03N</u> (L9080P6-03N) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | SURFACE CLOSER | 4011 MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 08

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|----|----------------|------------------------|--------|-----|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | PUSH PLATE | 8200 4" X 16" | 630 | IVE |
| 1 | EA | PULL PLATE | 8302 8" 4" X 16" | 630 | IVE |
| 1 | EA | SURFACE CLOSER | 4011 MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 1 | EA | GASKETING | 488SBK PSA | BK | ZER |

Hardware Group No. 09

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|----|--------------------|------------------------|--------|-----|
| 6 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | 652 | IVE |
| 2 | EA | FIRE EXIT HARDWARE | 9849-EO-F-LBL | 626 | VON |
| 2 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 2 | EA | KICK PLATE | 8400 10" X 1" LDW B-CS | 630 | IVE |
| 2 | EA | WALL MAG HOLDER | SEM7850 12V/24V/120V | 689 | LCN |
| 2 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 10

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|-------------------------------|-------------------|-------------------|
| 2 | EA | CONT. HINGE | 224XY | 628 | IVE |
| 1 | EA | FIRE RATED REMOVABLE MULLION | KR9954 | 689 | VON |
| 2 | EA | FIRE EXIT HARDWARE | 98-L-F-2SI-03 | 626 | VON |
| 3 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> <u>(MORTISE CYLINDER)</u> | <u>80-110-(20-002)</u> | 626 | SCH |
| 2 | EA | <u>RIM CYLINDER (SFIC) (RIM CYLINDER)</u> | <u>80-159-(20-057)</u> | 626 | SCH |
| 2 | EA | RIM CYL THUMBTURN | XB13-379 | 626 | SCH |
| 2 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 2 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 2 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 1 | EA | MULLION SEAL | 8780NBK PSA | BK | ZER |
| 2 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 11

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|----------------------------|--|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | STOREROOM LOCK | <u>L9080BDC 03N</u> (L9080P6-03N) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | OH STOP | 90S | 652 | GLY |
| 1 | EA | SURFACE CLOSER | 4011 MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 12

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|-------------------------------------|------------|------------|
| 2 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 2 | EA | SURFACE BOLT | SB453 8" TB | 604 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-9875-EO | 626 | VON |
| <u>2</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 2 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 2 | EA | OH STOP & HOLDER | 100H | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 2 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 655A-V3-223 | A | ZER |

Hardware Group No. 13

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|---|------------|------------|
| 4 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | <u>OFFICE/ENTRY LOCK W/</u> <u>INSIDE INDICATOR</u> (OFFICE/ENTRY LOCK) | <u>L9050BDC 03N 09-544 IS-LOC</u> (L9050P6-03N 09-544 L283-711) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | SURFACE CLOSER | 4111 CUSH MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 14

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|--|-------------------|-------------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO | 626 | VON |
| 1 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 15

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|-----------------------------------|---|-------------------|-------------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | STOREROOM LOCK | <u>L9080BDC LLL 03A L283-150</u> (L9080P6 LLL 03A L283-150) | 626 | SCH |
| 1 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP & HOLDER | 100H | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 16

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|------------------------|------------|------------|
| 2 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4954 STAB | 689 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO | 626 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| <u>4</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 3 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110-(20-002)</u> | 626 | SCH |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159-(20-057)</u> | 626 | SCH |
| 2 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 2 | EA | OH STOP | 100S | 630 | GLY |
| 2 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA | BK | ZER |
| 2 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 2 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 17

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|---------------------------|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| <u>2</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110-(20-002)</u> | 626 | SCH |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159-(20-057)</u> | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6300 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |
| 1 | EA | INTERCOM/REMOTE RELEASE | (BY OTHERS) | ↗ | |
| 1 | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | |

Hardware Group No. 18

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|-----------------------------------|--|------------|------------|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | CLASSROOM/STOREROOM | L9070/80BDC 03N XL12-876 (L9070/80P6 03N XL12-876) | 626 | SCH |
| 2 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6400 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 1 | EA | OH STOP | 90S | 652 | GLY |
| 1 | EA | SURFACE CLOSER | 4011 | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |
| 1 | EA | DESK MOUNT BUTTON | 660-PB | ↗ 628 | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |
| 1 | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | |

Hardware Group No. 19

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|-----------------------------------|---|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | STOREROOM LOCK | L9080BDC 03N (L9080P6 03N) | 626 | SCH |
| 1 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6400 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | EA | DESK MOUNT BUTTON | 660-PB | ↗ 628 | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |

Hardware Group No. 20

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----------------|------------------|-----------------------------------|--|-------------------|-------------------|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | CLASSROOM/STOREROOM | L9070/80BDC 03N XL12-876 (L9070/80P6 03N XL12-876) | 626 | SCH |
| <u>2</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | ELECTRIC STRIKE | 6400 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 1 | EA | SURFACE CLOSER | 4011 | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |
| 1 | EA | DESK MOUNT BUTTON | 660-PB | ↗ 628 | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |
| | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | |

Hardware Group No. 21

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----------------|------------------|---|--|-------------------|-------------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | OFFICE/ENTRY LOCK W/ INSIDE INDICATOR (OFFICE/ENTRY LOCK) | L9050BDC 03N 09-544 IS-LOC (L9050P6 03N 09-544 L283-711) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | SURFACE CLOSER | 4011 MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 22

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|--|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| 2 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | 626 | SCH |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159</u> (20-057) | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6300 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |
| 1 | EA | INTERCOM/REMOTE RELEASE | (BY OTHERS) | ↗ | |
| 1 | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | |

Hardware Group No. 22.1- Not Used

Hardware Group No. 23

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|--|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO | 626 | VON |
| 1 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | 626 | SCH |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 23.1- Not Used

Hardware Group No. 24

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|-----------------------------------|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO | 626 | VON |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 25

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|----------------------------|--|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | STOREROOM LOCK | <u>L9080BDC 03N</u> (L9080P6 03N) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | OH STOP & HOLDER | 100H | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 26

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|---|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | <u>OFFICE/ENTRY LOCK W/</u> <u>INSIDE INDICATOR</u> (OFFICE/ENTRY LOCK) | <u>L9050BDC 03N 09-544 IS-LOC</u> (L9050P6 03N 09-544 L283-711) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | WALL STOP/HOLDER | WS40 | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 27

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|---|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | <u>CORRIDOR LOCK W/ OUTSIDE INDICATOR</u> (CORRIDOR LOCK) | <u>L9456BDC 03N 09-544 OS-OCC</u> (L9456P6 03N 09-544 L283-722) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | SURFACE CLOSER | 4011 MC | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | 630 | IVE |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 28

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|----------------------------|--|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | CLASSROOM LOCK | <u>L9070BDC 03N</u> (L9070P6 03N) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 29

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|-------------------------------------|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | FIRE EXIT HARDWARE | 98-NL-OP-F-110MD | 626 | VON |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159</u> (20-057) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 30

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|----------------------------|--|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | CLASSROOM LOCK | <u>L9070BDC 03N</u> (L9070P6-03N) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | OH STOP | 90S | 652 | GLY |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 31

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|----|--------------------|------------------------|--------|-----|
| 8 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | 652 | IVE |
| 2 | EA | FIRE EXIT HARDWARE | 9849-L-BE-F-03-LBL | 626 | VON |
| 2 | EA | OH STOP | 90S | 652 | GLY |
| 2 | EA | SURFACE CLOSER | 4111 EDA MC ST-2730 | 689 | LCN |
| 2 | EA | KICK PLATE | 8400 10" X 1" LDW B-CS | 630 | IVE |

Hardware Group No. 32

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|----|---------------------|---------------------------|--------|-----|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | PRIVACY W/COIN TURN | L9044 03N 09-544 L283-722 | 626 | SCH |
| 1 | EA | WALL STOP | WS33(X) | 626 | IVE |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 33- Not Used

Hardware Group No. 34- Not Used

Hardware Group No. 35

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|--|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | STOREROOM LOCK | L9080BDC LLL 03A L283-150 (L9080P6 LLL 03A L283-150) | 626 | SCH |
| 1 | EA | CORE (SFIC EVEREST) | 80-037 EV29 R | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6400 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP & HOLDER | 100H | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MCSRI | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |
| 1 | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | |

Hardware Group No. 36

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|---|--|------------|------------|
| 2 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4854B | 689 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO | 626 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| 3 | EA | CORE (SFIC EVEREST) | 80-037 EV29 R | 626 | SCH |
| 3 | EA | MORTISE CYL (SFIC) (MORTISE CYLINDER) | 80-110 (20-002) | 626 | SCH |
| 1 | EA | RIM CYLINDER (SFIC) (RIM CYLINDER) | 80-159 (20-057) | 626 | SCH |
| 1 | EA | ELECTRIC STRIKE | 6300 FSE 12/24 VAC/VDC | ↗ 630 | VON |
| 2 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 2 | EA | OH STOP | 100S | 630 | GLY |
| 2 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 2 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC | ↗ | VON |
| 1 | EA | ACCESS CONTROL | (BY SECURITY CONTRACTOR) | | |

Hardware Group No. 36.1- Not Used

Hardware Group No. 37

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|------------------------|------------|------------|
| 2 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | REMOVABLE MULLION | KR4954 STAB | 689 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-EO | 626 | VON |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| <u>4</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 3 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110-(20-002)</u> | 626 | SCH |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159-(20-057)</u> | 626 | SCH |
| 2 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 2 | EA | OH STOP | 100S | 630 | GLY |
| 2 | EA | SURFACE CLOSER | 4021 MC | 689 | LCN |
| 1 | EA | MOUNTING BRKT | 4020-18G SRT | 689 | LCN |
| 1 | EA | MULLION SEAL | 8780NBK PSA | BK | ZER |
| 2 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 2 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. 38

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|----------------------------|--|------------|------------|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | CLASSROOM LOCK | <u>L9070BDC 03N</u> (L9070P6-03N) | 626 | SCH |
| <u>1</u> | <u>EA</u> | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | <u>626</u> | <u>SCH</u> |
| 1 | EA | SURFACE CLOSER | 4111 CUSH MC | 689 | LCN |
| 3 | EA | SILENCER | SR64/SR65 AS REQ'D | GRY | IVE |

Hardware Group No. 39

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|----------|-----------|--|--|------------|------------|
| 1 | EA | CONT. HINGE | 112XY | 628 | IVE |
| 1 | EA | PANIC HARDWARE | CDSI-98-NL-OP-110MD | 626 | VON |
| 2 | EA | <u>CORE (SFIC EVEREST)</u> | <u>80-037 EV29 R</u> | 626 | SCH |
| 1 | EA | <u>MORTISE CYL (SFIC)</u> (MORTISE CYLINDER) | <u>80-110</u> (20-002) | 626 | SCH |
| 1 | EA | <u>RIM CYLINDER (SFIC)</u> (RIM CYLINDER) | <u>80-159</u> (20-057) | 626 | SCH |
| 1 | EA | RECESSED PULL | (BY DOOR MFR) | | |
| 1 | EA | OH STOP | 100S | 630 | GLY |
| 1 | EA | SURFACE CLOSER | 4111 EDA MC | 689 | LCN |
| 1 | SET | WEATHER SEAL | (BY FRAME MFR) | | |
| 1 | EA | DOOR SWEEP | 39A | A | ZER |
| 1 | EA | THRESHOLD | 65A-223 | A | ZER |

Hardware Group No. DELETED

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|--|-------------|----------------|--------|-----|
|-----|--|-------------|----------------|--------|-----|

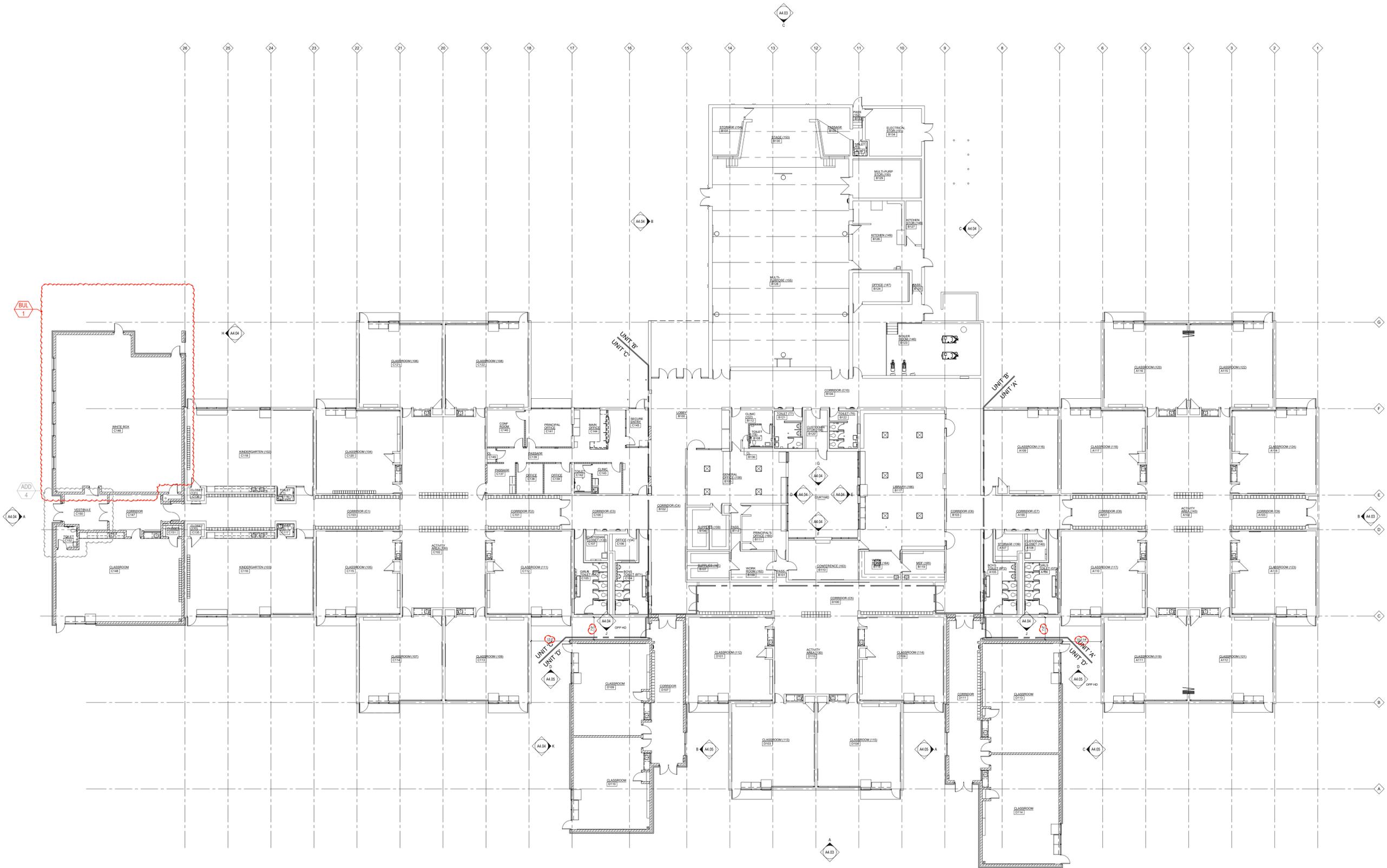
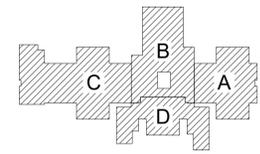
| Opening | HwSet |
|---------|-------|
| A100A | 06 |
| A100B | 06 |
| A103A | 24 |
| A103B | 03 |
| A105 | 08 |
| A106 | 08 |
| A107 | 07 |
| A108 | 07 |
| A109 | 02 |
| A110A | 14 |
| A110B | 02 |
| A111A | 14 |
| A111B | 26 |
| A112A | 14 |
| A112B | 26 |
| A113A | 14 |
| A113B | 02 |
| A114A | 14 |
| A114B | 02 |
| A115A | 14 |
| A115B | 26 |
| A116A | 14 |
| A116B | 26 |
| A117A | 14 |
| A117B | 02 |
| B100A | 22 |
| B100B | 23 |
| B100C | 23 |
| B100D | 23 |
| B105 | 13 |
| B108 | 27 |
| B109 | 01 |
| B110 | 01 |
| B111 | 02 |
| B112 | 02 |
| B117A | 06 |
| B117B | 06 |
| B120A | 11 |
| B120B | 25 |
| B121 | 08 |
| B122 | 08 |
| B123A | 35 |
| B123B | 07 |
| B126 | 15 |

| Opening | HwSet |
|--------------|-----------------|
| B128A | 10 |
| B128B | 10 |
| B128C | 16 |
| B133 | 14 |
| B134 | 12 |
| B136 | 28 |
| C100A | 06 |
| C100B | 06 |
| C104 | 08 |
| C105 | 08 |
| C106 | 21 |
| C107 | 07 |
| C112A | 14 |
| C112B | 02 |
| C113A | 14 |
| C113B | 02 |
| C114A | 14 |
| C114B | 02 |
| C115A | 14 |
| C115B | 02 |
| C116A | 29 |
| C116B | 02 |
| C118A | 29 |
| C118B | 02 |
| C120A | 14 |
| C120B | 02 |
| C121A | 14 |
| C121B | 02 |
| C122A | 14 |
| C122B | 02 |
| C137 | 02 |
| C138 | 05 |
| C139 | 05 |
| C140 | 05 |
| C141A | 05 |
| C141B | - |
| C141C | 05 |
| C142 | 32 |
| C143 | 05 |
| C144 | 20 |
| C145A | 17 |
| C145B | 19 |
| C145C | 38 - |
| C146A | 39 |

| Opening | HwSet |
|--------------|-----------|
| C146B | 06 |
| C146C | 30 |
| C146D | 14 |
| C147A | 36 |
| C147B | 33 |
| C147C | 09 |
| C148A | 14 |
| C148B | 02 |
| C148C | - |
| C149 | 30 |
| C150A | 37 |
| C150B | 03 |
| C151 | 38 |
| C152 | 32 |
| D100A | 06 |
| D100B | 06 |
| D100C | 06 |
| D100D | 06 |
| D101A | 14 |
| D101B | 02 |
| D103A | 14 |
| D103B | 02 |
| D104A | 14 |
| D104B | 02 |
| D106A | 14 |
| D106B | 02 |

| Opening | HwSet |
|---------|-------|
| D107A | 16 |
| D107B | 31 |
| D107C | 29 |
| D109A | 14 |
| D109B | 13 |
| D109C | - |
| D109D | 30 |
| D110A | 14 |
| D110B | 13 |
| D110C | - |
| D110D | 30 |
| D111A | 16 |
| D111B | 31 |
| D111C | 29 |
| D113A | 14 |
| D113B | 13 |
| D113C | - |
| D113D | 30 |
| D114A | 14 |
| D114B | 13 |
| D114C | - |
| D114D | 30 |

END OF SECTION



PROJECT
Southfield Public Schools
Adlai Stevenson ES
Additions & Renovations

Southfield,
Michigan

SHEET
Composite
Floor Plan

PROJECT NUMBER
2023-017

SHEET NUMBER
A2.10

 COMPOSITE FLOOR PLAN
SCALE: 1/16" = 1'-0"

DOOR SCHEDULE

| UNIT D | DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | H.W. NO. | MIN/LABEL | LINTEL MAT. | REMARKS | |
|--------|----------|------------------|--------|------|------|-------|------|------|--------|----------|-----------|-------------|---------|--------|
| | | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | | | | | HEAD * |
| | D100A | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | D100B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | D100C | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | D100D | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | D101A | 3'-0" x 8'-0" | F | FRP | PREF | W15 | HM | PTD | - | - | 14 | 45 | EX | 4 |
| | D101B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | D103A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | D103B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | D104A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | D104B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | D106A | 3'-0" x 8'-0" | F | FRP | PREF | W15 | HM | PREF | - | - | 14 | 45 | EX | 4 |
| | D106B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | D107A | PR 3'-0" x 7'-0" | FG1 | FRP | PREF | W14 | ALUM | PREF | - | - | 16 | - | STL | 5 |
| | D107B | PR 3'-0" x 7'-0" | F | HM | PTD | 2 | HM | PTD | - | - | 31 | 90 | STL | - |
| | D107C | 3'-0" x 7'-0" | FRP | PREF | W11 | HM | PTD | - | - | - | 29 | 45 | STL | - |
| | D109A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | MSF | ADD 3 |
| | D109B | 3'-0" x 7'-0" | N | WD | WD1 | 2 | HM | PTD | C | D | 13 | 45 | STL | - |
| | D109C | 6'-0" x 5'-0" | WINDOW | - | - | 8 | HM | PTD | - | - | - | 45 | STL | - |
| | D109D | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 30 | - | STL | - |
| | D110A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | MSF | ADD 3 |
| | D110B | 3'-0" x 7'-0" | N | WD | WD1 | 2 | HM | PTD | C | D | 13 | 45 | STL | - |
| | D110C | 3'-8" x 5'-0" | WINDOW | - | - | 9 | HM | PTD | - | - | - | 45 | STL | - |
| | D110D | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 30 | - | STL | - |
| | D111A | PR 3'-0" x 7'-0" | FG1 | FRP | PREF | W14 | ALUM | PREF | - | - | 16 | - | STL | 5 |
| | D111B | PR 3'-0" x 7'-0" | F | HM | PTD | 2 | HM | PTD | - | - | 31 | 90 | STL | - |
| | D111C | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | E | F | 29 | 45 | STL | - |
| | D113A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | MSF | ADD 3 |
| | D113B | 3'-0" x 7'-0" | N | WD | WD1 | 2 | HM | PTD | C | D | 13 | 45 | STL | - |
| | D113C | 6'-0" x 5'-0" | WINDOW | - | - | 8 | HM | PTD | - | - | - | 45 | STL | - |
| | D113D | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 30 | - | STL | - |
| | D114A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | MSF | ADD 3 |
| | D114B | 3'-0" x 7'-0" | N | WD | WD1 | 2 | HM | PTD | C | D | 13 | 45 | STL | - |
| | D114C | 3'-8" x 5'-0" | WINDOW | - | - | 9 | HM | PTD | C | D | - | 45 | STL | - |
| | D114D | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 30 | - | STL | - |

DOOR SCHEDULE

| UNIT C | DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | H.W. NO. | MIN/LABEL | LINTEL MAT. | REMARKS | |
|--------|----------|-------------------|--------|------|------|-------|------|------|--------|----------|-----------|-------------|---------|--------|
| | | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | | | | | HEAD * |
| | C100A | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | C100B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | C104 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 08 | - | EX | 1.2,6 |
| | C105 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 08 | - | EX | 1.2,6 |
| | C106 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 21 | 45 | EX | 1.2,6 |
| | C107 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 07 | 45 | EX | 1.2,6 |
| | C112A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | C112B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C113A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | C113B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C114A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | C114B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C115A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | C115B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C116A | 3'-0" x 8'-0" | F | FRP | PREF | W16 | HM | PTD | - | - | 29 | 45 | EX | 4 |
| | C116B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C118A | 3'-0" x 8'-0" | F | FRP | PREF | W16 | HM | PTD | - | - | 29 | 45 | EX | 4 |
| | C118B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C120A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PERF | - | - | 14 | - | EX | 4 |
| | C120B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C121A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | C121B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C122A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | C122B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | C137 | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 02 | 45 | STL | 7,10 |
| | C138 | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | A | B | 05 | - | MSF | - |
| | C139 | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | A | B | 05 | - | MSF | - |
| | C140 | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | A | B | 05 | - | MSF | - |
| | C141A | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | A | B | 05 | - | MSF | - |
| | C141B | 4'-0" x 4'-0" | WINDOW | - | - | 10 | HM | PTD | - | - | - | - | MSF | - |
| | C141C | 3'-0" x 7'-0" | N | WD | WD1 | 1 | HM | PTD | A | B | 05 | - | MSF | - |
| | C142 | 3'-0" x 7'-0" | F | WD | WD1 | 1 | HM | PTD | A | B | 32 | - | MSF | - |
| | C143 | 3'-0" x 7'-0" | N | WD | WD1 | 3 | HM | PTD | A | B | 05 | - | MSF | - |
| | C144 | 3'-0" x 7'-0" | FG1 | WD | WD1 | 3 | HM | PTD | - | - | 20 | 45 | STL | - |
| | C145A | 3'-0" x 7'-0" | FG1 | FRP | PREF | W9 | ALUM | PREF | - | - | 17 | - | STL | 9 |
| | C145B | 3'-0" x 7'-0" | FG1 | FRP | PREF | 7 | ALUM | PREF | A | B | 19 | - | MSF | - |
| | C145C | 7'-8" x 7'-2" | WINDOW | - | - | 6 | ALUM | PREF | - | - | - | - | MSF | - |
| | C146A | 3'-0" x 7'-2" | FG1 | FRP | PREF | 1 | ALUM | PREF | E | F | 39 | - | STL | - |
| | C146B | 3'-0" x 7'-0" | N | WD | WD1 | 2 | HM | PTD | C | D | 06 | 45 | STL | - |
| | C146C | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 30 | 45 | STL | ADD 2 |
| | C146D | 3'-0" x 7'-2" | FG1 | FRP | PREF | 1 | ALUM | PREF | E | F | 14 | - | STL | - |
| | C147A | PR 3'-0" x 7'-0" | FG1 | FRP | PREF | 2 | ALUM | PREF | C | D | 36 | - | STL | 9 |
| | C147B | | | | | | | | | | | | | |
| | C147C | PR 2'-10" x 7'-0" | F | HM | PTD | 2 | HM | PTD | C | D | 09 | 90 | MAS | ADD 1 |
| | C148A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | E | F | 14 | - | STL | - |
| | C148B | 3'-0" x 7'-0" | N | WD | WD1 | 2 | HM | PTD | C | D | 02 | 45 | STL | - |
| | C148C | 6'-0" x 5'-0" | WINDOW | - | - | 8 | HM | PTD | - | - | - | 45 | STL | - |
| | C149 | 3'-0" x 7'-0" | F | WD | WD1 | 1 | HM | PTD | A | B | 30 | - | MSF | - |
| | C150A | PR 3'-0" x 7'-0" | FG1 | FRP | PREF | W14 | ALUM | PREF | C | D | 37 | - | STL | 5 |
| | C150B | | | | | | | | | | | | | |
| | C151 | 3'-0" x 7'-0" | F | WD | WD1 | 2 | HM | PTD | C | D | 38 | 45 | STL | - |
| | C152 | 3'-0" x 7'-0" | F | WD | WD1 | 1 | HM | PTD | A | B | 32 | - | STL | - |

DOOR SCHEDULE

| UNIT A | DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | H.W. NO. | MIN/LABEL | LINTEL MAT. | REMARKS | |
|--------|----------|---------------|------|------|------|-------|------|------|--------|----------|-----------|-------------|---------|--------|
| | | | TYPE | MAT. | FIN. | TYPE | MAT. | FIN. | JAMB * | | | | | HEAD * |
| | A100A | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | A100B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 06 | 45 | EX | 1.3,6 |
| | A103A | 3'-0" x 7'-0" | FG1 | FRP | PREF | W1 | ALUM | PREF | - | - | 24 | - | EX | 4 |
| | A103B | 3'-0" x 7'-0" | FG1 | FRP | PREF | W1 | ALUM | PREF | - | - | 03 | - | EX | 4 |
| | A105 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 08 | - | EX | 1.2,6 |
| | A106 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 08 | - | EX | 1.2,6 |
| | A107 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 07 | 45 | EX | 1.2,6 |
| | A108 | 3'-0" x 7'-0" | F | WD | WD1 | EX | EX | PTD | - | - | 07 | 45 | EX | 1.2,6 |
| | A109 | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | A110A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A110B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | A111A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A111B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 26 | 45 | EX | 1.2,6 |
| | A112A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A112B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 26 | 45 | EX | 1.2,6 |
| | A113A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A113B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | A114A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A114B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |
| | A115A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A115A | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 26 | 45 | EX | 1.2,6 |
| | A117A | 3'-0" x 8'-3" | F | FRP | PREF | W3 | ALUM | PREF | - | - | 14 | - | EX | 4 |
| | A117B | 3'-0" x 7'-0" | N | WD | WD1 | EX | EX | PTD | - | - | 02 | 45 | EX | 1.2,6 |

| UNIT B | DOOR NO. | DOOR SIZE | DOOR | | | FRAME | | | | H.W. NO. |
|--------|----------|-----------|------|--|--|-------|--|--|--|----------|
|--------|----------|-----------|------|--|--|-------|--|--|--|----------|