PROJECT MANUAL

VOLUME 1 of 1
SPECIFICATION DIVISION 00-10

SECURITY VESTIBULES FOR ELEMENTARY SCHOOLS

GOSPORT
MCCORMICK'S CREEK
PATRICKSBURG
SPENCER

PREPARED FOR:

SPENCER-OWEN COMMUNITY SCHOOLS

DATE: August 9, 2022

LANCER + BEEBE, LLC
Architecture | Planning | Interiors

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VOLUME 1 OF 1
DIVISIONS 00-10

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220 NORTH COLLEGE AVENUE, INDIANAPOLIS, INDIANA 46202

INDEX

VOLUME 1 OF 2

DIVISION 09 - FINISHES

DIVISION 10 - SIGNAGE

END OF INDEX

LETTER OF INSTRUCTIONS

PROJECT NAME: SECURITY VESTIBLUES FOR ELEMENTARY SCHOOLS: GOSPORT, MCCORMICK'S CREEK, PATRICKSBURG AND SPENCER

ALL REQUESTS FOR INFORMATION DURING THE BIDDING PROCESS SHALL BE SUBMITTED IN WRITING BY EMAIL TO: Gary Fisher at gfisher@lancerbeebe.com

Gary Fisher is also available at: 317-432-4832

END OF LETTER OF INSTRUCTIONS

DOCUMENT 00 11 13

NOTICE TO BIDDERS

NOTICE is hereby given that sealed bids will be received as follows:

BY: SPENCER OWEN COMMUNITY SCHOOLS
205 E. Hillside Ave.
Spencer, IN 47440

FOR: SECURITY VESTIBULES FOR GOSPORT ELEMENTARY SCHOOL
, SECURITY VESTIBULES FOR MCCORMICK'S CREEK ELEMENTARY SCHOOL
SECURITY VESTIBULES FOR PATRICKSBURG ELEMENTARY SCHOOL
SECURITY VESTIBULES FOR SPENCER ELEMENTARY SCHOOL

Bids will be opened and publicly read aloud at:

SPENCER OWEN COMMUNITY SCHOOLS
205 E. Hillside Ave.
Spencer, IN 47440

At the following day and time: Wednesday, September 7. 2022 at 2:00 PM local time.

Bids may be delivered to the following location until the time as indicated:

SPENCER OWEN COMMUNITY SCHOOLS
205 E. Hillside Ave.
Spencer, IN 47440

Bids received after the date and time set for receipt and opening of bids as herein indicated will be returned unopened.

Bids will be received for four prime contracts :

Base Bid A: Gosport Elementary School
Base Bid B: McCormick's Creek Elementary School
Base Bid C: Patricksburg Elementary School
Base Bid D: Spencer Elementary

Bid will also be accepted for:

Combination Bid including Gosport, McCormick's Creek, Patricksburg and Spencer Elementary Schools

Bids shall be in full accordance with the Construction Documents which are now on file with the Owner or with the Architect and may be examined by prospective Bidders at the following locations:

Dodge Data & Analytics
4300 Beltway Place, Ste 150
Arlington, TX 76018

Construct Connect
30 Technology Parkway
Norcross, GA 30092

Phone: 413-548-8188
dodge.docs@construcion.com

Phone: 800-699-8640
Fax: 800-508-5370

BX Indiana
1028 Shelby Street
Indianapolis, IN 46203
Phone: 317-423-7080
Fax: 317-423-7094
projects@buildingex.com

BidTool
Construction Data Company Inc.
4201 W. Parmer Lane, Ste A200
Austin, TX 78727
Phone: 888-506-7613
plans@bidtool.net

ISQFT – Construction Software Technology
The Rockwood Exchange
3825 Edwards Rd, Suite 800
Cincinnati, Ohio 45209
Phone: 800-364-2059

Bidders may obtain complete sets of Construction Documents from Reprographix, 437 N. Illinois Street, Indianapolis, IN 46204, Phone: 317-637-3377; www.reprographix.com , upon receipt of a deposit of one hundred dollars ($100.00) for each complete set of Construction Documents requested for each project. Deposits shall be made payable to Lancer + Beebe, LLC.

Digital Files (PDFs) of the drawings and specs are available for purchase with an order for a hardcopy set of drawings and specs with deposit.

DOCUMENT AVAILABILITY: Documents will be available on a deposit basis while supplies last. After the supply is gone, documents will be available on a non-refundable basis only.

DEPOSIT will be refunded in full upon return of Construction Documents to Architect/Engineer in good condition within ten (10) days after date of Bid Opening.

FORFEIT OF DEPOSIT: When documents are not returned under the conditions specified, none of the deposit will be refunded.

Bids shall include BID SECURITY in the form of a Bid Bond or certified check in the amount of a sum no less than 5 percent of the Bid Sum including all add alternates.

BIDDERS are urged to attend a **pre-bid conference** with representatives of the Owner and Architect to discuss the project and related requirements. Prebid conference will convene at 1:00 PM Thursday, August 25th, 2022 in the Spencer Owen Community Schools office located at 200 E. Hillside Ave. Spencer, IN 47460. After a general review of the Work to be performed at all sites, Contractors will have an opportunity to visit each site.

The Owner reserves the right to accept or reject any or all bids and to waive any irregularities in bidding. Base bids may be held for the following period before award of Contract: Sixty (60) Days.

Should a successful Bidder withdraw his bid of fail to satisfactorily execute all of the requirements and enter into a written Contract within ten (10) days after Notice of Acceptance of his bid, the Owner may declare the Bid Security forfeited, not as a penalty, but as liquidated damages.

The successful Bidder shall furnish a Performance Bond and Payment Bond from an approved surety company, which will remain in full force and effect for a period of one (1) years after date of final acceptance of work. Performance Bond and Payment Bond shall be in an amount equal to the following percentage of the Contract Sum: One hundred percent (100%)

END OF DOCUMENT

DOCUMENT 00 21 13

INSTRUCTIONS TO BIDDERS

1.1 SUMMARY

A. Document Includes:
1. Intent.
2. Contract Time.
3. Definitions.
4. Contract Documents identification.
5. Availability of documents.
6. Examination of documents.
7. Inquiries and Addenda.
8. Product substitutions.
9. Site examination.
10. Prebid conference.
11. Subcontractors.
12. Submission procedure.
13. Bid ineligibility.
14. Security deposit.
15. Performance Assurance.
16. Bid Form requirements.
17. Tax Exemption.
18. Bid Form signature.
19. Additional Bid information.
20. Bid opening.
21. Duration of offer.
22. Acceptance of offer.

1.2 INTENT

A. The intent of this Bid request is to obtain an offer for each project to perform work to complete the project for a Stipulated Sum contract, in accordance with Contract Documents.

1.3 CONTRACT TIME

A. Bidders shall insert the number of days required for construction on the Bid Form.

1.4 DEFINITIONS

A. Bidding Documents: Contract Documents supplemented with Notice to Bidders, Instructions to Bidders, Bid Form, Bid Form Supplements and Appendices, and bid securities, identified.

B. Bid: Executed Bid Form and required attachments submitted in accordance with these Instructions to Bidders.

C. Bid Sum: Monetary sum identified by the Bidder in the Bid Form.

1.5 CONTRACT DOCUMENTS IDENTIFICATION

A. The Contract Documents are identified as Project number 21149 as prepared by LANCER + BEEBE, LLC located at 220 N College Ave, Indianapolis, Indiana 46202.

1.6 AVAILABILITY OF DOCUMENTS

A. Bidding Documents may be obtained as stated in Notice to Bidders.

B. Bidding Documents are made available only for the purpose of obtaining offers for this Project. Their use does not grant a license for other purposes.

1.7 EXAMINATION OF DOCUMENTS

A. Bidding Documents may be viewed, by appointment only, at:
Spencer-Owen Community Schools
205 E. Hillside Ave.
Spencer, IN 47460
Contact Dana Geldhof, e-mail: dana@stengroup.com. Phone: 812/639-9709

B. Upon receipt of Bidding Documents verify documents are complete. Notify Architect/Engineer if documents are incomplete.

C. Immediately notify Architect upon finding discrepancies or omissions in Bidding Documents.

1.8 INQUIRIES AND ADDENDA

A. Direct questions in writing by email to jcripps@lancerbeebe.com

B. Verbal answers are not binding on any party.

C. Submit questions not less than 10 days before date set for receipt of Bids. Replies will be made by Addenda.

D. Addenda may be issued during bidding period. Addenda will be sent to known Bidders. Addenda become part of the Contract Documents. Include resultant costs in the Bid Sum.

1.9 PRODUCT SUBSTITUTIONS

A. Where Bidding Documents stipulate particular Products, substitution requests will be considered by Architect/Engineer up to 10 days before receipt of Bids.

B. With each substitution request, provide sufficient information for Architect to determine acceptability of proposed products.

C. When a request to substitute a Product is made, Architect may approve the substitution. Approved substitutions will be identified by Addenda.

D. In submission of substitutions to Products specified, Bidders shall include in their Bid, changes required in the Work and changes to Contract Time and Contract Sum to accommodate such approved substitutions. Later claims by the Bidder for an addition to the Contract Time or Contract Sum because of changes in Work necessitated by use of substitutions will not be considered.

E. A request constitutes a representation that Bidder:
1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
2. Will provide same warranty for Substitution as for specified product.
3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension which may subsequently become apparent.
5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.
6. The product shall be readily available in sufficient quantity to prevent delay of any work, available in the same range of colors, textures, dimensions, gages, types, and finishes as the material specified.
7. The product shall be equal in strength, durability, efficiency, serviceability, ease and cost of maintenance and compatible with the building design and not necessitate design modifications by the Architect/Engineer nor impose additional work of require changes in the work.

1.10 SITE EXAMINATION

A. Examine Project site before submitting a Bid.

B. Contact the Owner's Representative to arrange date and time to visit Project site: Contact Dana Geldhof, e-mail: dana@stengroup.com. Phone: 812/639-9709

C. No claims for extra compensation shall be allowed due to failure of any Bidder to examine conditions which exist at the building site nor for conditions of difficulties encountered in execution of work which may have been avoided by such examination.

1.11 PREBID CONFERENCE

A. Bidders are urged to attend a **pre-bid conference** with representatives of the Owner and Architect to discuss the project and related requirements. Prebid conference will convene at 1:00 PM Thursday, August 25, 2022. in the Spencer Owen Community Schools office located at 200 E. Hillside Ave, Spencer, IN 47460. After a general review of Work to be performed at all sites, Contractors will have an opportunity to visit each site.

B. General contract Bidders, subcontractors and suppliers are invited to attend.

C. Representatives of the Owner and Architect will be in attendance.

D. Summarized minutes of this meeting will be circulated to known Bidders.

E. Information relevant to Bidding Documents will be issued by Addendum.

1.12 SUBCONTRACTORS

A. The Owner reserves the right to reject a proposed Subcontractor for reasonable cause.

B. Refer to AIA Document A201-2007, Article 5 of General Conditions.

1.13 SUBMISSION PROCEDURE

A. Bidders shall be solely responsible for delivery of Bids in manner and time prescribed.

B. Submit two copies of executed offer on Bid Forms provided, signed and sealed with required security deposit in a closed opaque envelope, clearly identified with Bidder's name, Project name, and Owner's name on the outside.

C. The following items must be included with the Bid:
1. Bid Security.
2. Form No. 96 (Revised 2013) Contractor's Bid for Public Work
3. Document 00 41 13 Bid Form – Stipulated Price
4. Written drug testing plan that covers all employees of the bidder who will perform work on the public works project and meets or exceeds the requirements of IC 4-13-18-5 or IC 4-13-18-6.

D. Contractors shall submit an amount for performing Work at each Project site on the designated line provided on the Bid form.

E. Contractors shall have the opportunity to submit a Combination Bid which will include performing Work at ALL Project sites. Submit the Combination Bid amount for performing Work at ALL Project sites on the designated line provided on the Bid form

F. An abstract summary of submitted Bids will be made available to all Bidders following bid opening.

1.14 BID INELIGIBILITY

A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may be declared unacceptable at Owner's discretion.

B. Bid Forms, Appendices, and enclosures which are improperly prepared may be declared unacceptable at Owner's discretion.

C. Failure to provide security deposit, bonds or insurance requirements may invalidate the Bid at the discretion of the Owner.

1.15 SECURITY DEPOSIT

A. Bids shall be accompanied by security deposit as follows:
   1. Bid Bond or certified check in the amount of a sum no less than 5 percent of the Bid Sum plus all add alternates on AIA Document A310 - Bid Bond.

B. Endorse Bid Bond or certified check in name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.

C. Security deposit of accepted Bidder will be returned after delivery to the Owner of the required Performance and Payment Bonds by the accepted Bidder.

D. Include the cost of security deposit in the Bid Sum.

E. After a Bid has been accepted, security deposits will be returned to the respective Bidders.

F. If no contract is awarded, security deposits will be returned.

1.16 PERFORMANCE ASSURANCE

A. Accepted Bidder: Provide a Performance and Payment bond as described in Document 00811 - Supplementary Conditions.

B. Include the cost of performance assurance bonds in the Bid Sum and identify the cost when requested by the Owner.

1.17 BID FORM REQUIREMENTS

A. Complete requested information in the Bid Form and Bid Form Supplements.

1.18 TAX EXEMPTION

A. Materials supplied for this project are exempt from Indiana State sales tax.

1.19 BID FORM SIGNATURE

A. Sign Bid Form, as follows:
   1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
   2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.

   3. Corporation: Signature of a duly authorized signing officers in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the Bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, submit a copy of the by-law

resolution of their board of directors authorizing them to do so, with the Bid Form in the bid envelope.

4. Joint Venture: Signature of each party of the joint venture under their respective seals in a manner appropriate to such party as described above, similar to requirements for Partnerships.

1.20 BID OPENING

A. Bids will be opened publicly immediately after time for receipt of Bids.

B. At the following day and time: Wednesday, Sept. 7, 2022 at 2:00 PM local time.

Bids may be delivered to the following location until the time as indicated:

SPENCER-OWEN COMMUNITY SCHOOLS
205 E. Hillside Ave.
Spencer, IN 47460

Bids delivered by e-mail will not be accepted.

1.21 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of 60 days after bid closing date.

1.22 ACCEPTANCE OF OFFER

A. The Owner reserves the right to accept or reject any or all offers.

B. After acceptance by the Owner, the Architect on behalf of the Owner, will issue to the accepted Bidder, a written Letter of Intent.

C. Notwithstanding delay in the preparation and execution of the Agreement, accepted Bidder shall be prepared, upon written Notice to Proceed, to commence work within seven days following receipt of official written order of the Owner to proceed, or on date stipulated in such order.

D. The accepted bidder shall assist and cooperate with the Owner to prepare the Agreement, and within 7 days following its presentation shall execute Agreement and return it to the Owner.

END OF DOCUMENT

CONTRACTOR'S BID FOR PUBLIC WORK - FORM 96

State Form 52414 (R2 / 2-13) / Form 96 (Revised 2013)
Prescribed by State Board of Accounts

PART I
(To be completed for all bids. Please type or print)

Date *(month, day, year):*_____

1. Governmental Unit (Owner):_____
2. County :_____
3. Bidder (Firm):_____

   Address:_____

   City/State/ZIPcode:_____
4. Telephone Number:_____
5. Agent of Bidder *(if applicable):*_____

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of _____

(Governmental Unit) in accordance with plans and specifications prepared by _____

_____ and dated _____ for the sum of

_____ $_____

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ACCEPTANCE

The above bid is accepted this _____ day of _____, _____, subject to the following conditions: _____

_____

Contracting Authority Members:

_____ _____

_____ _____

_____ _____

PART II

(For projects of $150,000 or more – IC 36-1-12-4)

Governmental Unit: _____

Bidder (Firm) _____

Date *(month, day, year):* _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Expected Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. *(Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)*

2. Please list the names and addresses of all subcontractors *(i.e. persons or firms outside your own firm who have performed part of the work)* that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.

5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

SECTION IV CONTRACTOR'S NON – COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to include anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES FOR PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT.

Dated at _____ this _____ day of _____, _____

_____
(Name of Organization)

By_____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) ss
COUNTY OF_____)

Before me, a Notary Public, personally appeared the above-named _____ and swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____, _____.

_____
Notary Public

My Commission Expires:_____

County of Residence:_____

Part of State Form 52414 (R2 / 2-13) / Form 96 (Revised 2013)

BID OF

_____
(Contractor)

_____
(Address)

_____

FOR

PUBLIC WORKS PROJECTS

OF

_____

_____

_____

_____

Filed _____, _____

_____

Action taken _____

_____

_____

DOCUMENT 00 41 13

BID FORM - STIPULATED PRICE

To: SPENCER-OWEN COMMUNITY SCHOOLS

Project: SECURITY VESTIBULES FOR ELEMENTARY SCHOOLS

Date: .....

Submitted by: .....
(full name)

(full address) .....

.....

(phone number)……..

1. OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by LANCER + BEEBE, LLC for the above mentioned project, we, the undersigned, having become thoroughly familiar with the terms and conditions of the proposed Contract Documents and with local conditions affecting the performance and costs of the work at the place where the Work is to be completed, and having fully inspected the site in all particulars, hereby offer to enter into a Contract to perform the Work for the Sum of:

BASE BID A: GOSPORT ELEMENTARY

……

……$.....dollars, in lawful money of the United States of America.

An $15,000 contingency allowance as described in Section 01200 - Price and Payment Procedures is included in the Base Bid A above.

BASE BID B: MCCORMICK'S CREEK ELEMENTARY

……

……$.....dollars, in lawful money of the United States of America.

An $15,000 contingency allowance as described in Section 01200 - Price and Payment Procedures is included in the Base Bid B above.

BASE BID C: PATRICKSBURG ELEMENTARY

……

……$.....dollars, in lawful money of the United States of America.

An $15,000 contingency allowance as described in Section 01200 - Price and Payment Procedures is included in the Base Bid C above.

BASE BID D: SPENCER ELEMENTARY

……

……$.....dollars, in lawful money of the United States of America.

An $15,000 contingency allowance as described in Section 01200 - Price and Payment Procedures is included in the Base Bid D above.

COMBINATION BID: GOSPORT, MCCORMICK'S CREEK, PATRICKSBURG AND SPENCER ELEMENTARY SCHOOLS

……

……$.....dollars, in lawful money of the United States of America.

An $60,000 contingency allowance as described in Section 01200 - Price and Payment Procedures is included in Combined Bid above.

We have included, the security deposit or Bid Bond as required by the Instruction to Bidders.

All applicable taxes are included in the Bid Sum.

2. ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for sixty days from the bid closing date.

If this bid is accepted by the Owner within the time period stated above, we will:

- Execute the Agreement within seven days of receipt of Notice of Award.

- Furnish the required bonds within seven days of receipt of Notice of Award.

- Commence work within seven days after written Notice to Proceed.

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds, the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit will be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

3. CONTRACT TIME

If awarded this contract, we complete construction in _____ calendars from Notice to Proceed.

5. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # ..... Dated .....

Addendum # ..... Dated .....

Addendum # ..... Dated .....

Addendum # ..... Dated .....

Addendum # ..... Dated .....

6. APPENDICES

The following documents are attached to and made a condition of the Bid:

Bid security in form of .....

7. BID FORM SIGNATURES

.....
(Bidder - print the full name of your firm)
was hereunto affixed in the presence of:

.....
(Authorized signing officer Title)

(Seal)

.....
(Authorized signing officer Title)

(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF DOCUMENT

DOCUMENT 00 43 36

BID FORM SUPPLEMENTS

To: SPENCER OWEN COMMUNITY SCHOOL CORPORATION

Project: SECURED ENTRANCES AT GOSPORT, MCCORMICK'S CREEK, PATRICKSBURG AND SPENCER ELEMENTARY SCHOOLS

Date: .....

Submitted by: .....
(full name)

(full address) .....

.....

In accordance with the Instructions to Bidders, we include the Appendices to Bid Form Supplements listed below. The information provided shall be considered an integral part of the Bid Form.
The following Appendices are attached to this document:

Appendix A – Subcontractors and Materials List:

BID FORM SUPPLEMENTS SIGNATURES

The Corporate Seal of

.....
(Bidder - print the full name of your firm)

was hereunto affixed in the presence of:

.....
(Authorized signing officer Title)

(Seal)

.....
(Authorized signing officer Title)
(Seal)

APPENDIX A – SUBCONTRACTORS AND MATERIALS LIST

Herewith is the list of subcontractors referenced in the bid submitted by:

(Bidder) .....

To (Owner) SPENCER OWEN COMMUNITY SCHOOL CORPORATION

Dated ..... and which is an integral part of the Bid Form.

The two apparent low bidders for General Construction shall submit, in duplicate, completed Subcontractors and Materials List within 24 hours following bid receipt date.

The Owner and Architect/Engineer have the right to choose the Subcontractor, Material or Equipment for any particular item where the Bidder fails to list same.

When products are named and a list of acceptable manufacturers is included in the specifications, Bidders shall select one of the named manufacturers in his Subcontractors and Materials List.

After the submission and approval of this Subcontractors and Materials List by the Architect/Engineer and the Owner, the Contractor shall make no changes or alterations without the written approval of the Architect/Engineer and the Owner.

The following work will be performed (or provided) by subcontractors and coordinated by us:

SECTION	**MATERIAL AND/OR EQUIPMENT**	**MANUFACTURER**	**SUPPLIER**	**INSTALLER**
07 84 00	Firestopping			
07 92 00	Joint Sealers			
08 11 13	Steel Doors			
08 12 13	Steel Frames			
08 14 16	Flush Wood Doors			
08 41 13	Aluminum Storefront			
08 71 00	Hardware			
08 80 00	Glazing			
09 21 16	Gypsum Board Assemblies			
09 91 00	Paints and Coatings			

END OF DOCUMENT

DOCUMENT 00 52 13

AGREEMENT

1.1 SUMMARY

A. Document Includes:
1. Agreement.

1.2 AGREEMENT

A. AIA Document, Standard Form of Agreement between Owner and Contractor Where the Basis of Payment is a Stipulated Sum, forms the basis of Agreement between the Owner and Contractor.

END OF DOCUMENT

DOCUMENT 00 72 00

GENERAL CONDITIONS - AIA

1.1 SUMMARY

A. Document Includes:
   1. General Conditions.

1.2 GENERAL CONDITIONS

A. AIA Document A201-2007, General Conditions of the Contract for Construction, is the General Conditions of the Contract.

1.3 SUPPLEMENTARY CONDITIONS

A. Refer to Document 00 73 00 for modifications to General Conditions.

END OF DOCUMENT

DOCUMENT 00 73 00

SUPPLEMENTARY CONDITIONS

1.1 SUMMARY

A. Document Includes:
1. Supplementary Conditions.

1.2 SUPPLEMENTARY CONDITIONS

A. These Supplementary Conditions modify the General Conditions of the Contract for Construction, AIA Document A201-2007, and other provisions of the Contract Documents as indicated below. All provisions which are not so modified remain in full force and effect.

B. The terms used in these Supplementary Conditions which are defined in the General Conditions of the Contract for Construction, AIA Document A201-2007, have the meanings assigned to them in the General Conditions.

Article 1 - Contract Documents

1. Add the following Subparagraph 1.1.5.1 as follows:

1.1.5.1- In general, mechanical and electrical drawings are diagrammatic and schematic, and cannot indicate every offset, fitting, and accessory required to avoid all conflict with other trades. Contractor shall check drawings of other trades to verify spaces available and make reasonable modifications, as directed, without extra cost to Owner; maintain headroom and other requirements in all areas; and where such requirements appear inadequate, notify Architect/Engineer before proceeding.

2. Add a new Subparagraph 1.2.4 as follows:

1.2.4 Contractor also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Contract Documents and have made such additional surveys and investigations necessary for the performance of the Work at the Contract Sum and in accordance with the requirements of the Contract Documents, and results of all such data with the requirements of the Contract Documents, and that the Contractor enters into the Contract on the basis of its own examination, investigation and evaluation of all such matters and risks associated with the Work, and not in reliance upon any opinions, statements or representations of the Owner or Architect or any of their respective officers, agents, servants or employees.

3. Add a new Subparagraph 1.2.5 as follows:

1.2.5 Contractor represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with the type, nature, sources, availability and compatibility of all material, systems, products, and equipment specified or which have been

proposed or approved as substitutions prior to the execution of the Contract.

4. Add a new Subparagraph 1.2.6 as follows:

1.2.6 "The specifications are, in part, of the brief or "streamlined" type and include incomplete sentences. Omissions of words or phrases such as "The Contractor shall", "as noted on the drawings", "according to the drawings", "a", "an", "the", and "all" are intentional. Omitted words or phrases shall be supplied by reference in the same manner as they are when "note" occurs on the drawings. Words "shall" or "shall be" shall be supplied by inference where a colon (:) is used within sentences or phrases. Words "as per" shall mean "in accordance with". Words "provide" and "work" shall mean furnish, install and connect up complete, in operative conditions and use, all materials, equipment, apparatus and required appurtenances of the particular item to which it has reference. Whenever words "approved", "satisfactory", "directed", "submitted", "inspected", or similar words or phrases are used, it shall be assumed that the word "Architect" follows the verb as the object of the clause, such as "approved by the Architect" and "submitted to the Architect". Where a manufacturer's name is mentioned, words "as manufactured by" or "as made by" shall be understood.

5. Add a new Subparagraph 1.2.7 as follows:

1.2.7 Contractor shall promptly call to the attention of the Owner and Architect any discrepancy or conflict in figures, Drawings, or Specifications that affect its Work. In the event of conflicts or discrepancies between and among the Contract Documents, the Architect shall determine which takes precedence over the other. However, figure dimensions shall take precedence over scale measurements, large scale details shall take precedence over small scale drawings, and drawings of later date shall take precedence over those of earlier date. Any part of the Work shown on the Drawings but not specifically mentioned in the Specifications, or vice versa, shall be considered as part of the Work, the same as though included in both. In the event of an inconsistency or conflict between Drawings and Specifications, or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Architect' s interpretation.

Likewise, the work to be undertaken by Contractor shall include all incidental work necessary as customarily done for the completion of the Project even though it may not be specifically described in the Specifications or Drawings.

6. Add a new Subparagraph 1.2.8 as follows:

1.2.8 In the event of conflicts or discrepancies among the Contract documents, interpretations will be based on the following priorities.

1. The Agreement.
2. Addenda, with those of later date having precedence over those of earlier date.
3. The Supplementary Conditions.
4. The General Conditions of the Contract for Construction.
5. Drawings and Specifications.

In the case of an inconsistency between Drawings and Specifications or within either Document not clarified by Addendum, the better quality or greater quantity of Work shall be provided in accordance with the Architect's interpretation, in every case the more expensive item or method specified or shown shall be figured over any less expensive one. Written dimensions shall be used rather than determined by scale or rule.

7. Add a new Subparagraph 1.2.9 as follows:

1.2.9 Where reference to codes and standards of technical associations and organizations are made in the Contract Documents, the current edition of such codes and standards shall govern unless specified edition dates are included.

8. Add a new Subparagraph 1.2.10 as follows:

1.2.10 The Drawings, Plans and Specifications for the Work and the Project have been prepared for the Owner by the Architect and, accordingly, the Owner makes any express or implied warranty representing the suitability, adequacy, or accuracy thereof.

Article 2 - Owner

1. Modify Subparagraph 2.3.1 by adding the following sentence to the end thereof:

2.3.1 Contractor shall have no right of action or claim as against the Owner or Architect for or on account of orders or directives for work stoppage if given in good faith upon reasonable belief that sufficient grounds exist therefor.

Article 3 - Contractor

1. Add a new Subparagraph 3.3.1.1 as follows:

3.3.1.1 Contractor shall provide and maintain, in full operation at all times during the performance of the Contract, a sufficient crew of laborers, mechanics and foremen to prosecute the Work with dispatch. The Contractor shall provide a full-time superintendent who shall be on the job during all working periods. Additional provisions pertaining to coordination are included in Division 1, General Requirements, of the Specifications.

2. Add a new Subparagraph 3.4.4 as follows:

3.4.4 Labor shall be performed in a workmanlike manner, by mechanics skilled in their respective trades. Standards of Work required throughout shall be of such grade as will bring results of good workmanship. Mechanics whose Work is unsatisfactory to the Owner or Architect, or are considered by either Owner or Architect to be careless, incompetent, unskilled or otherwise objectionable, shall be dismissed from the Work upon notice from the Architect or Owner. Neither the Owner nor Architect shall be responsible for any increased costs of delays caused by such a dismissal.

3. Add a new Subparagraph 3.4.5 as follows:

3.4.5 The Contractor shall perform a criminal history check for all workers including all subcontractors prior to starting work on the project. A list of workers who have successfully passed the criminal history check and who will be working on the project shall be provided to the Owner's representative. Only persons who have successfully passed the criminal history check will be allowed to work on the project. The Contractor and all subcontractors shall provide written verification to the Owner's representative that all persons working on the project have completed and filed valid I-9 forms and are eligible for employment on the project. No person will be employed by the contractor or any subcontractor that have been found to be the perpetrator of sexual or physical abuse of a minor under the age of 18 years of age; including but not limited to a conviction for any of the following felonies: kidnapping, criminal confinement, rape, criminal deviate conduct, child molesting, child exploitation, vicarious sexual gratification, child solicitation, child seduction, sexual misconduct with a minor or incest. No person shall be employed by and the contractor or any subcontractor that has been convicted of: dealing in or manufacturing cocaine, a narcotic drug or methamphetamine, dealing in a schedule I, II, or III controlled substance as defined by IC-35-48-4-2, dealing in a schedule IV controlled substance as defined by IC 35-48-4-3, dealing in a schedule V controlled substance as defined by IC 35-48-4-4, dealing in a counterfeit substance as defined by IC 35-48-4-10(b) or possession of marijuana, cocaine, a narcotic drug or methamphetamine. The Contractor shall at all times enforce strict discipline at the site and shall remove from the site any persons found by the Owner's Representative, Owner or Architect to be disorderly, disruptive to the orderly and efficient progress of the Work, or otherwise exhibiting conduct not in compliance with the Contract Documents. Neither the Owner's Representative, Owner nor Architect shall be responsible for any increased costs or delays caused by such removal.

4. Add a new Subparagraph 3.4.6 as follows:

3.4.6 All labor used throughout the Work and in performance of the Contract shall be acceptable to the Owner and of a standing or affiliation that will permit the Work to be carried on harmoniously and without delay, and that will in no case or under any circumstances cause any disturbance, interference or delay to the progress of the Work. Contractor agrees to proceed with its Work without interruption, regardless of any trade or craft affiliations or the lack thereof on the part of any workmen on the Project. Contractor agrees that where its Work is stopped or delayed or interfered with by

strikes, slowdowns or work interruptions resulting from the acts or failures to act of its employees in concert, or by the breach of any of the terms of this provision, then the Owner, at its option, may terminate the Contract and proceed in accordance with the Contractual Documents.

5. Add a new Subparagraph 3.4.7 as follows:

3.4.7 Contractor shall be obligated to perform all work designated by the Owner or Architect as work included within the scope of the Contract Documents notwithstanding a dispute or claim by the Contractor that such work constitutes extra or additional work.

6. Add the following Subparagraphs 3.4.8 and 3.4.9 to 3.4:
   a. 3.4.8 After the Contract has been executed, the Owners' Representative, Owner and the Architect will consider a formal request of the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications). Refer to Section 01631.
   b. 3.4.9 By making requests for substitutions based on Subparagraph 3.4.8 above, the Contractor:
      1. represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
      2. represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
      3. certifies that the cost data presented is complete and includes all related costs under his Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and
      4. will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be completed in all respects.
      5. time required by the Architect to review the Contractor's request for substitution shall be compensated by the Contractor through the Owner. Compensation will be on an hourly basis per the Architect's current labor rate schedule for employees involved in the review of the request.

7. Change the second sentence of Subparagraph 3.5.1 to read as follows:

3.5.1 All Work not conforming to these requirements, including substitutions not: properly approved and authorized, shall be considered defective.

8. Add new Subparagraphs 3.5.2 through 3.5.12 as follows:
   a. 3.5.2 For a period of one year from the date of final completion and acceptance of the Work by the Owner, as evidenced by the date of the Architect's Certificate of Completion, the Contractor warrants to the Owner all movable windows, apparatus, machinery, mechanical and electrical equipment. For the same period, the Contractor warrants to Owner to make good, at his own expense, any defects, shrinkages, warpages or other faults in Work required under this Contract arising out of defective materials or workmanship, ordinary wear and tear excepted.
   b. 3.5.3 As part of the above warranty, it is expressly understood and agreed that the Contractor warrants that the Contractor's portion of the Work shall be waterproof and weatherproof in every respect.

c. 3.5.4 The Contractor warrants and represents to the Owner that the Drawings and Specifications for the Work are suitable and adapted for said Work, and guarantees the sufficiency of said Drawings and Specifications for their intended purpose and agrees that it will perform said construction work and complete same to the entire satisfaction of the Owner's Representative, Owner and Architect.

d. 3.5.5 The commencement and terms for the guarantees and warranties provided and required by the Contract Documents shall not in any manner be affected by any delay in the commencement, progress or completion of the Work, regardless of the cause therefor.

e. 3.5.6 In addition to all of Contractor's warranties and obligations to correct defective Work provided by law or as set forth in any of the Contract Documents, the Contractor agrees, upon notice from Owner's Representative, Owner or Architect, immediately to repair, restore, correct and cure, at Contractor's expense, all defects and omissions in workmanship and materials and all failures to comply with the Contract Documents which appear within one (1) year from the date of final completion and acceptance of Work by Owner. Contractor shall pay for, and if requested, correct, repair, restore and cure any damage or injury, whenever the same shall occur or appear, resulting from any defects, omissions or failure in workmanship and materials, and indemnify, hold harmless, and defend Owner's Representative and Owner against any and all claims, losses, costs, damages and expenses, including attorney's fees, suffered by Owner as a result of such damage or injury, whenever such damage or injury shall occur or appear.

f. 3.5.7 The foregoing guarantees and warranties shall not shorten any longer warranty or liability period provided for by law or in the plans, drawings or specifications or otherwise received from Contractor or any subcontractor, material supplier or manufacturer of Contractor nor supersede the terms of any liability for defective Work, but shall be in addition thereto, and shall be in addition to all manufacturer's and factory warranties.

g. 3.5.8 Notwithstanding anything to the contrary contained herein with respect to warranties, it is understood and agreed that the foregoing warranties and guarantees shall not affect, limit or impair Owner's right against Contractor with regard to latent defects in the Work which do not appear within the applicable warranty period following acceptance of the Work and which could not, by the exercise of reasonable care and due diligence, be ascertained or discovered by Owner within such warranty period. Contractor shall be and remain liable and responsible to correct and cure any such latent defects which are reported to Contractor by Owner in writing within ninety (90) days after such latent defect first appears or could, by the exercise of reasonable care and due diligence, be ascertained or discovered by Owner.

h. 3.5.9 All guarantees or warranties upon any Work, labor, materials, or equipment by any subcontractor or material supplier of Contractor shall be deemed made by Contractor to Owner. All guarantees and warranties shall survive Owner's final acceptance of the Project. Neither the acceptance of any of the Work by Owner, in whole or in part, nor any payment, either partial or final, by Owner to Contractor, shall constitute a waiver by Owner of any claims against/Contractor for defects in the Work, whether latent or apparent, and no such payment or acceptance of the Work by Owner shall release or discharge Contractor or Contractor's surety from any such claims for breach of such warranties.

i. 3.5.10 Nothing herein intends or implies that the guarantees or warranties shall apply to Work which has been abused or neglected by the Owner or his successor in interest.

j. 3.5.11 Upon30 calendar days from completion of the Work, Contractor shall furnish Owner with copies of all warranties, guarantees, operating manuals relative to equipment installed, and a complete set of reproducible drawings with all field changes noted on them relating to the improvements constructed under the Contract.

k. 3.5.12 If required by the Owner or the Architect, the Contractor shall deliver to the Owner a signed affidavit stating that, to the best of his knowledge, the Work has been constructed in accordance with the Contract Documents. If such an affidavit is required, the Architect will not recommend final payment or issue a final certificate for payment until such affidavit has been delivered to the Owner.

9. Modify Subparagraph 3.6.1 by adding the following sentence to the end thereon:

3.6.1 The Contract Sum includes the cost of such taxes, and Owner may deduct from the Contractor's account any expense the Owner incurs because of the Contractor's failure to comply with applicable taxing laws, rules or regulations of local, state and federal authorities.

10. Add the following Subparagraph 3.6.2 as follows:

3.6.2 "Materials and properties purchased by Contracts with the Owner that become a permanent part of the structure or constructed facility are not subject to the Indiana Gross Retail Tax (Sales Tax). The Contractor shall obtain a copy of the Owner's Exemption Certificate and then issue copies of this certificate to his suppliers when acquiring materials and products for use in this project. The Contractor shall enforce this exemption clause for all of his purchases and for those of his Subcontractors."

11. Modify Subparagraph 3.7.3 as follows: At the start of this Subparagraph, insert the following:

Contractor represents and warrants that it is familiar with all governmental rules, regulations, laws and ordinances pertaining to the Work.

12. Add the following new Subparagraph 3.7.5 as follows:

3.7.5 The Contractor shall give prior notice to utility companies, make all arrangements and provide all services necessary to discontinue utilities or place same service.

13. Add the following Subparagraph 3.7.6 as follows:

3.7.6 - It is the Contractor's responsibility to perform all construction in accordance with appropriate local, state and national laws, statutes, building codes and requirements. All rated construction shall conform to the requirements of similar construction as tested by UL, or another testing organization recognized by the State of Indiana.

14. Add the following Subparagraph 3.7.7 as follows:

3.7.7 - The Contractor shall provide the owner all necessary and required signed statements that the construction is in compliance with local, state and national laws, statutes, building codes and

requirements. These statement must be supplied prior to final payment.

15. Add the following Subparagraph 3.9.4 as follows:

3.9.4 - The Contractor shall not remove the superintendent from the project under any circumstances prior to substantial completion. Exceptions will be made for major illness, incompetence or termination with cause and even so will require the Owner's concurrence. The superintendent can not be removed prior to "Final Completion" without the consent of the Architect/Engineer and written approval of the Owner. The Superintendent shall not be allowed vacation or other time off during the last three months before substantial completion.

16. Add the following Subparagraphs 3.10.4 through 3.10.9 as follows:

a. 3.10.4 The Owner, if deems necessary, may direct the Contractor to Work overtime, in addition to any overtime required to meet the approved progress schedule as incorporated in the Contract Documents, and if so directed Contractor shall Work said overtime. Provided that the Contractor is not in default under any of the terms or provisions of the Contract or of any of the other Contract Documents, the Contractor will be reimbursed for such actual additional wages paid, if any, at rates which have been approved by the Architect and the Owner plus taxes imposed by law on such additional wages, plus workmen's compensation insurance and levies on such additional wages if required to be paid by the Contractor.

b. 3.10.5 The following requirements will govern in connection with such additional overtime required under Subparagraph 3.10.4. The Contractor and his Subcontractors shall be required to submit a daily statement of employees by name, trade classification, hourly rate, premium or overtime hours worked, and signed by the Owner to substantiate his premium or overtime charges, all in accordance with the Owner's and standard procedures. These changes shall be submitted weekly for the Owner's records. All such statements shall be submitted in three (3) copy form, including the original statement. The contractor will be reimbursed for the overtime premium and in addition applicable contributions to Federal and State Unemployment Tax and Federal Insurance Contributions Tax. These taxes shall be a percentage factor to be applied to the premium cost. No overhead and profit will be allowed. Each Contractor involved will be required to submit to the Owners, as promptly as possible, an itemized breakdown of the foregoing percentage and shall furnish a photostatic copy of the applicable State unemployment experience rate or a statement from the State Unemployment Security Commission setting forth said experience rate. In addition, in the case of major premium time charge, the union agreements for the trades involved shall be submitted along with the first premium time proposal. Such adjustments shall be subject to an audit by the Architect and the Owner and shall be recorded on the Contractor's books in a manner to facilitate such audit.

c. 3.10.6 If, however, the progress of the Work or of the Project be delayed by any fault or neglect or act or failure to act of the Contractor or any of its officers, agents, servants, or employees, then the Contractor shall, in addition to all of the other obligations imposed by the Contract upon the Contractor in such cases, and at its own cost and expense, Work such overtime as may be necessary to make up for all time lost to avoid delay in the completion of the Work and of the Project. If, after written notice is given, the Contractor refuses to Work overtime required

to make up lost time or to avoid delay in the completion of the Work and of the Project, the Owner may hire others to perform the Work and deduct the cost from the Contractor's Contract amount.

d. 3.10.7 Should the progress of the Work or of the Project be delayed by any fault or neglect or act or failure to act of the Contractor or any of its officers, agents, servants or employees so as to cause any additional cost, expense, liability or damage to the Owner or Architect, or any damages or additional costs or expenses for which the owner, or Architect may or shall become liable, the Contractor shall and does hereby agree to compensate the Owner and the Architect and to indemnify them against all such costs, expenses, damages and liability.

e. 3.10.8 If the Owner considers it necessary for the Contractor or Subcontractor to cease Work at a designated point at any time for the orderly progress of the Work, each Contractor or Subcontractor, when directed by the Owner's Representative or Owner, shall transfer his men to such point or points as directed, and execute such portions of his Work as required to enable others to properly carry on their Work without delay.

f. 3.10.9 Additional provisions pertaining to the progress schedule are included in Division 1, General Requirements.

17. Add new Subparagraphs 3.13.2 and 3.13.3 as follows:

a. 3.13.2 If the Owner requires the Contractor to relocate materials which have been stored on site or within the building, the Contractor shall relocate such materials at no additional cost to the Owner.

b. 3.13.3 The Contractor is responsible for its site access. The Contractor shall keep roads, walks, ramps, etc. on and adjacent to the Project site in good working order and condition and free from obstructions which might present a hazard to or interference with traffic. When construction operations necessitate the closing of traffic lanes, the Contractor shall be responsible for arranging such closings in advance with the authorities having jurisdiction, the Owner, and adjacent property Owners. The Contractor shall provide adequate barricades, signs and other devices for traffic guides and public safety.

18. Add new Subparagraphs 3.14.3, 3.14.4 and 3.14.5 as follows:

a. 3.14.3 Cutting and patching shall be performed by the proper trades or crafts necessary for the material involved, but the cost of same shall be borne by the Contractor requiring the cutting and patching.

b. 3.14.4 Patching shall mean the restoration of a surface or item to its original condition to match the existing adjoining surfaces unless otherwise indicated, noted, detailed or specified.

1. When patching involves painting, special coating, vinyl fabric or other applied finish, the entire surface affected (i.e., wall or ceiling) shall be refinished as a part of this requirement.

c. 3.14.5 Cutting and patching includes cleaning of all surfaces soiled by this work.

19. Add the following to Subparagraph 3.16:

3.16 – The Owner's Representative, Owner and Architect shall have access to the work at all times.

Article 7 - Changes in the Work

1. Modify Subparagraph 7.3.6 as follows:

In the last part of the second sentence, delete the words "a reasonable allowance for overhead and profit" and substitute "an allowance for overhead and profit in accordance with the schedule set forth in Subparagraph 7.3.6 as amended." This cost must include cost of supervision and project management, on or off site, Contractor's off site expense.

In the eighth line, change the word "Architect" to "Owner and Architect's".

2. Add a new Subparagraph 7.3.6.6 as follows:

7.3.6.6 In Subparagraph 7.3.3.3 and 7.3.3.4 the allowance for overhead and profit combined, included in the total cost to the Owner, shall be based on the following schedule:

a. For the Contractor, the work performed by the Contractor's own forces, ten percent (10%) of the cost.
b. For the Contractor, for work performed by his Subcontractor, ten percent (10%) of the amount due the Subcontractor.
c. For each Subcontractor or Sub-Subcontractor involved, for work performed by his own forces, ten percent (10%) of the cost.
d. For each Subcontractor, for work performed by his Sub-Subcontractors, ten percent (10%) of the amount due the Sub-Subcontractor.
e. Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.1.4.
f. In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs as directed by the Owner's Representative showing quantities, with unit price of labor and materials for each quantity, including those items furnished by Subcontractors. Where major cost items are subcontracts, they shall be itemized also and a copy of their quotations, itemized as indicated above, shall be included in the proposal. In no case will a change involving over $500.00 be approved without such itemization.
g. "Cost" is to include supervision cost.

3. Add a new Subparagraph 7.3.6.7 as follows:

7.3.6.7 No action, conduct, omission, prior failure or course of dealing by the Owner's Representative or Owner shall act to waive, modify, change or alter the requirements that change orders must be in writing and signed by the Owner and Contractor, and that such written change orders are the exclusive method of effecting any change to the Contract Sum or Contract Time.

The Contractor acknowledges that the Contract Sum and Contract Time cannot be changed by implication, oral agreements, actions, inactions, course of conduct, or constructive change order.

Article 8 - Time

1. Add a new Subparagraph 8.2.3.1 as follows:

8.2.3.1 Inasmuch as the completion of the Project within the prescribed time is dependent upon the close and active cooperation of all those engaged therein, it is, therefore, required that the Contractor shall lay out and install his Work at such time or times and in such manner as consistent with the schedule to permit the carrying forward of the work of other contractors.

2. Add a new Subparagraph 8.2.4 as follows:

8.2.4 - Except as otherwise provided herein, substantial completion of work shall be within the number of calendar days stated by the Contractor in Proposal Form (Form 96) and shall become a contract obligation. The time for completion of the Work shall be extended for the period of any excusable delay, which term shall include only those delays directly caused by any of the reasons enumerated in the following Sub-Paragraphs 8.3.2 and 8.3.3.

3. Add a new Subparagraph 8.2.5 as follows:

8.2.5 - Completion shall be understood to be substantial completion for the Owner's beneficial occupancy, with only minor "punch list" items yet to be completed and items such as balancing of heating system, etc., which cannot be completed due to climatic conditions.

4. Add a new Subparagraph 8.2.6 as follows:

8.2.6 Whenever it may be useful or necessary for the Owner to do so, before final inspection and acceptance of the Project, the Owner may take possession of the Project or parts thereof at any time that it is determined by the Architect that the construction has been completed to a point where the Owner can occupy or use said Project, or parts thereof, without impairment to Contractor's Work. The Owner may at such time install furnishings and equipment as he sees fit or may at his discretion award separate Contracts for this purpose. It is recognized that some of the Contractor's Work may not be complete at such time and the Contractor shall make all reasonable efforts to complete the Work as quickly as possible. Such use or occupation shall not relieve the Contractor of his guarantee of said Work and materials nor of his obligation to make good at his own expense any defective materials or workmanship which may occur or develop prior to Contractor's release from responsibility to the Owner.

However, the Contractor shall not be responsible for the maintenance of such portion of the Work as may be used or occupied by the Owner, nor for any damage thereto that is due to or caused by the negligence of the Owner during such period of use or occupancy.

5. Modify Subparagraphs 8.3.1 through 8.3.3 by deleting them in their entirety and replace them with the following:
   a. 8.3.1 If the Contractor is delayed at any time in the progress, performance or completion of any portion or portions of the whole of the Work contemplated by its Contract with Owner as the result of flood, cyclone, hurricane, tornado, earthquake or other similar catastrophe, or as the result of Acts of God, the public enemy, Acts of the Government, or fires, epidemics, quarantine restrictions, strikes or labor disputes, freight embargoes or unusual delay in transportation, unavoidable casualties, or on account of any acts or omissions of the Owner, Architect, or others engaged by them (except as herein provided), or by their

employees, agents or representatives, or by changes ordered in the Work by the Owner which are not required to correct problems or discrepancies in the Contractor's Work, or by any other causes which the Contractor could not reasonably control or circumvent, and which are not due to any fault, neglect, act or omission on Contractor's part, and the risks of which are not otherwise assumed by Contractor pursuant to the provisions of the Contract Documents, then the Contract Time for completion of the portion or portions of the Work directly affected by such delay, shall upon timely request of the Contractor, be extended by a period equivalent to the time lost by reason of any and all of the aforesaid causes. Said period shall be as approved and certified by the Architect and the Owner.

b. 8.3.2 No extension of time shall be granted for delays on account of, or resulting from, weather conditions or other natural phenomenon of normal intensity for the locality or other weather conditions except for the catastrophic weather conditions mentioned in the preceding Subparagraph 8.3.1, unsuitable ground conditions, inadequate construction forces, the failure of the Contractor to place orders for equipment or materials sufficiently in advance to insure their delivery when needed, or delays resulting from interruptions to or suspensions of Contractor's Work so as to enable other contractors to perform their Work.

c. 8.3.3 Any claim for an extension in the Contract Time shall be based on written notice delivered to Owner and Architect within seventy-two (72) hours of the commencement of the event or occurrence giving rise to the claim. Such notice must set forth (a) the cause of the delay, (b) a description of the portion or portions of the Work affected thereby, and (c) all details pertinent thereto. Notice of the extent of the claim with supporting data, including application for the specific number of days extension of time requested shall be delivered to Owner’s Representative, Owner and Architect within twenty (20) days of such occurrence unless Owner allows an additional period of time to ascertain more accurate data.

d. 8.3.4 It is a condition precedent to the consideration or prosecution of claims relating to any delays, suspension, hindrance or causes which justify an extension of the Contract Time, that such claims be made and furnished in strict accordance with all applicable time limits provided in this Article. Otherwise, if the Contractor fails to comply, such claims shall be waived, invalid and unenforceable as against the Owner and Architect.

e. 8.3.5 The Contractor agrees that, whether or not any delay shall be the basis for an extension of time, he shall have no claim against the Owner’s Representative or Owner for an increase in the Contract Price, nor a claim against the Owner’s Representative, Owner or Architect for a payment or allowance of any kind for damage, loss or expense resulting from delays nor shall Contractor have any claim for damage, loss or expense resulting from interruptions to, or suspension of his Work to enable other Contractors to perform their Work. As between the Contractor and Owner, except for delays caused by acts constituting intentional interference by the Owner with the Contractor's performance of its Work when such acts continue after the Contractor's written notice to the Owner’s Representative and Owner of such interference, the Contractor shall assume the risk of all suspensions of, delays in or hindrances to the performance of the Work, regardless of the length thereof, arising from any and all causes whatsoever, including without limitation, those due to any acts or omissions of the Owner’s Representative, Owner, other contractors or subcontractors, except only to the extent that an extension of time may be due to the Contractor as

expressly provided for in this Article for such suspension, delay or hindrance. The Contractor shall bear all costs, expenses and liabilities which he may incur in connection with such suspensions, delays or hindrances, and all such suspensions, delays or hindrances, costs, expenses and liabilities of any nature, whatsoever, whether or not provided for in this Contract, shall conclusively be deemed to have been within the contemplation of the parties. The only remedy available to the Contractor shall be an extension of time.

1. 8.3.5.1 The Owner's exercise of any of its rights under the Contract Documents, including but not limited to, its rights regarding changes in the Work, regardless of the extent or number of such changes, performance of separate work or carrying out the Contractor's Work by the Owner directing overtime or changes in the sequence of the Work, withholding payment or otherwise exercising its rights under the provisions of Articles 9 and 14 hereof, or exercising any of its remedies of suspension of the Work or requirements of correction or re-execution of any defective work shall not, under any circumstances, be construed as intentional interference with the Contractor's performance of the Work.

f. 8.3.6 In the event of a dispute between the Contractor and Owner concerning the period of such time extension, the matter shall be referred to the Architect whose decision thereon shall be final and binding upon the parties. Such extension or extensions of time as determined by the Owner's Representative, Owner or the Architect shall release and discharge the Owner's Representative, Owner and the Architect of and from any and all claims of whatever character by the Contractor on account of the aforesaid or any other causes of delay.

g. 8.3.7 Notwithstanding any provision of this Contract, whether or not relating to the Contract Time, the Owner makes no representation or guarantee as to the date or time that the Project site or any portion thereof will be made available to the Contractor for the performance of the Work, or as to weather conditions at the Project site will be such as to permit the Work to be performed thereon without interruption or by any particular sequence or method or as to whether the performance of the Work can be completed by the time required under this Contract or by any other time.

h. 8.3.8 Whenever in connection with this Contract it is required, expressly or otherwise, that the Owner shall perform any act relating to the Contract, including making available or furnishing any real property, materials, or other things, no guarantee is made by the Owner as to the time of such performance, and delay of the Owner in fulfilling such requirements shall not result in liability of any kind on the part of the Owner except only to the extent that an extension of time may be due as expressly provided for in this Article.

Article 9 - Payments and Completion

1. Add a new Subparagraph 9.2.2 as follows:

9.2.2 The Schedule of Values shall be prepared in a manner as approved by the Owner's Representative that shows each major portion of the Work as a separate line item. The Contractor shall identify those line items of Work that will be accomplished by Subcontractors.

2. Add a new Subparagraph 9.2.3 as follows:

9.2.3 Contractor shall obtain written concurrence in such schedule of values from the Surety furnishing any Performance Bond and Labor and Materials Payment Bond. Copy of written concurrence by the Surety shall be submitted by the time of written submission.

3. Add a new Subparagraph 9.2.4 as follows:

9.2.4 Said schedule shall include a value of two (2) percent closeout cost associated with each subcontractor and is to be clearly itemized on the schedule.

4. Modify Subparagraph 9.3.1 by adding the following:

Two percent closeout cost associated with each subcontractor and is the end thereof:

a. 9.3.1 Progress payment requests shall be to be clearly itemized on the schedule. submitted on a notarized AIA Document G702, Application and Certificate for Payment, supported by AIA G703, Continuation Sheet. These requests shall detail the value of the various materials stored on the site and the value of the various types of labor performed during the period of time since the previous payment request. The Contractor shall attach to each payment request, a statement certifying that all payments due the Contractor from previously issued Certificates for Payment have been paid. Contractor shall furnish such additional supporting data substantiating the Contractor's right to payment as the Owner or Architect may require.

Payment will be recommended by Owner's Representative, Architect, and approved by the Owner, based on ninety percent (90%) of the estimated value of labor performed and materials incorporated in the Work, plus ninety percent (90%) of the value of non-perishable materials suitably stored at the site. Stored materials shall not be removed from the site without permission of the Owner.

b. Add the following Subparagraphs 9.3.1.3 through 9.3.1.6 as folllows:

1. 9.3.1.3 - Until the Work is 50 percent complete, the Owner shall pay 90 percent of the amount due the Contractor on account of progress payments. At the time Work is 50 percent complete and thereafter, the Architect will authorize remaining partial payments to be paid in full.
2. 9.3.1.4 - Until his Subcontract is fifty percent (50%) complete, a Subcontractor shall be paid ninety percent (90%) of the earned sum by the Contractor. At the time his Subcontract is fifty percent (50%) complete, if the manner of completion of his Subcontract and its progress are and remain satisfactory to the Contractor and the Architect/Engineer, and in the absence of other good and sufficient reasons, he shall be paid in full on the remaining progress payments.
3. 9.3.1.5 - The full contract retainage may be reinstated if the manner of completion of the work and its progress do not remain satisfactory to the Architect/Engineer, Owner's Representative or the Owner, or for other good and sufficient reasons.
4. 9.3.1.6 - The Owner's Representative, Owner, Contractor, and the Architect/Engineer shall cooperate to the end that retentions shall be paid promptly when all conditions of the contract have been met.

5. Add the following Subparagraphs 9.3.2.1 to 9.3.2 as follows:

9.3.2.1 - Payment for Stored Material and Equipment will be made if the Contractor includes with each monthly request the following two paragraphs to certify that all material and equipment for which payment is requested is in fact paid for the Contractor and becomes the property of the Owner. The Architect and Owner's Representative reserves the right to observe building materials, stored off-site, for which the Contractors are requesting payment. If building materials are stored more than five miles from the project site or the Architect's office, the Prime Contractor requesting payment shall compensate the Architect and Owner's Representative both for time and expense in making this review.

a. "The Contractor certifies that all stored materials included in this Application for Payment are free and clear of all liens, claims, security interests and encumbrances and that no work, materials, or equipment covered hereby is subject to any retained interest by any other person."

b. "Title to all work materials and equipment covered by this Application for Payment which has not heretobefore passed to the Owner is hereby conveyed and transferred to the Owner effective upon payment of this Application for Payment."

6. Add the following to Subparagraph 9.4.3:

"ESCROW ACCOUNT FOR RETAINAGE, applicable to contracts in amounts of $100,000 or more, in accordance with Indiana Statutes."

7. Add new Subparagraph 9.5.4 as follows:

9.5.4 In the event Owner withholds any payment, partial or final, from the Contractor by virtue of Contractor's failure to make payments properly to subcontractors, laborers, and material suppliers for labor, materials, and/or equipment furnished to the Project, Owner may, but shall not be obligated or required to, make direct payment on behalf of Contractor of any part or all of such sums due and owing to said subcontractors, material suppliers and/or laborers for their labor, materials or equipment furnished to the Project, not to exceed the Contract Sum remaining due and owing to Contractor, and charging all such direct payments against the Contract Sum under the Contract. Before making any such direct payments for labor, materials or equipment, Owner first shall give Contractor three (3) days' written notice stating Owner's intention to make such payment and setting forth the names of the subcontractors, material suppliers and/or laborers which Owner intends to pay directly, the amounts to be paid them, and the reason therefor. If Contractor does not pay or otherwise satisfy such bills, statements and/or claims of the parties so identified within two (2) days after receipt of such notice or give Owner satisfactory assurances that the same will be paid or otherwise satisfied, Owner may proceed with such payment; provided, however, nothing contained in this paragraph shall create any personal liability on the part of the Owner to any subcontractor, material supplier or laborer, or any direct contractual relationship between Owner and them.

8. Add new Subparagraph 9.5.5 as follows:

9.5.5 If any claim or lien is made or filed with or against the Owner, the Project, real estate, or contract proceeds by any person claiming that Contractor or any subcontractor or other person for whom Contractor is liable has failed to make payment for labor, services, materials, equipment, taxes or other items or obligations furnished or incurred for or in connection with the Work, or if any time there shall be evidence of such non-payment or of any claim or lien

which is chargeable to Contractor, or if Contractor or any subcontractor or other person for whom Contractor is liable causes damage to the Work or to any other Work on the Project, or if Contractor fails to perform or is otherwise in default under any of the terms or provisions of the Contract Documents, Owner shall have the right to retain from any payment then due or thereafter to become due an amount which it deems sufficient to (1) satisfy, discharge and/or defend against such claim or lien or any action which may be brought or judgment which may be recovered thereon, (2) make good any such non-payment, damage, failure or default, and (3) compensate the Owner and Architect for and indemnify them against any and all losses, liability, damages, costs, expenses including legal fees and disbursements which may be sustained or incurred by either or both of them in connection therewith. Owner shall have the right to apply and charge against Contractor so much of the amount retained as may be required for the foregoing purposes. If the amount retained is insufficient therefor, Contractor shall be liable for the difference and shall pay the same to the Owner.

9. 9.6 - "Progress Payments". Add the following to 9.6.1 and Subparagraphs 9.6.8 through 9.6.13 to 9.6:
   a. 9.6.1 - The Schedule of Values so prepared by the Contractor, reviewed by the Owner's Representative, Architect/Engineer, and concurred by the Surety, shall constitute the basis of progress payments to the Contractor, and payments made pursuant to regards the Architect, the Contractor and the Surety on any bonds be deemed properly made at the request of the Contractor and the Surety.
   b. 9.6.8 - Upon commencement of the Work, an escrow account shall be established in a financial institution chosen by the Contractor and approved by the Owner.
   c. 9.6.9 - The escrow agreement shall provide that the financial institution will act as escrow agent, will pay interest on funds deposited in such account in accordance with the provisions of the escrow agreement and will disburse funds from the account upon the direction of the Owner as set forth below. Compensation to the escrow agent for establishing and maintaining the escrow account shall be paid from interest accrued in the escrow account.
   d. 9.6.10 - As each progress payment is made, the retainage with respect to that payment shall be deposited by the Owner in the escrow account.
   e. 9.6.11 - Interest earned on retainage will be maintained proportionally to the amount of retainage which is maintained, and any retainage which is released to the contractor will also be released with the appropriate amount of interest earned at the time that the retainage is released to the Contractor.
   f. 9.6.12 - When the Contractor has fulfilled all of the requirements of the Contract providing for reduction of retained funds, the escrow agent shall release to the Contractor one-half of the accrued funds but none of the interest thereon. When the work has been fully completed in a satisfactory manner and the Architect has issued a final Certificate for Payment, the escrow agent shall pay to the Contractor the full amount of funds remaining in the account, including net balance of the interest paid to the account, but less any interest that may have accrued for the benefit of the Owner, which shall be paid for the Owner.
   g. 9.6.13 - If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor, the escrow agent shall make payment to the Contractor as provided in Subparagraph 9.10.3

10. Add new Subparagraph 9.10.6 as follows:

9.10.6 - Final Payment, including all escrowed principal and escrowed income shall be due within sixty-one (61) days following the Date of Substantial Completion, as defined above. If

at that time there are any remaining uncompleted minor items, an amount equal to two hundred percent (200%) of the value of each item as determined by the Owner's Representative and the Architect/Engineer shall be withheld until all such items are complete. The cost of the review estimate and other efforts necessary to establish the value of the incomplete work will be deducted from the remaining funds owed to the Contractor.

11. Add Paragraph 9.11 and Subparagraph 9.11.1 as follows:
    a. 9.11 - Owner cost incurred due to incomplete work.
    b. 9.11.1 - The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner all sums incurred and attributable to the work not being completed within the number of days stated on the bid form including extensions of time properly granted and within 60 days after Substantial Completion.

Article 10 - Protection of Persons and Property

1. Modify Subparagraph 10.2.2 by adding the following sentence to the end thereof:

10.2.2 The Contract Sum includes the cost of such notices and compliance, and Owner may deduct from the Contractor's account any expense the Owner incurs because of the Contractor's failure to comply with such laws, ordinances, rules, regulations and lawful orders.

2. Add a new Subparagraph 10.2.4.1 as follows:

10.2.4.1 - When use or storage of explosives and other hazardous materials or equipment or unusual methods are necessary, the Contractor shall give the Owner reasonable advance notice.

3. Add a new Subparagraph 10.2.8 as follows:

10.2.8 The Contractor shall comply with all applicable safety recommendations of the Associated General Contractors of America, American National Standards Institute and National Fire Protection Association, the Occupational Safety and Health Act, and all special safety and security requirements of the Owner. If any inconsistency exists between the provisions of this Subparagraph 10.2.8 and Subparagraph 10.2.2, Subparagraph 10.2.2 shall take precedence.

4. Add a new Subparagraph 10.2.9 as follows:

10.2.9 All damage, injury or loss to any property referred to in Paragraph 10.2 caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by Contractor. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and accepted by Owner.

5. Add a new Subparagraph 10.2.10 as follows:

10.2.10 Contractor shall indemnify, save harmless and defend Owner’s Representative and Owner from any liability, including any and all claims, damages, losses, costs, attorneys' fees and other professional fees, resulting from any violation of all such applicable laws, ordinances, rules, regulations, lawful orders and safety requirements referred to in Paragraph 10.2.

Article 11 - Insurance

1. Delete Subparagraph 11.1.2 in its entirety and substitute the following:

11.1.2 The Contractor shall not commence the Work until he has obtained all insurance required under this section and has submitted a Certificate of Insurance form to the Owner. Certificates shall be furnished on AIA Document G705 or the Accord Form and submitted to the Architect, in duplicate, at least five (5) days prior to starting Work. The Certificate shall provide for sixty (6) days prior written notice to the Owner and Architect of policy cancellation or of material change. If requested, a certified copy of the policies shall be submitted to the Architect for his review. The Owner, the Owner's Representative and the Architect shall be named as additional insureds for those insurance coverages carried and maintained by the Contractor except as respects workers' compensation. The Contractor shall maintain the above insurance at all times until completion of the Work or later, as provided in the Contract Documents.

2. Add a new Subparagraph 11.1.2.1 as follows:

11.1.2.1 In the event the Contractor engages Subcontractors for all or a portion of the Work required by its Contract, the Contractor will require any and all Subcontractors to also assume all of the duties, obligations and requirements in this Article. The Contractor shall require such Subcontractors to provide Certificates of Insurance evidencing the insurance, and naming the Contractor, Architect, Owner’s Representative and Owner as additional insureds, except as respects worker's compensation insurance, and that the insurance carried and maintained by the Subcontractor meets all of the requirements of this Article. The Contractor shall not permit any Subcontractor to commence Work until a Certificate of such insurance has been submitted and on file with the Contractor.

3. Add a new Subparagraph 11.1.2.2 as follows:

11.1.2.2 The Contractor's Commercial General Liability Insurance shall include premises - operations (including explosion, collapse and underground coverage) elevators, independent contractors, products liability, completed operations, and blanket contractual liability on all written contracts, all including broad form property damage coverage.

4. Add a new Subparagraph 11.1.2.3 as follows:

11.1.2.3 The Contractor's Commercial, General and Automobile Liability Insurance, as required by Subparagraphs 11.1.1, 11.1.2, 11.1.2.1 and 11.1.2.2 shall be written for not less than limits of liability as follows, or as required by law, whichever is greater, and shall name the Owner and Project Manager as additional insureds:

a.	Worker's Compensation Employer's Liability	Statutory $1,000,000 Each Accident
b.	Commercial General Liability	Bodily Injury & Property Damage
	Commercial Form Including: Premises-Operations	$2,000,000 Each Occurrence
	Explosion & Collapse -Hazard	$2,000,000 General Aggregate
	-Underground Hazard -Products/Completed Operational Hazard Contractual Insurance	$2,000,000 Product/ Completed Operation Aggregate
	-Broad Form Property Damage	
	-Independent Contractors	
	-Personal Injury (with Contractual and Employee Exclusions Deleted)	$2,000,000 Personal Injury
c.	Comprehensive Automobile Liability (Including Owned, Non-Owned, and Hired Vehicles)	
	Bodily Injury and Property Damage Combined Single Limit $2,000,000	

5. Add a new Subparagraph 11.1.2.4 as follows:

11.1.2.4 For all worker's compensation and employer's liability insurance required hereby, Contractor shall require wavier of subrogation for itself and for all subcontractors, or others performing Work on the Project pursuant to the terms of Contractor's Contract with Owner.

6. Add a new Subparagraph 11.1.2.5 as follows:

11.1.2.5 Commercial General Liability Insurance may be arranged under a single policy for the full limits required or by a combination of underlying policies with the balance provided

by an Excess or Umbrella Liability Policy in the amount of $5,000,000.

7. Delete Subparagraph 11.4.1 and substitute the following:

11.4.1 - The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds may be obtained through the Contractor's usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to one hundred percent (100%) of the Contract Sum.

a. 11.4.1.1 - The Contractor shall deliver the required bonds to the Owner not later than three (3) days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

b. 11.4.1.2 - The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

8. Add a new Subparagraph 11.4.3 as follows:

11.4.3 - Each Contractor to whom awards are made, shall furnish a Performance Bond and Labor and Material Payment Bond with submission of his Contract to the Owner. The Contractor shall use a Surety for this Performance Bond and Labor and Material Payment Bond one of the acceptable companies listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies": Circular 570, latest Revision, Department of the Treasury. The Contractor shall use a surety company that can underwrite the entire amount of the Performance Bond and Labor and Material Payment Bond. Underwriting limitations for the acceptable companies are also contained in Circular 570. Said Performance Bond and Labor and Material Payment Bond shall be in amount not less than the following percentage of the Contract Sum:

One hundred percent (100%)

Performance Bond and Labor Material Payment Bond shall be security for the following:

The faithful performance of all provisions of the Contract and satisfactory completion of the work included thereunder.

The payment of all persons performing labor and furnishing materials in connection with the Contract.

The covering of all guarantees included herein.

The addition to the paragraphs above, this Bond shall guarantee the Owner for a period of one (1) year after the date of final payment of the work by the Owner that all workmanship and materials performed and furnished as part of this Contract are in accordance with the Drawings and Specifications and that the Contractor shall remove any defects due to faulty workmanship and/or materials that shall appear within the guarantee period.

Article 12 - Uncovering and Correction of Work

1. Add a new Subparagraph 12.2.6 as follows:

12.2.6 Contractor shall return to project up to 24 months from date of substantial completion to repair all masonry cracks inside or out, and establish new control joints as required.

Article 13 - Miscellaneous Provisions

1. Modify Subparagraph 13.2.1 by adding the following to the end thereof:

13.2.1 Neither this Contract nor any monies due or to become due hereunder shall be assignable without the prior written consent of the Owner's Representative and Owner, neither shall the whole or any part of this Contract be sublet without such prior written consent. Any such assignment or subletting without prior written consent by the Owner shall be void and of no effect and shall vest no right of action in the assignee or subcontractor as against the Owner's Representative, Owner or Architect. Owner's Representative or Owner's consent to any subletting shall not be deemed to create any contractual relationship between the Owner's Representative or Owner and any subcontractor to whom the work or any portion thereof is sublet and shall not vest any right or right of action in such subcontractor against Owner's Representative or Owner.

2. Add a new Subparagraph 13.4.3 as follows:

13.4.3 Every provision of the Contract is intended to be severable such that, if any term or provision thereof is illegal or invalid for any reason whatsoever, such provision shall be severed from the Contract and shall not affect the validity of the remainder of the Contract. A waiver of any breach or default under the Contract shall not constitute a waiver of any other breach or default of any provision hereunder.

3. Add a new Subparagraphs 13.5.7, 13.5.8, 13.5.9, 13.5.10 and 13.5.11 as follows:
   a. 13.5.7 Where materials are specified to conform to the standard specifications of the American Society for Testing and Materials, American Concrete Institute, American Institute of Steel Construction, other recognized technical organizations with the Federal Government, but testing is not required in connection therewith, the Contractor shall furnish certificates to the Architect and Owner's Representative as evidence that the proposed products meet requirements of standard specifications cited.
   b. 13.5.8 Notices required by this Paragraph shall be delivered in writing to the Architect no less than three (3) days prior to inspection, test or approval date. Notices shall specify the location and time that inspection, test or approval will be made.
   c. 13.5.9 If any portion of the Work to be inspected, tested or approved under the observation of the Owner's Representative, Architect or Owner is not ready for such inspections, tests or approvals at the time designed in the Contractor's notice to the Owner's Representative or Architect, the Contractor shall bear all costs for Owner's Representative and Architect's additional services made necessary by such delay.

d. 13.5.10 Certificates of inspection or testing shall indicate if that portion of the Work inspected or tested meets the minimum requirements of the standard or regulation specified. Certificates shall include the name of Contractor, name of Project and location and date inspection or test was conducted.

e. 13.5.11 Additional provisions pertaining to testing are included in Division 1 - General Requirements, and in Sections relating to specific work involved.

5. Add a new Subparagraph 13.8.1 as follows:

13.8.1 The Contractor shall comply with all federal, state, and municipal and local rules, ordinances, rules, regulations, orders, notices and requirements relating to non-discrimination in employment, fair employment practices, and equal employment opportunity, whether or not provided elsewhere in the Contract Documents without additional charge or expense to the Owner, and shall be responsible for and correct, at its own cost and expense, any violations thereof resulting from or in connection with the performance of the Work. Contractor shall at any time upon demand, furnish such proof as the Owner may require to demonstrate compliance with such requirements and correction of any violations. Contractor agrees to save harmless and indemnify the Owner, the Owner's Representative, and Architect from and against any and all loss, injury, claims, actions, damages, costs and expenses, including legal fees and disbursements, caused or occasioned directly or indirectly by the Contractor's failure to comply with any of said laws, ordinances, rules, regulations, orders, notices or requirements, or to correct violations.

6. Add a new Subparagraph 13.8.2 as follows:

13.8.2 Contractor shall maintain policies of employment as follows:

1. Pursuant to the requirements of Indiana Code S22-91-10 and S5.16-6-1, Contractor and his Subcontractors may not discriminate against any employee or applicant for employment to be employed in the performance of such contract, with respect to his hire, tenure, terms, conditions or privileges of employment of any matter directly or indirectly related to employment because of his race, religion, color, sex, handicap, national origin or ancestry. The Contractor and Subcontractor, if any, agrees to comply with all the provisions contained in the Equal Opportunity Clause quoted in Executive Orders No. 11246 and No. 11375. In addition, the Contractor shall cause this Equal Opportunity Clause to be included in the subcontracts or purchase orders hereunder unless exempted by rules, regulations and orders of the Secretary of Labor
issued pursuant to Section 204 of the executive Orders No. 11246 and No. 11375 as amended. Breach of this covenant may be regarded as a material breach of contract.
2. Contractor and Contractor's Subcontractors shall, in all solicitations or advertisements for employees placed by them on their behalf, state all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, handicap, national origin or ancestry.

7. Add a new Subparagraph 13.9.1 as follows:

13.9.1 The Contractor affirms under the penalties of perjury that it does knowingly employ an unauthorized alien. The Contractor shall enroll in and verify the work eligibility status of all its newly hire employees through the E-Verify program as defined in IC 22-5-1.7-3. The Contractor shall not knowingly employ or contract with an unauthorized alien. The Contractor shall not retain and employee or contract with a person the Contractor subsequently learns is an unauthorized alien. The Contractor shall require its Subcontractors, who perform work under this Agreement, to certify to the Contractor that the Subcontractor has enrolled and is participating in the E-Verify program. The Contractor agrees to maintain this certification throughout the duration the term of an agreement with a Subcontractor. In addition to the Owner's right to terminate under other provision of this Agreement, the Owner may terminate for default if the Contractor fails to cure a breach of this provision.

8. Add a new Subparagraph 13.10.1 as follows:

13.10.1. As required by IC 5-22-16.5, the Contractor certifies that it is not engaged in investment activities in Iran or agency or instrumentality of the government of Iran, as defined and regulated by Senate Enrolled Act 231, effective July 1, 2012. Providing false certification may result in the consequences listed in IC 5-22-16.5-14, including termination of the Agreement and denial of future agreements, as well as an imposition of civil penalty.

Article 14 - Termination of the Contract

1. Add a new Subparagraph 14.2.5 as follows:

14.2.5 The Contract may be terminated by the Owner in whole or in part without cause and for its convenience on three (3) days written notice to the Contractor. In the event of such termination for convenience, the Contractor shall be compensated for that portion of the contract sum earned to the date of termination, but Owner shall not be liable for any additional or other consequential damages. Such entitlement of Contractor shall constitute Contractor's sole and exclusive remedy and recovery, and in no event shall the Contractor be entitled to recover anticipated profits and overhead on unperformed Work by reason of such termination for convenience.

2. Add a new Subparagraph 14.2.6 as follows:

14.2.6 Owner shall have the right to terminate the Contract at any time upon three (3) days' written notice to contractor in the event Owner is unable to obtain or maintain financing for the portion of the Work as yet unfinanced or uncompleted. Owner shall be obligated to pay Contractor that portion of the Contract Sum earned to the date of termination, but Owner shall not be liable for any additional or other consequential damages.

3. Add a new Subparagraph 14.2.7 as follows:

14.2.7 The occurrence of any labor dispute, work stoppage, strike (including sympathetic strike), slow down, picketing, or any other activity directly or indirectly attributable to Contractor's employees, either caused by them or resulting from their employment on the Project which interrupts, interferes with or delays the Work of Contractor or other separate contractors shall constitute a breach of Contract. In such event, the Owner shall have the right, in addition to any

other rights and remedies provided by this Contract or the Contract Documents, or by law, following two (2) days' written notice to the Contractor, to terminate this Contract or any part thereof for all or any portion of the Work, and for purpose of completing the Work, to enter upon the premises and take possession in the same manner, to the same extent, and upon the same terms and conditions as set forth in Subparagraph 14.2.3.

4. Add a new Subparagraph 14.2.8 as follows:

14.2.8 If termination of the Contract is effectuated by Owner for cause resulting from Contractor's failing to substantially perform in accordance with the terms of the Contract, and it is subsequently found or determined in legal proceedings that the Contractor was not in substantial breach of the Contract by failure to perform in accordance with its terms, or that such failure was caused through fault of the Owner, then such termination shall be deemed to be a termination for convenience pursuant to Subparagraph 14.2.1, and the Contractor's remedy and recovery as against the Owner shall, in such case, be limited to the payments provided by such Subparagraph 14.2.1

END OF DOCUMENT

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Contract description.

B. Contractor's use of site and premises.

C. Work sequence.

D. Owner occupancy.

E. Specification Conventions.

1.2 CONTRACT DESCRIPTION

A. Project A includes all work associated with the security vestibule at Gosport Elementary School

B. Project B includes all work associated with the security vestibule at McCormicks Creek Elementary School.

C. Project C includes all work associated with the security vestibule at Patricksburg Elementary School.

D. Project D includes all work associated with the security vestibule at Spencer Elementary School

E. Combination Bid includes all work associated with the security vestibules at Gosport, McCormick’s Creek and Spencer Elementary Schools.

1.3 CONTRACTOR'S USE OF SITE AND PREMISES

A. Limit use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Others and Work by Owner.
   3. Use of site and premises by the public.

B. Construction Operations: Limited to areas noted on Drawings or as designated by the Owner’s Representative and the Owner.

C. Security: At locations where doors that are specified to receive electronic hardware, if electronic door hardware is not available at the time of door installation, the Contractor

shall provide temporary security locksets that can be utilized and fully functional until electronic hardware has been installed.

1.4 WORK SEQUENCE

A. Refer to Section 01 32 16 Schedule for dates acceptable to perform the Work

1.5 ‘OWNER OCCUPANCY

A. The Owner will occupy the premises during the entire period of construction for the conduct of normal operations.

B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy.

1.6 SPECIFICATION CONVENTIONS

A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words “shall be” are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Contingency allowances.

B. Alternates.

C. Schedule of values.

D. Applications for payment.

E. Change procedures.

1.2 CONTINGENCY ALLOWANCES

A. Include in the Base Bid for Project A Gosport Elementary,
1. a stipulated sum/price of $15,000.00 for changes to the work as directed by the Architect/Engineer.

B. Include in the Base Bid for Project B, McCormick's Creek Elementary
1. a stipulated sum/price of $15,000.00 for changes to the work as directed by the Architect/Engineer,

C. Include in the Base Bid for Project C, Particksburg Elementary,
1. a stipulated sum/price of $15,000.00 for changes to the work as directed by the Architect/Engineer.

D. Include in the Base Bid for Project D, Spencer Elementary
1. a stipulated sum/price of $15,000.00 for changes to the work as directed by the Architect/Engineer.

E. Include in the Base Bid for Combined Bid,
1. a stipulated sum/price of $60,000.00 for changes to the work as directed by the Architect/Engineer.

F. Contractor overhead and profit on the contingency allowance shall be included in the Base Bid.

G. Funds will be drawn from Contingency Allowance only by Change Allowance Bulletin issued by the Architect.

H. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.3 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work.

C. Schedule of Alternates: None

1.4 SCHEDULE OF VALUES

A. Submit printed schedule on AIA Form G703 - Continuation Sheet for G702.

B. Submit Schedule of Values in duplicate within 15 calendar days after date of Notice to Proceed.

C. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of major specification Section. Separate material and labor costs. Identify site mobilization, bonds and insurance.

D. Include in each line item, amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by unit cost to achieve total for each item.

E. Include within each line item, direct proportional amount of Contractor's overhead and profit.

F. Revise Schedule of Values as directed by the Owner’s Representative and resubmit.

G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.5 APPLICATIONS FOR PAYMENT

A. Submit five copies of each application on AIA Form G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet for G702.

B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

C. Submit updated construction schedule with each Application for Payment.

D. Payment Period: Submit at intervals stipulated in the Agreement.

E. Submit with transmittal letter.

F. Submit waivers required by the Owner.

G. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:

1. Current construction photographs.
2. Partial release of liens from major subcontractors and vendors.
3. Affidavits attesting to off-site stored products and insurance.
4. Construction progress schedules, revised and current.

1.6 CHANGE PROCEDURES

A. Submittals: Submit name of individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. The Architect/Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on AIA Form G710.

C. The Architect/Engineer may issue a Proposal Request including a detailed description of proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with stipulation of overtime work required and the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within 7 calendar days.

D. Contractor may propose changes by submitting a request for change to the Owner’s Representative and Architect/Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on Work by separate or other Contractors. Document requested substitutions.

E. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Architect/Engineer.

F. Construction Change Directive: Architect/Engineer may issue directive, on AIA Form G713 Construction Change Directive signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.

G. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Owner’s Representative and Architect/Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.

H. Maintain daily detailed records of work done on Time and Material basis. Provide daily Time and Material tickets to Owner's Representative at the end of each day. Each Time and Material ticked must be signed by the Owner's Representative to be considered and approved. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

I. Document each quotation for change in cost or time with sufficient data to allow evaluation of quotation.

J. Change Order Forms: AIA G701.

K. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

L. Correlation Of Contractor Submittals:
   1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
   2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
   3. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination and project conditions.

B. Field engineering.

C. Preconstruction meeting.

D. Site mobilization meeting.

E. Progress meetings.

F. Pre-installation meetings.

G. Cutting and patching.

H. Special procedures.

1.2 COORDINATION AND PROJECT CONDITIONS

A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.

C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.

E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.

F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

A. The Owner’s Representative in collaboration with the Architect will schedule meeting after Notice of Award.

B. Attendance Required: Owner’s Representative, Owner, Architect/Engineer, and Contractor and Subcontractors.

C. Agenda:
1. Execution of Owner-Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of schedule of values and progress schedule.
5. Designation of personnel representing Owner, Architect/Engineer and Contractor.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
7. Use of premises by Owner and Contractor.
8. Owner's requirements.
9. Construction facilities and controls.
10. Temporary utilities.
11. Security and housekeeping procedures.
12. Schedules.
13. Application for payment procedures.
14. Procedures for testing.
15. Procedures for maintaining record documents.

D. The Architect/Engineer will record minutes and distribute copies to participants and those affected by decisions made.

1.4 PROGRESS MEETINGS

A. The Architect will Schedule and administer meetings throughout progress of the Work at maximum bi-monthly intervals.

B. Architect/Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required: Owner’s Representative, Contractor’s Project Manager, Job superintendent, and Architect/Engineer’s representative.

D. Agenda:
1. Progress to date.
2. Anticipated progress next 30 days.

3. Identification of problems impeding planned progress.
4. Review of submittals schedule and status of submittals.
5. Maintenance of progress schedule.
6. Corrective measures to regain projected schedules.
7. Review of Requests For Information (RFI's).
8. Review of Architect's Supplemental Instructions (ASI's).
9. Review of Proposal Requests (PR's).
10. Review of Change Orders (CO's).
11. Review of Pay Applications.
12. Review of submittals schedule and status of submittals.
13. Owner discussions, concerns and comments.
14. Architect discussions, concerns and comments.
15. Other business relating to Work.

E. The Architect will record minutes and distribute copies to participants and those affected by decisions made.

1.5 PRE-INSTALLATION MEETINGS

A. When required in individual specification sections or as requested but the Owner's Representative, convene pre-installation meetings at Project site prior to commencing work of specific section.

B. Require attendance of parties directly affecting, or affected by, Work of specific section.

C. Notify Owner's Representative, Architect/Engineer four days in advance of meeting date.

D. Prepare agenda and preside at meeting:
1. Review conditions of installation, preparation and installation procedures.
2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with copies to the Owner's Representative, Architect/Engineer, and the Owner, and those affected by decisions made.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

A. Employ skilled and experienced installer to perform cutting and patching.

B. Submit written request in advance of cutting or altering elements affecting:

1. Structural integrity of element.
2. Integrity of weather-exposed or moisture-resistant elements.
3. Efficiency, maintenance, or safety of element.
4. Visual qualities of sight exposed elements.
5. Work of Owner or separate contractor.

C. Execute cutting, fitting, and patching [including excavation and fill,] to complete Work, and to:
1. Fit the several parts together, to integrate with other Work.
2. Uncover Work to install or correct ill-timed Work.
3. Remove and replace defective and non-conforming Work.
4. Remove samples of installed Work for testing.
5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.

E. Cut masonry and concrete materials using masonry saw or core drill.

F. Restore Work with new products in accordance with requirements of Contract Documents.

G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07840, to full thickness of penetrated element.

J. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.

K. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer and Owner’s Representative for decision or remedy.

3.2 SPECIAL PROCEDURES

A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.

B. Employ skilled and experienced installer to perform alteration work.

C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.

D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.

E. Remove debris and abandoned items from area and from concealed spaces.

F. Prepare surface and remove surface finishes to permit installation of new work and finishes.

G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.

H. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original condition.

I. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with neat transition to adjacent finishes.

J. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.

K. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division, review and submit recommendation to Owner's Representative and Architect/Engineer for review.

L. Where change of plane of ¼ inch (6 mm) or more occurs, submit recommendation for providing smooth transition; to Owner's Representative and Architect/Engineer for review.

M. Trim existing doors to clear new floor finish. Refinish trim to original condition.

N. Patch or replace all portions of all existing surfaces which are damaged, lifted, discolored, or showing other imperfections.

O. Finish surfaces as specified in individual product sections.

END OF SECTION

SECTION 01 32 16

NETWORK ANALYSIS SCHEDULES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. References.

B. Quality assurance.

C. Format.

D. Schedules.

E. Submittals.

F. Review and evaluation.

G. Updating schedules.

H. Distribution.

I. Project Schedule

1.2 REFERENCES

A. The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry, Washington, D.C., The Associated General Contractors of America (AGC).

1.3 QUALITY ASSURANCE

A. Scheduler: Contractor's personnel specializing in CPM scheduling with five years minimum experience in scheduling construction work of complexity comparable to this Project, and having use of computer facilities capable of delivering detailed graphic printout within 48 hours of request.

B. Contractor's Administrative Personnel: Five years minimum experience in using and monitoring CPM schedules on comparable projects.

1.4 FORMAT

A. Listings: Reading from left to right, in ascending order for each activity. Identify each activity with applicable specification section number.

B. Diagram Sheet Size: 24 inches high x 36 inches wide.

C. Scale and Spacing: To allow for notations and revisions.

D. The use of Microsoft Project is acceptable.

1.5 SCHEDULES

A. Refer to the Project Schedule at the end of this Section for required timeline to perform the Work and to develop the Project Schedule.

B. Develop and provide a Project Schedule for each site.

C. Prepare network analysis diagrams and supporting mathematical analyses using Critical Path Method, under concepts and methods outlined in AGC's "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

D. Illustrate order and interdependence of activities and sequence of work; how start of given activity depends on completion of preceding activities, and how completion of activity may restrain start of subsequent activities.

E. Illustrate complete sequence of construction by activity, identifying work of separate stages, floors, etc. Indicate dates for submittals and return of submittals; dates for procurement and delivery of critical products; and dates for installation and provision for testing. Include legend for symbols and abbreviations used.

F. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates, and identify for each activity:
   1. Preceding and following event numbers.
   2. Activity description.
   3. Estimated duration of activity, in maximum 15 day intervals.
   4. Earliest start date.
   5. Earliest finish date.
   6. Actual start date.
   7. Actual finish date.
   8. Latest start date.
   9. Latest finish date.
   10. Total and free float; accrue float time to Owner and to Owner's benefit.
   11. Monetary value of activity, keyed to Schedule of Values.
   12. Percentage of activity completed.
   13. Responsibility.

G. Analysis Program: Capable of compiling monetary value of completed and partially completed activities, of accepting revised completion dates, and recomputation of scheduled dates and float.

H. Required Sorts: List activities in sorts or groups:
   1. By preceding work item or event number from lowest to highest.
   2. By longest float, then in order of early start.

3. By responsibility in order of earliest possible start date.
4. In order of latest allowable start dates.
5. In order of latest allowable finish dates.
6. Contractor's periodic payment request sorted by Schedule of Values listings.
7. Listing of basic input data generating report.
8. Listing of activities on critical path.

I. Prepare sub-schedules for each stage of Work.

J. Coordinate contents with schedule of values.

1.6 SUBMITTALS

A. Within 30 calendar days after date established in Notice to Proceed, submit proposed preliminary network diagram defining planned operations for the installation of all Work

B. Participate in review of preliminary and complete network diagrams jointly with Owner's Representative and Architect/Engineer.

C. Within 20 days after joint review of proposed preliminary network diagram, submit draft of proposed complete network diagram for review. Include written certification that major Subcontractors have reviewed and accepted proposed schedule.

D. Within 10 days after joint review, submit complete network analysis consisting of network diagrams and mathematical analysis.

E. Submit updated network schedules for and prior to each Progress Meeting.

1.7 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of network diagrams and analysis with Owner's Representative and Architect/Engineer at each submittal.

B. Evaluate project status to determine work behind schedule and work ahead of schedule.

C. After review, revise network diagrams and analysis incorporating results of review, and resubmit within 14 days.

1.8 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update diagrams to graphically depict current status of Work.

C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

D. Indicate changes required to maintain Date of Substantial Completion.

E. Submit sorts required to support recommended changes.

F. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect including effects of changes on schedules of separate contractors.

1.9 DISTRIBUTION

A. Following joint review, distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, Owner's Representative, Architect/Engineer, Owner, and other concerned parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

PROJECT SCHEDULE:

All major Work such as demolition activities, installation of new H.M. frames, ceiling, floor and wall modifications, installation of doors, gypsum board finishing, painting, glazing installation and counter installation shall be performed during the following school breaks:

FALL BREAK – October 10, 2022 through October 15, 2022
CHRISTMAS BREAK December 19m 2022 through December 31, 2022
SPRING BREAK March 13, 2023 through March 18, 2023
SUMMER BREAK Summer, 2023

NOTES:

1. It shall be the Contractors option to create the schedule for each site to perform the Work on the above listed dates based upon the fabrication and delivery lead time for material, equipment, products, etc.
2. After the major Work is installed, minor work such as installation of security film, painting and touch up work can be performed during school hours.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.

B. Product data.

C. Shop drawings.

D. Samples.

E. Test reports.

F. Certificates.

G. Manufacturer's instructions.

H. Manufacturer's field reports.

I. Construction photographs.

1.2 SUBMITTAL PROCEDURES

A. Transmit each submittal with Architect/Engineer accepted form. Transmit all submittals, product date, shop drawings, etc. to Owner’s Representative at the same time submitted to the Architect/Engineer.

B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.

D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.

E. Schedule submittals to expedite Project, and deliver to Lancer + Beebe, LLC at 220 North College Avenue, Indianapolis, IN 46202. Coordinate submission of related items.

F. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.

G. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.

H. Allow space on submittals for Contractor and Architect/Engineer review stamps.

I. When revised for resubmission, identify changes made since previous submission.

J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

K. Submittals not requested will not be recognized or processed.

L. CAD File Drawings may be requested for submittals, the cost for each sheet is $100.00 if requested in the Architect's current CAD software edition (AutoCAD 2004). There will be an additional cost of $25.00 per sheet for any other editions of AutoCAD. In addition to this, a signed release of "Waiver of claims for use of electronic data" for each request for AutoCAD files.

M. Once submittal, product data, shop drawings and etc. approved by the A/E, within 3 calendar days, provide hard copy of approved submittals, product data, shop drawings and etc. in full size to Owner's Representative. Contractor shall project a binder to the Owner's Representative indexed to identify approved submittals.

1.3 PRODUCT DATA

A. Product Data: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Submit number of copies Contractor requires, plus two copies Architect/Engineer will retain.

C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents.

1.4 SHOP DRAWINGS

A. Shop Drawings: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Submit in form of one reproducible transparency and two opaque reproductions. The Architect/Engineer will return the reproducible transparency.

D. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents.

1.5 SAMPLES

A. Samples: Submit to Owner’s Representative and Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Samples For Selection as Specified in Product Sections:
1. Submit to Owner’s Representative and Architect/Engineer for aesthetic, color, or finish selection.
2. Submit samples of finishes from full range of manufacturers' standard colors, or in custom colors selected, textures, and patterns for Owner’s Representative and Architect/Engineer selection.

C. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

D. Include identification on each sample, with full Project information.

E. Submit number of samples specified in individual specification sections; Architect/Engineer will retain one sample.

F. Reviewed samples which may be used in the Work are indicated in individual specification sections.

G. Samples will not be used for testing purposes unless specifically stated in specification section.

H. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes.

1.6 TEST REPORTS

A. Submit for Owner’s Representative and Architect/Engineer's knowledge as contract administrator or for Owner.

B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.7 CERTIFICATES

A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Owner’s Representative and Architect/Engineer, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect/Engineer.

1.8 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Owner's Representative and Architect/Engineer for delivery to Owner in quantities specified for Product Data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.9 MANUFACTURER'S FIELD REPORTS

A. Submit reports for Owner's Representative and Architect/Engineer's benefit as contract administrator or for Owner.

B. Submit report in duplicate within 10 days of observation to Owner's Representative and Architect/Engineer for information.

C. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.10 CONSTRUCTION PHOTOGRAPHS

A. Provide photographs of site and construction throughout progress of Work produced by an experienced photographer, acceptable to Architect/Engineer.

B. Each month submit photographs with Application for Payment.

C. Photographs: Digital photographs of high resolution.

D. Take ten interior photographs of indicating relative progress of the Work, 7 days maximum prior to submitting.

E. Identify each print on front. Identify name of Project, orientation of view, date and time of view, name and address of photographer, and photographer's numbered identification of exposure.

F. Deliver digital format to Owner with project record documents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

WAIVER OF CLAIMS
FOR USE OF ELECTRONIC DATA

CONTRACT/JOB NO.: _____

PROJECT DESCRIPTION: _____

DATA BEING RELEASED: _____
DATE: _____

Lancer + Beebe, LLC, makes the above information available to you without payment/with nominal payment on condition that you agree that Lancer + Beebe, LLC has developed the information for its own use and for the use of its clients and, therefore, makes no representation, warranties or undertakings of any type concerning the accuracy or completeness of the information or its usefulness in relation to your consulting services. By receipt and use of this data transmitted herewith, you agree to and do indemnify and hold harmless Lancer + Beebe, LLC against and from any and all claims, damage, liability, and/or costs, including reasonable attorney's fees, made or asserted by you or by any third party allegedly resulting from your use or transfer to any other party of the data being provided to you herewith by Lancer + Beebe, LLC, including but not limited to any claimed inaccuracies or incompleteness of the data and regardless of whether such claims, etc., involve the alleged negligence of Lancer + Beebe, LLC, in the preparation, recording, or transfer of the data.

Lancer + Beebe, LLC

BY: _____

TITLE: _____

No data are to be used unless and until an authorized representative of the recipient shall have properly executed and returned **"WAIVER OF CLAIMS FOR USE OF ELECTRONIC DATA"** form.

ACKNOWLEDGED AND ACCEPTED THIS _____ DAY OF ____, 20____.

COMPANY: _____

BY: _____

TITLE: _____

The electronic data transmitted herewith is for the use of the intended recipient. If you have intercepted or received this transmittal in error, you are not authorized to use or distribute the information contained herein by any means or for any purpose, and Lancer + Beebe, LLC requests that you communicate the unintended receipt to Lancer + Beebe, LLC as soon as possible, and Lancer + Beebe, LLC will make arrangements to recover the data transmitted herewith.

AUTOCAD FILE FEES

$100.00 per sheet or
$2000.00 per set

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality control and control of installation.

B. Tolerances

C. References.

D. Mock-up requirements.

E. Testing and inspection services.

F. Manufacturers' field services.

G. Examination.

H. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce required and specified quality.

F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Owner's Representative and Architect/Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current on date for receiving bids, except where specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Owner's Representative or Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.5 TESTING AND INSPECTION SERVICES

A. The Contractor shall employ and pay for services of an independent testing agency or laboratory acceptable to Owner to perform specified testing.
   1. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full time Registered Professional Engineer and responsible officer.
   2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of deficiencies reported by inspection.

B. The independent firm will perform tests, inspections and other services specified in individual specification sections and as required by Architect/Engineer, Owner or Authority having jurisdiction.
   1. Laboratory: Authorized to operate at Project location.
   2. Laboratory Staff: Maintain full time registered Professional Engineer on staff to review services.
   3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.

C. Testing, inspections and source quality control may occur on or off project site. Perform off-site testing as required by Architect/Engineer, the Owner's Representative and Owner.

D. Reports will be submitted by independent firm to Architect/Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
   1. Notify Owner's Representative and Architect/Engineer and independent firm 24 hours prior to expected time for operations requiring services.
   2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

F. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

G. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by same independent firm on instructions by Architect/Engineer. Payment for re-testing or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.

H. Agency Responsibilities:
   1. Test samples of mixes submitted by Contractor.
   2. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.
   3. Perform specified sampling and testing of products in accordance with specified standards.
   4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
   5. Promptly notify Owner's Representative and Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or products.
   6. Perform additional tests required by Architect/Engineer.
   7. Attend preconstruction meetings and progress meetings.

I. Agency Reports: After each test, promptly submit two copies of report to Architect/Engineer and to Contractor. When requested by Owner's Representative and Architect/Engineer, provide interpretation of test results. Include the following:
   1. Date issued.
   2. Project title and number.
   3. Name of inspector.
   4. Date and time of sampling or inspection.
   5. Identification of product and specifications section.
   6. Location in Project.
   7. Type of inspection or test.
   8. Date of test.
   9. Results of tests.
   10. Conformance with Contract Documents.

J. Limits On Testing Authority:
   1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
   2. Agency or laboratory may not approve or accept any portion of the Work.
   3. Agency or laboratory may not assume duties of Contractor.
   4. Agency or laboratory has no authority to stop the Work.

1.6 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Owner’s Representative andArchitect/Engineer 30 days in advance of required observations. Observer subject to approval of Architect/Engineer, Owner’s Representative and Owner.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Refer to Section 01 33 00 - SUBMITTAL PROCEDURES, MANUFACTURERS' FIELD REPORTS article.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products.

B. Product delivery requirements.

C. Product storage and handling requirements.

D. Product options.

E. Product substitution procedures.

F. Equipment electrical characteristics and components.

1.2 PRODUCTS

A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.

B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.

C. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products in accordance with manufacturers' instructions.

B. Store with seals and labels intact and legible.

C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

D. For exterior storage of fabricated products, place on sloped supports above ground.

E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.

H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.

1.6 PRODUCT SUBSTITUTION PROCEDURES

A. Instructions to Bidders specify time restrictions for submitting requests for Substitutions during bidding period to requirements specified in this section.

B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that Contractor:
   1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
   2. Will provide same warranty for Substitution as for specified product.
   3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension which may subsequently become apparent.
   5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:

1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
3. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.

B. Cord and Plug: Furnish minimum 6 foot (2 m) cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 70 00

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Closeout procedures.

B. Final cleaning.

C. Starting of systems.

D. Demonstration and instructions.

E. Protecting installed construction.

F. Project record documents.

G. Operation and maintenance data.

H. Manual for materials and finishes.

I. Manual for equipment and systems.

J. Spare parts and maintenance products.

K. Product warranties and product bonds.

L. Maintenance service.

1.2 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner’s Representative and Architect/Engineer's review.

B. Provide submittals to Architect/Engineer required by authorities having jurisdiction.

C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.3 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Clean equipment and fixtures to sanitary condition and dust free condition with cleaning materials appropriate to surface and material being cleaned.

D. Clean all building components in and adjacent to project work areas to clean and dust free conditions as approved by the Owner’s Representative.

E. Clean site; sweep paved areas, rake clean landscaped surfaces.

F. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.

B. Demonstrate Project equipment by manufacturer's representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. Required instruction time for each item of equipment and system is specified in individual sections.

1.5 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified in individual specification sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

E. Prohibit traffic from landscaped areas.

1.6 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, Product Data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner’s Representative and Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish first floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract drawings.

G. Submit documents to Owner’s Representative and Architect/Engineer.

1.7 OPERATION AND MAINTENANCE DATA

A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Owner's Representative, Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Originals of warranties and bonds.

1.8 MANUAL FOR MATERIALS AND FINISHES

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Owner's Representative and Architect/Engineer will review draft and return one copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Owner's Representatives and Architect/Engineer comments. Revise content of document sets as required prior to final submission.

D. Submit two sets of revised final volumes in final form within 10 days after final inspection.

E. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.

F. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

G. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.

H. Additional Requirements: As specified in individual product specification sections.

I. Include listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.9 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Owner’s Representative and Architect/Engineer will review draft and return one copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Owner’s Representative and Architect/Engineer comments. Revise content of document sets as required prior to final submission.

D. Submit two sets of revised final volumes in final form within 10 days after final inspection.

E. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

F. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

G. Include color coded wiring diagrams as installed.

H. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.

I. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

J. Include servicing and lubrication schedule, and list of lubricants required.

K. Include manufacturer's printed operation and maintenance instructions.

L. Include sequence of operation by controls manufacturer.

M. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

N. Include control diagrams by controls manufacturer as installed.

O. Include Contractor's coordination drawings, with color coded piping diagrams as installed.

P. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

Q. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

R. Include test and balancing reports.

S. Additional Requirements: As specified in individual product specification sections.

T. Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

1.10 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.11 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.

C. Verify documents are in proper form, contain full information, and are notarized.

D. Co-execute submittals when required.

E. Include Table of Contents and assemble in three D side ring binder with durable plastic cover.

F. Submit prior to final Application for Payment.

G. Time Of Submittals:
   1. For equipment or component parts of equipment put into service during construction with Owner's Representative and Owner's permission, submit documents within ten days after acceptance.
   2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

1.12 MAINTENANCE SERVICE

A. Furnish service and maintenance of components indicated in specification sections.

B. Examine system components at frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by manufacturer of original component.

D. Do not assign or transfer maintenance service to agent or Subcontractor without prior written consent of Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 02 41 19

SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Demolish and remove all items required to complete the work indicated.
2. Refer to all drawings for new work required. Demolish and remove any item required to make way for new work.
3. Demolish designated building equipment and fixtures.
4. Cutting and alterations for completion of the Work.
5. Protecting items designated to remain.
6. Removing demolished materials.
7. Provide adequate shoring and bracing.
8. Patching all substrates and finishes after demolition to match existing.

1.2 SUBMITTALS

A. Division 1 - Submittal Procedures: Requirements for submittals.

B. Demolition Schedule: Indicate overall schedule and interruptions required for utility and building services.

C. Shop Drawings:
1. Indicate demolition and removal sequence.
2. Indicate location of items designated for reuse or Owner’s retention.
3. Indicate location and construction of temporary work.

1.3 CLOSEOUT SUBMITTALS

A. Project Record Documents: Accurately record actual locations of capped utilities, concealed utilities discovered during demolition and subsurface obstructions.

B. Operation and Maintenance Data: Submit description of system, inspection data, and parts lists.

1.4 QUALITY ASSURANCE

A. Conform to applicable code for demolition work, dust control, products requiring electrical disconnection and re-connection.

B. Conform to applicable code for procedures when hazardous or contaminated materials are discovered.

C. Obtain required permits from authorities having jurisdiction.

1.5 PRE-INSTALLATION MEETINGS

A. Administrative Requirements: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this section.

1.6 SCHEDULING

A. Section 01323 - Network Analysis Schedules: Requirements for scheduling.

B. Schedule Work to coincide with new construction.

C. Cooperate with Owner in scheduling noisy operations and waste removal that may impact Owners operation and in adjoining spaces.

D. Perform noisy or dusty work as scheduled with the Owner.

E. Coordinate utility and building service interruptions with Owner.
   1. Do not disable or disrupt building fire or life safety systems without three days prior written notice to Owner.
   2. Schedule tie-ins to existing systems to minimize disruption.
   3. Coordinate Work to ensure fire sprinklers, fire alarms, smoke detectors, emergency lighting, exit signs and other life safety systems remain in full operation in occupied areas.

1.7 PROJECT CONDITIONS

A. Conduct demolition to minimize interference with adjacent and occupied building areas.

B. Cease operations immediately if structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PREPARATION

A. Notify affected utility companies before starting work and comply with their requirements.

B. Mark location and termination of utilities.

C. Erect, and maintain temporary barriers and security devices, including warning signs and lights, and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.

D. Erect and maintain temporary partitions to prevent spread of dust, odors, and noise to permit continued Owner occupancy.

E. Prevent movement of structure; provide temporary bracing and shoring required to ensure safety of existing structure.

F. Provide appropriate temporary signage including signage for exit or building egress.

G. Do not close or obstruct building egress path.

H. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.

3.2 SALVAGE REQUIREMENTS

A. Coordinate with Owner to identify building components and equipment required to be removed and delivered to Owner.

B. Tag components and equipment Owner designates for salvage.

C. Protect designated salvage items from demolition operations until items can be removed.

D. Carefully remove building components and equipment indicated to be salvaged.

E. Disassemble as required to permit removal from building.

F. Package small and loose parts to avoid loss.

G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.

H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.

I. Deliver salvaged items to Owner. Obtain signed receipt from Owner.

3.3 DEMOLITION

A. Conduct demolition to minimize interference with adjacent and occupied building areas.

B. Maintain protected egress from and access to adjacent existing buildings at all times.

C. Do not close or obstruct roadways or sidewalks without permits.

D. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer.

E. Disconnect and remove designated utilities within demolition areas.

F. Demolish in orderly and careful manner. Protect existing improvements and supporting structural members.

G. Carefully remove building components indicated to be reused.
   1. Disassemble components as required to permit removal.
   2. Package small and loose parts to avoid loss.
   3. Mark components and packaged parts to permit reinstallation.
   4. Store components, protected from construction operations, until reinstalled.

H. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.

I. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.

J. Remove temporary Work.

K. After demolition, patch all substrates and finishes to match existing.

END OF SECTION

SECTION 07 84 00

FIRESTOPPING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes firestopping and through-penetration protection system materials and accessories; firestopping tops of fire rated walls.

1.2 REFERENCES

A. ASTM International:
1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
2. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
3. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops.

B. Underwriters Laboratories Inc.:
1. UL 263 - Fire Tests of Building Construction and Materials.
2. UL 723 - Tests for Surface Burning Characteristics of Building Materials.
3. UL 1479 - Fire Tests of Through-Penetration Firestops.
4. UL - Fire Resistance Directory.

C. Intertek Testing Services (Warnock Hersey Listed):
1. WH - Certification Listings.

1.3 DEFINITIONS

A. Firestopping (Through-Penetration Protection System): Sealing or stuffing material or assembly placed in spaces between and penetrations through building materials to arrest movement of fire, smoke, heat, and hot gases through fire rated construction.

1.4 SYSTEM DESCRIPTION

A. Firestopping Materials: ASTM E814 to achieve fire ratings as noted on Drawings for adjacent construction. Provide rated systems complying with the following requirements.
1. Through-penetration firestop system products bear classification marking of qualified testing and inspecting agency.
2. Through-penetration firestop systems correspond to those indicated by reference to through-penetration firestop system designations listed by UL in “Fire Resistance Directory”.

B. Surface Burning: ASTM E84 with maximum flame spread / smoke developed rating of 25/450.

C. Firestop interruptions to fire rated assemblies, materials, and components.

1.5 PERFORMANCE REQUIREMENTS

A. Conform to applicable code for fire resistance ratings and surface burning characteristics.

1.6 SUBMITTALS

A. Division 01 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data on product characteristics, performance and limitation criteria.

C. Schedule: Submit schedule of opening locations and sizes, penetrating items, and required listed design numbers to seal openings to maintain fire resistance rating of adjacent assembly.

D. Manufacturer's Installation Instructions: Submit preparation and installation instructions.

E. Manufacturer's Certificate: Certify products meet or exceed applicable code requirements.

F. Engineering Judgements: For conditions not covered by UL or WH listed designs, submit judgements by licensed professional engineer suitable for presentation to authority having jurisdiction for acceptance as meeting code fire protection requirements.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Applicator: Company specializing in performing Work of this section with minimum three years documented experience , and approved by manufacturer.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Division 01 - Product Requirements.

B. Do not apply materials when temperature of substrate material and ambient air is below 60 degrees F (15 degrees C).

C. Maintain this minimum temperature before, during, and for minimum 3 days after installation of materials.

D. Provide ventilation in areas to receive solvent cured materials.

PART 2 PRODUCTS

2.1 FIRESTOPPING

A. Manufacturers:
   1. A/D Fire Protection Systems, Inc.
   2. Hilti Corp.
   3. 3M fire Protection Products.
   4. Nelson Firestop Products.
   5. Instant Firestop Mfg. Inc.
   6. Isolatek International.
   7. RectorSeal Corporation.
   8. Specified Technologies Inc.
   9. Tremco.
   10. United States Gypsum Co.

B. Product Description: Different types of products by multiple manufacturers are acceptable as required to meet specified system description and performance requirements; provide only one type for each similar application.
   1. Silicone Firestopping Elastomeric Firestopping: Single or Multiple component silicone elastomeric compound and compatible silicone sealant.
   2. Foam Firestopping Compounds: Single or Multiple component foam compound.
   3. Formulated Firestopping Compound of Incombustible Fibers: Formulated compound mixed with incombustible non-asbestos fibers.
   4. Fiber Stuffing and Sealant Firestopping: Composite of mineral or ceramic fiber stuffing insulation with silicone elastomer for smoke stopping.
   5. Mechanical Firestopping Device with Fillers: Mechanical device with incombustible fillers and silicone elastomer, covered with sheet stainless steel jacket, joined with collars, penetration sealed with flanged stops.
   6. Intumescent Firestopping: Intumescent putty compound which expands on exposure to surface heat gain.
   7. Firestop Pillows: Formed mineral fiber pillows.

2.2 ACCESSORIES

A. Primer: Type recommended by firestopping manufacturer for specific substrate surfaces and suitable for required fire ratings.

B. Installation Accessories: Provide clips, collars, fasteners, temporary stops or dams, and other devices required to position and retain materials in place.

PART 3 EXECUTION

3.1 EXAMINATION

A. Administrative Requirements: Coordination and project conditions.

B. Verify openings are ready to receive firestopping.

3.2 PREPARATION

A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter affecting bond of firestopping material.

B. Remove incompatible materials affecting bond.

C. Install backing materials to arrest liquid material leakage.

3.3 APPLICATION

A. Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, ductwork, conduit and other items, requiring firestopping.

B. Apply primer where recommended by manufacturer for type of firestopping material and substrate involved, and as required for compliance with required fire ratings.

C. Apply firestopping material in sufficient thickness to achieve required fire and smoke rating.

D. Compress fibered material to maximum 40 percent of its uncompressed size.

E. Place foamed material in layers to ensure homogenous density, filling cavities and spaces. Place sealant to completely seal junctions with adjacent dissimilar materials.

F. Place intumescent coating in sufficient coats to achieve rating required.

3.4 FIELD QUALITY CONTROL

A. Inspect installed firestopping for compliance with specifications and submitted schedule.

3.5 CLEANING

A. Division 01 - Execution Requirements: Final cleaning.

B. Clean adjacent surfaces of firestopping materials.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

A. Division 01 - Execution Requirements: Protecting installed construction.

B. Protect adjacent surfaces from damage by material installation.

END OF SECTION

SECTION 07 92 00

JOINT SEALERS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes sealants, joint backing and accessories.

1.2 REFERENCES

A. ASTM International:
   1. ASTM C834 - Standard Specification for Latex Sealants.
   2. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
   3. ASTM C1193 - Standard Guide for Use of Joint Sealants.

1.3 SUBMITTALS

A. Division 1 - Submittal Procedures: Submittal procedures.

B. Products Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

C. Samples: Submit two samples illustrating sealant colors for selection.

D. Manufacturer's Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.

E. Warranty: Include coverage for installed sealants and accessories failing to achieve watertight seal, exhibit loss of adhesion or cohesion, and sealants which do not cure.

1.4 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Applicator: Company specializing in performing Work of this section with minimum five years documented experience , and approved by manufacturer.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Division 1 - Products Requirements.

B. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.6 COORDINATION

A. Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with sections referencing this section.

PART 2 PRODUCTS

2.1 JOINT SEALERS

A. Products Description:
1. High Performance General Purpose Exterior (Nontraffic) Sealant Silicone.
   a. Color: Colors as selected by the Architect.
   b. Acceptable Manufacturers/Products:
      1) Dow Corning; 790.
      2) GE Silicones; Silpruf
      3) GE Silicones: UltraPruf SCS2300.
      4) Pecora; 864.
      5) Pecora; 890.
      6) BASF; Omniseal.
      7) Tremco; Spectrem 1.
      8) SIKA
2. High Performance General Purpose Exterior (Nontraffic) Sealant Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; multi-component.
   a. Color: Colors as selected by the Architect.
   b. Acceptable Manufacturers/Products:
      1) Pecora; Dynatrol II.
      2) Sika; Sikaflex – 2c NS EZ
      3) Tremco; Dymeric 511.
      4) Bostik; Chem-Calk 2641.
      5) BASF; NP 2.
3. High Performance General Purpose Exterior (Nontraffic) Sealant Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single-component.
   a. Color: Colors as selected by the Architect.
   b. Acceptable Manufacturers/Products:
      1) Sika; Sikflex – 1a.
      2) BASF; NP 1.
      3) Bostik; Chem-Calk 900.
      4) Mameco; Vulkem 921.
      5) Pecora; Dynatrol I.
      6) Tremco; DyMonic.
4. General Purpose Traffic Bearing Sealant Polyurethane; ASTM C920, Grade P, Class 25, Use T; multi-component.
   a. Color: Colors as selected by the Architect.
   b. Acceptable Manufacturers/Products:
      1) Bostik; Chem-Calk 550.
      2) W.R. Meadows; Pourthane.
      3) Pecora; NR-200 Urexpan.

4) Pecora; NR-300 Urexpan, Type M.
5) Sika; Sikaflex – 2c SL.
6) BASF; SL 2.
7) Tremco; THC-900.
8) Tremco; THC-901.

5. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.
   a. Color: Colors as selected by the Architect.
   b. Acceptable Manufacturers/Products:
      1) Bostik; Chem-Calk 600.
      2) Pecora; AC-20.
      3) BASF; Sonolac.
      4) Tremco; Tremflex 834.
6. Plumbing Fixture Sealant: Silicone; ASTM C920, Uses M and A; single component, mildew resistant.
   a. Color: White.
   b. Acceptable Manufacturers/Products:
      1) Dow Corning; 786 Mildew Resistant.
      2) GE Silicones; Sanitary 1700.
      3) Pecora; 898 Silicone Sanitary Sealant.
      4) Tremco; Tremsil 600 white.
      5) SIKA
7. Low Modulus High Performance, 1 component, non-sag elastomeric sealant.
   a. Color: Colors as selected by the Architect.
   b. BASF; Sonolastic 150 with VLM Technology.
   c. SIKAflex-15LM.

2.2 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: Round foam rod compatible with sealant; ASTM C 330; oversized 30 to 50 percent larger than joint width.
   1. Type: C: Closed-cell material with surface skin.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Administrative Requirements: Coordination and project conditions.

B. Verify substrate surfaces and joint openings are ready to receive work.

C. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

A. Remove loose materials and foreign matter impairing adhesion of sealant.

B. Clean and prime joints.

C. Perform preparation in accordance with ASTM C1193.

D. Protect elements surrounding Work of this section from damage or disfiguration.

3.3 INSTALLATION

A. Perform installation in accordance with ASTM C1193.

B. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.

C. Install bond breaker where joint backing is not used.

D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

F. Tool joints concave.

G. Precompressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch (3 to 6 mm) below adjoining surface.

3.4 CLEANING

A. Division 01 - Execution Requirements: Final cleaning.

B. Clean adjacent soiled surfaces.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Division 01 - Execution Requirements: Protecting installed construction.

B. Protect sealants until cured.

3.6 SCHEDULE

A. Exterior Sealants:
   1. Door and window frame perimeters: silicone.
   2. All joints and openings with dissimilar materials: silicone.
   3. Expansion joints in a vertical plane: pre-compressed foam sealer.

4. Masonry control joints: silicone.
5. Unit masonry joints at lintels: silicone.
6. Expansion Joints in a horizontal plane: polyurethane.
7. Sheet metal joints, flashing, reglets: silicone.
8. Metal curtain wall joints: silicone.
9. Concrete panel joints: silicone or polyurethane.
10. Plaza sealants: self-leveling polyurethane.
11. EIFS joints: Low modulus high performance, 1 component, non sag elastomeric sealant.

B. Interior Painted Caulks:
1. Door and window frame perimeters: acrylic latex.

C. Interior Non-Painted Caulks:
1. Door and window frame perimeters: acrylic latex.
2. All joints and openings with dissimilar materials: acrylic latex.
3. Vertical expansion joints and masonry control joints: silicone.
4. Unit masonry joints at lintels: silicone.
5. Horizontal expansion joints: polyurethane.
6. Sheet metal joints: polyurethane.
7. Plumbing fixture perimeters: mildew resistant silicone.
8. Structural pre-cast joints: non-sag polyurethane.
9. Exposed concrete control joints: self-leveling polyurethane.
10. Counter tops: silicone.

END OF SECTION

SECTION 08 11 13

STEEL DOORS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes non-rated and fire rated steel doors and door accessories.

1.2 REFERENCES

A. ASTM International:
1. ASTM A591/A591M - Standard Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.
2. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
3. ASTM C1363 - Standard Test Method for the Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
4. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
5. ASTM E413 - Standard Classification for Rating Sound Insulation.

B. National Fire Protection Association:
1. NFPA 80 - Standard for Fire Doors, Fire Windows.
2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
3. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.

C. Underwriters Laboratories Inc.:
1. UL 10B - Fire Tests of Door Assemblies.
2. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
3. UL 723 - Tests for Surface Burning Characteristics of Building Materials.

D. Uniform Building Code:
1. UBC Standard 7-2 - Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Division 01 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate door elevations, internal reinforcement, closure method, and cut-outs for glazing, louvers, and finishes.

C. Product Data: Submit door configurations, location of cut-outs for hardware reinforcement.

D. Manufacturer's Installation Instructions: Submit special installation instructions.

E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Conform to requirements of HMMA 890 - Hollow Metal Manual, including HMMA 802, HMMA 810, HMMA 830, HMMA 840, and HMMA 850.

B. Fire Rated Door and Panel Construction: Conform to one of the following:
   1. NFPA 252; with neutral pressure level at 40 inches (1015 mm) maximum above sill at 5 minutes into test.
   2. UL 10C.
   3. 20-Minute Fire Rated Corridor and Smoke Barrier Doors: Fire tested without hose stream test.

C. Fire Rated Stair Doors: Rate of rise of 450 degrees F (250 degrees C) across door thickness.

D. Installed Fire Rated Door and Panel Assembly: Conform to NFPA 80 for fire rated class as indicated on Drawings.

E. Smoke and Draft Control Doors: Tested in accordance with UL 1784.
   1. Air Leakage: Maximum 3.0 cfm/sf (0.0154 cu m/s/sq m) of door opening with 0.10 inch water gage (24.9 Pa) pressure differential.

F. Attach label from agency approved by authority having jurisdiction to identify each fire rated door.
   1. Indicate temperature rise rating for stair doors.
   2. Attach smoke label to smoke and draft control doors.

G. Surface Burning Characteristics:
   1. Foam Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

H. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation board.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years [documented] experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Division 01 - Product Requirements: Product storage and handling requirements.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

C. Break seal on site to permit ventilation.

1.7 COORDINATION

A. Division 01 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with door opening construction, door frame and door hardware installation.

C. Sequence installation to accommodate required door hardware electric wire connections.

PART 2 PRODUCTS

2.1 STEEL DOORS

A. Manufacturers:
1. Ceco Door Products.
2. Curries.
3. Steelcraft.
4. Habersham Metal Products.
5. Republic Builders Products.
6. Metal Products, Inc. (MPI).

B. Product Description:
1. Design:
a. Interior Doors (Non-rated): SDI-100 Grade II model 1. Minimum 18 gage sheet steel faces.
b. Interior Doors (Fire Rated): SDI-100 Grade II model 1. Minimum 18 gage sheet steel faces.
2. Type:
a. Full flush with continuously welded edge seams.
3. Thickness: 1-3/4 inch (45 mm).

2.2 COMPONENTS

A. Face: Steel, galvanized sheet in accordance with ASTM A653/A653M electrolytic zinc-coated in accordance with ASTM A591/A591M, manufactured and fabricated in accordance with HMMA 802 and 810.
1. Interior Doors: 0.042 inch or 18 gage (1 mm).

B. Core: Vertical steel stiffeners with foam at exterior doors.

2.3 ACCESSORIES

A. Removable Stops: Rolled steel channel shape, mitered corners; prepared for countersink style tamper proof screws.

B. Primer: Zinc chromate type.

2.4 FABRICATION

A. Astragals for Double Doors: Steel, Z shaped, specifically for double doors.

B. Fabricate doors with hardware reinforcement welded in place.

C. Fabricate doors indicated with reinforcement and flush capped opening to receive transaction window.

D. Attach fire rated label to each fire rated door unit.

2.5 SHOP FINISHING

A. Exterior Units: ASTM A653/A653M G90.

B. Interior Units: ASTM A653/A653M G60.

C. Primer: Air dried.

PART 3 EXECUTION

3.1 EXAMINATION

A. Division 01 - Administrative Requirements: Coordination and project conditions.

B. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install doors in accordance with HMMA 840.

B. Coordinate installation of glass and glazing.

C. Install door louvers, plumb and level.

D. Coordinate installation of doors with installation of frames and hardware, and glass.

3.3 ERECTION TOLERANCES

A. Division 01 - Quality Requirements: Tolerances.

B. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.4 ADJUSTING

A. Division 01 - Execution Requirements: Testing, adjusting, and balancing.

B. Adjust door for smooth and balanced door movement.

END OF SECTION

SECTION 08 12 13

STEEL FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes non-rated and fire rated steel frames.
   1. Provide frames for interior glazed lights.

1.2 REFERENCES

A. ASTM International:
   1. ASTM A591/A591M - Standard Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.
   2. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

B. Hollow Metal Manufacturers Association:
   1. HMMA 802 - Manufacturing of Hollow Metal Doors and Frames.
   2. HMMA 820 - Hollow Metal Frames.
   3. HMMA 830 - Hardware Preparation and Locations for Hollow Metal Doors and Frames.
   4. HMMA 840 - Installation and Storage of Hollow Metal Doors and Frames.
   5. HMMA 850 - Fire Rated Hollow Metal Doors & Frames.
   6. HMMA 890 - Technical Summary of Hollow Metal by HMMA.

C. National Fire Protection Association:
   1. NFPA 80 - Standard for Fire Doors, Fire Windows.
   2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.

D. Underwriters Laboratories Inc.:
   1. UL 10B - Fire Tests of Door Assemblies.
   2. UL 10C - Positive Pressure Fire Tests of Door Assemblies.

E. Uniform Building Code:
   1. UBC Standard 7-2 - Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Division 01 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate frame elevations, reinforcement, anchor types and spacings, location of cut-outs for hardware, and finish.

C. Product Data: Submit frame configuration and finishes.

D. Manufacturer's Installation Instructions: Submit special installation instructions.

E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Conform to requirements of HMMA 890 - Hollow Metal Manual, including HMMA 802, HMMA 820, HMMA 830, HMMA 840, and HMMA 850.

B. Fire Rated Frame Construction: Conform to one of the following:
   1. NFPA 252; with neutral pressure level at 40 inches (1015 mm) maximum above sill at 5 minutes into test.
   2. UL 10C.
   3. 20-Minute Fire Rated Corridor and Smoke Barrier Frames: Fire tested without hose stream test.

C. Fire Rated Frame Construction: Conform to UBC Standard 7-2.

D. Installed Fire Rated Frame Assembly: Conform to NFPA 80 for fire rated class same as fire door.

E. Smoke and Draft Control Door Frames: Tested in accordance with UL 1784.

   1. Air Leakage: Maximum 3.0 cfm/sf (0.0154 cu m/s/sq m) of door opening with 0.10 inch water gage (24.9 Pa) pressure differential.

F. Attach label from agency approved by authority having jurisdiction to identify each fire rated door frame.

   1. Attach smoke label to smoke and draft control door frames.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years [documented] experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Division 01 - Product Requirements: Product storage and handling requirements.

B. Accept frames on site in manufacturer's packaging. Inspect for damage.

C. Break seal on-site to permit ventilation.

1.7 COORDINATION

A. Division 01 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with frame opening construction, door and hardware installation.

C. Sequence installation to accommodate required door hardware electric wire connections.

PART 2 PRODUCTS

2.1 STEEL FRAMES

A. Manufacturers:
   1. Ceco Door Products.
   2. Curries.
   3. Steelcraft.
   4. Habersham Metal Products.
   5. Republic Builders Products.
   6. Metal Products Inc. (MPI).

B. Product Description: Shop fabricated steel frames, fire rated and non-rated types.

2.2 COMPONENTS

A. Steel: Galvanized sheet in accordance with ASTM A653/A653M; G60,
   1. Interior Frames: 16 gage/0.053 inch thick material, base metal thickness.

2.3 ACCESSORIES

A. Silencers: Resilient rubber fitted into drilled hole.

B. Removable Stops: Rolled steel channel shape, mitered corners; prepared for countersink style tamper proof screws.

C. Epoxy Coating.

D. Primer: Zinc chromate type.

2.4 FABRICATION

A. Fabricate frames as welded unit.

B. Mullions for Double Doors: Fixed type, of same profiles as jambs.

C. Transom Bars for Glazed Lights: Fixed type, of same profiles as jamb and head.

D. Fabricate frames with hardware reinforcement plates welded in place. Furnish mortar guard boxes.

E. Attach fire rated label to each fire rated frame.

F. Reinforce frames wider than 48 inches (1 200 mm) with roll formed steel channels fitted tightly into frame head, flush with top.

G. Prepare frames for silencers. Furnish three single silencers for single doors and mullions of double doors on strike side. Furnish two single silencers on frame head at double doors without mullions.

H. Fabricate frames to suit masonry wall coursing with 4 or 2 inch head member.

I. Where applicable, provide recessed/"dimpled" anchor locations in jambs for fasteners into walls.

2.5 SHOP FINISHING

A. Interior Units: ASTM A653/A653M G90.

B. Primer: Air dried.

C. Prior to shipment, inside surfaces of all masonry frames shall be coated with epoxy, minimum 5 mils DFT.

PART 3 EXECUTION

3.1 EXAMINATION

A. Division 01 - Administrative Requirements: Coordination and project conditions.

B. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install frames in accordance with HMMA 840.

B. Coordinate with masonry, gypsum board and concrete wall construction for anchor placement.

C. Coordinate installation of glass and glazing specified in Section 08800.

D. Coordinate installation of frames with installation of hardware specified in Section 08710 and doors.

E. Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.

3.3 ERECTION TOLERANCES

A. Division 01 - Quality Requirements: Tolerances.

B. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

END OF SECTION

SECTION 08 33 10

ROLLING FIRE DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Rolling fire service doors.

1.2 REFERENCES

A. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

B. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

C. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

E. NEMA MG 1 - Motors and Generators.

F. NFPA-80 – Standard for Fire Doors and Fire Windows.

1.3 DESIGN / PERFORMANCE REQUIREMENTS

A. Fire Rated Assemblies: Provide assemblies complying with NFPA 80 and listed in UL Directory or Intertek Testing Services (Warnock Hersey Listed) Directory.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Details of construction and fabrication.
   4. Installation methods.

C. Shop Drawings: Include detailed plans and elevations, details of framing members, anchoring methods, clearances, hardware, and accessories.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and patterns.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

G. Operation and Maintenance Data: Submit lubrication requirements and frequency, and periodic adjustments required.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience.

B. Installer Qualifications: Installer Qualifications: Company approved by manufacturer, specializing in performing Work of this section with minimum three years experience, with IDEA Certified Installers and service technicians on staff.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.

C. Store materials in a dry, warm, ventilated weathertight location.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 COORDINATION

A. Coordinate Work with other operations and installation of adjacent materials to avoid damage to installed materials.

1.9 WARRANTY

A. Warranty: Manufacturer’s limited door and operators System warranty of all parts and components of the system except counterbalance spring and finish for 3 years or 20,000 cycles, whichever comes first.

B. PowderGuard Finish
   1. PowderGuard Premium Applied to curtain, guides, bottom bar, headplates: Manufacturer's limited Premium Finish warranty for 2 years.
   2. PowderGuard Zinc Base Coat applied to guides, bottom bar, headplates plus PowderGuard Premium applied to curtain and top coat for guides, bottom bar, headplates: Manufacturer's limited Zinc Finish warranty for 4 years.

3. PowderGuard Textured: Applied to curtain, guides, bottom bar, headplates: Manufacturer's limited Textured Finish warranty for 3 years.
4. PowderGuard Zinc Base Coat applied to guides, bottom bar, headplates plus PowderGuard Textured applied to curtain and top coat for guides, bottom bar, headplates: Manufacturer's limited Zinc Finish warranty for 4 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Overhead Door Corporation; Basis of Design

B. Cookson

C. Cornell

D. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 ROLLING FIRE SERVICE DOORS

A. Rolling Fire Service Doors: FireKing Model 634 Fire Doors.
   1. Label: Provide fire doors certified with the following listing.
      a. Rolling fire doors up to 152 sf (14.12 sm) and not exceeding 13 feet 6 inches (4.11 m) in width or height shall receive the UL 3-Hour Class A Label when face mounted to masonry opening.
      b. Rolling fire doors up to 144 sf (13.7 sm) and not exceeding 12 feet (3.7 m) in height or width shall receive the UL 3-Hour Class A Label for masonry or concrete walls or steel wall jambs.
      c. Provide UL labeled smoke protection. Comply with UL label for "Leakage Rated Assembly" or "S" label.
         1) Comply with NFPA 105 air leakage requirements.
         2) Pass UL test procedure 1784.
   2. Curtain: Interlocking roll-formed slats as specified following. Endlocks shall be attached to each end of alternate slats to prevent lateral movement.
      a. Curved profile type C-187 for doors thru 20 feet (6.10 m) wide by 25 feet 4 inches (7.72 m) high, fabricated of:
         1) 18 gauge galvanized steel.
   3. Finish:
      a. Galvanized Steel: Slats and hood galvanized steel to ASTM A 653 finished with a rust-inhibitive roll coating process, including bonderizing, a 0.2 mils thick baked prime paint, and a 0.6 mils thick baked top coat.
         1) Powder Coat:
            (a) PowderGuard Premium: Weather resistant polyester powder coat color as selected by the Architect.
   4. Bottom Bar:
      a. Two structural steel angles 1-1/2 inch by 1-1/2 inch by 1/8 inch (38 mm by 38 mm by 3 mm) minimum.

b. Two galvanized steel angles with 1-1/2 inch by 1-1/2 inch by 1/8 inch (38 mm by 38 mm by 3 mm) minimum.
c. Provide sloping bottom bar within UL limits.

5. Guides: Three structural steel angles.
   a. Finish: PowderGuard Zinc Finish for guides, bottom bar and head plate.
   b. Fastening Guides to Masonry Fire Walls: UL listed for fire and smoke in accordance with manufacturer's listing.
6. Brackets:
   a. Hot rolled steel to support counterbalance, curtain and hood.
7. Finish; Bottom Bar, Guides, and Brackets:
   a. Finish: PowderGuard Premium powder coat color as selected by the Architect.
8. Counterbalance: Helical torsion spring type housed in a steel tube or pipe barrel, supporting the curtain with deflection limited to 0.03 inch per foot of span. Counterbalance is adjustable by means of an adjusting tension wheel.
9. Hood:
   a. Fabricate of 22 gauge galvanized primed steel for wall openings over 19 feet (5.79 m) wide.
   b. Hood equipped with thermally controlled, internal, galvanized steel flame baffle as required for FM listing.
   c. Provide one intermediate support bracket for wall openings over 13 feet 6 inches (4.11 m) wide
   d. Provide two support brackets for wall openings over 19 feet (5.79 m) wide.
10. Manual Operation
    a. Manual push.
11. Automatic Closure Standard Fire Door: UL approved release mechanism equipped with a 165 degree fusible link.
    a. Doors equipped with chain hoist release mechanism, requiring only one sash chain to be routed to the operated side (sash chain not required to be routed to adjusting wheel side)
       1) Release mechanism includes planetary gear differential system
       2) Door will close by thermally activated link rated at 165 degrees F. or by on optional listed releasing device, or by manually activating the release handle
       3) All counterbalance spring tension shall be maintained when the release mechanism is activated
       4) After closing by manual activation of the release handle, to door shall be able to be reset by one person from one side of the door (re-engaging the release handle). No tools shall be required to reset the release mechanism.
    b. Fire Sentinel time-delay release mechanism provides an added measure of safety to control the doors' closure as required.
12. Governor: If required by the size for chain hoist doors, provide a viscous governor to regulate the rate of descent of door in a quiet manner. Use an engagement type that is not engaged during normal door operation, but after cable release, will retard the speed during automatic door closure to under 24 inches per second and not less than 6 inches per second per NFPA 80.
13. Locking:
    a. Cylinder lock for electric operation with interlock switch.

14. Wall Mounting Condition: Face-of-wall mounting.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify opening sizes, tolerances and conditions are acceptable.

B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install rolling counter fire doors in compliance with requirements of NFPA 80. Test fire-release system and reset components after testing.

C. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

D. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.

E. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

F. Coordinate installation of electrical service. Complete wiring from disconnect to unit components.

G. Install and test Fire Sentinel release device(s) in accordance with the manufacturer’s instructions and in compliance with applicable regulations and codes of the local authority having jurisdiction.

H. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.

I. Install perimeter trim and closures.

3.4 ADJUSTING

A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.

B. Release device(s) shall be tested and witnessed for proper operation with the door manufacturer recommendations

C. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.5 FIELD QUALITY CONTROL

A. Functional testing of fire door and window assemblies shall be performed by IDEA Certified personnel with knowledge and understanding of the operating components of the type of door being subject to testing.

3.6 CLEANING

A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.

B. Remove labels and visible markings.

C. Touch-up, repair or replace damaged products before Substantial Completion.

3.7 PROTECTION

A. Protect installed products until completion of project.

END OF SECTION

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:

a. "Metal Doors and Frames"
b. "Flush Wood Doors"

6. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
7. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

1.02 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:

a. Review drawings and Sections from related trades to verify compatibility with specified hardware.
b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:

a. Wiring Diagrams: For power, signal, and control wiring and including:
1) Details of interface of electrified door hardware and building safety and security systems.
2) Schematic diagram of systems that interface with electrified door hardware.
3) Point-to-point wiring.
4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.

a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule:

a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
c. Indicate complete designations of each item required for each opening, include:
    1) Door Index: door number, heading number, and Architect's hardware set number.
    2) Quantity, type, style, function, size, and finish of each hardware item.
    3) Name and manufacturer of each item.
    4) Fastenings and other pertinent information.
    5) Location of each hardware set cross-referenced to indications on Drawings.
    6) Explanation of all abbreviations, symbols, and codes contained in schedule.
    7) Mounting locations for hardware.
    8) Door and frame sizes and materials.
    9) Degree of door swing and handing.
    10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

5. Key Schedule:

    a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
    b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
    c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
    d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
    e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
    f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:

    a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
    b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

    a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.

b. Catalog pages for each product.
c. Final approved hardware schedule edited to reflect conditions as installed.
d. Final keying schedule
e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:

a. Fire door assemblies, in compliance with NFPA 80.
b. Required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

a. For door hardware: DHI certified AHC or DHC.
b. Can provide installation and technical data to Architect and other related subcontractors.
c. Can inspect and verify components are in working order upon completion of installation.
d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Fire-Rated Door Openings:

a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.

b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

2. Smoke and Draft Control Door Assemblies:

   a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
   b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

3. Electrified Door Hardware

   a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

4. Accessibility Requirements:

   a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

1. Keying Conference

   a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
      1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
      2) Preliminary key system schematic diagram.
      3) Requirements for key control system.
      4) Requirements for access control.
      5) Address for delivery of keys.

2. Pre-installation Conference

   a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   b. Inspect and discuss preparatory work performed by other trades.
   c. Inspect and discuss electrical roughing-in for electrified door hardware.
   d. Review sequence of operation for each type of electrified door hardware.
   e. Review required testing, inspecting, and certifying procedures.
   f. Review questions or concerns related to proper installation and adjustment of door hardware.

3. Electrified Hardware Coordination Conference:

   a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.
B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.06 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

1.07 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.

    1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
    2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.

        a. Mechanical Warranty
            1) Locks: 3 Years
            2) Exit Devices: 3 Years
            3) Closers: 30 Years

        b. Electrical Warranty
            1) Exit Devices: 1 Year
            2) Automatic Operators: 2 Years

1.08 MAINTENANCE

A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: ''No Substitute.''

1. Where ''No Substitute'' is noted, submittals and substitution requests for other products will not be considered.

B. Approval of manufacturers and/or products other than those listed as ''Scheduled Manufacturer'' or ''Acceptable Manufacturers'' in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
C. Approval of products from manufacturers indicated in ''Acceptable Manufacturers'' is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fabrication

1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer’s recognized installation standards for application intended.
2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with “Metal Doors and Frames”, “Flush Wood Doors”, “Stile and Rail Wood Doors” to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.
2. For closers and panic devices: Verify with Architect and/or Owner if thru-bolts are required at specific door materials.

2.03 CONTINUOUS HINGES

A. Manufacturers:

1. Scheduled Manufacturer:

    a. Ives

2. Acceptable Manufacturers:

    a. Select
    b. Pemko

B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.04 ELECTRIC POWER TRANSFER

A. Manufacturers:

1. Scheduled Manufacturer and Product:

    a. Von Duprin EPT-10

2. Acceptable Manufacturers and Products:

    a. No Substitute

B. Requirements:

1. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
2. Locate electric power transfer per manufacturer's template and UL requirements, unless interference with operation of door or other hardware items.

2.05 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage ND series

2. Acceptable Manufacturers and Products:

a. No Substitute

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
7. Provide electrified options as scheduled in the hardware sets.
8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

a. Lever Design: Schlage - Sparta (SPA).
b. Verify/Match Existing.

2.06 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Von Duprin 99/33A series

2. Acceptable Manufacturers and Products:

a. No Substitute

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide grooved touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices with weather resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer's approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.

10. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.07 ELECTRIC STRIKES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Von Duprin 6000 Series

2. Acceptable Manufacturers and Products:

a. No Substitute

B. Requirements:

1. Provide electric strikes designed for use with type of locks shown at each opening.
2. Provide electric strikes UL Listed as burglary resistant that are tested to a minimum endurance test of 1,000,000 cycles.
3. Where required, provide electric strikes UL Listed for fire doors and frames.
4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.08 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage/Von Duprin PS900 Series

2. Acceptable Manufacturers and Products:

a. No Substitute

B. Requirements:

1. Provide power supplies approved by manufacturer of supplied electrified hardware.

2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide regulated and filtered 24 VDC power supply, and UL class 2 listed.
4. Provide power supplies with the following features:

    a. 12/24 VDC Output, field selectable.
    b. Class 2 Rated power limited output.
    c. Universal 120-240 VAC input.
    d. Low voltage DC, regulated and filtered.
    e. Polarized connector for distribution boards.
    f. Fused primary input.
    g. AC input and DC output monitoring circuit w/LED indicators.
    h. Cover mounted AC Input indication.
    i. Tested and certified to meet UL294.
    j. NEMA 1 enclosure.
    k. Hinged cover w/lock down screws.
    l. High voltage protective cover.

2.09 CYLINDERS

A. Manufacturers:

1. Scheduled Manufacturer and Product:

    a. Best

2. Acceptable Manufacturers and Products:

    a. No Substitute

B. Requirements:

1. Provide cylinders/cores to match Owner’s existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer’s series as indicated. Refer to “KEYING” article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.

    a. Match owner's existing system.
    b. Cylinder/Core Type:
        1) Small Format Interchangeable Core (SFIC)

3. Replaceable Construction Cores.

    a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
        1) 3 construction control keys
        2) 12 construction change (day) keys.

4. Verify with Owner where permanent cores are to be shipped to.

2.10 KEYING

A. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
B. Requirements:

1. Provide keying system capable of multiplex masterkeying.
2. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.

    a. Master Keying system as directed by the Owner.
    b. Match Owner's existing system.
    c. (Great)Grand Master Key System: Cylinders/cores operated by change(day) keys and subsequent masters (including grand/great grand) keys.

3. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
4. Provide keys with the following features:

    a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm)

5. Identification:

    a. Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
    b. Identification stamping provisions must be approved by the Architect and Owner.
    c. Stamp cylinders/cores and keys with Owner’s unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with “DO NOT DUPLICATE”.
    d. Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.

6. Quantity: Furnish in the following quantities.

    a. Change (Day) Keys: 3 per cylinder/core.
    b. Permanent Control Keys: 3 (only applicable to interchangeable core).
    c. Master Keys: 6/ea (per master).
    d. Unused balance of key blanks shall be provided to Owner with cut keys.

7. Verify with Owner where permanent keys are to be shipped to.

2.11 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

    a. LCN 4040XP series

2. Acceptable Manufacturers and Products:

    a. No Substitute

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter piston with 5/8-inch (16 mm) diameter double heat-treated pinion journal. QR code with a direct link to maintenance instructions.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards. Provide snap-on cover clip, with plastic covers, that secures cover to spring tube.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck. Provide graphically labelled instructions on the closer body adjacent to each adjustment valve. Provide positive stop on reg valve that prevents reg screw from being backed out.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.12 ELECTRO-HYDRAULIC AUTOMATIC OPERATORS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

   a. LCN 4600 series

2. Acceptable Manufacturers and Products:

   a. No Substitute

B. Requirements:

1. Provide low energy automatic operator units with hydraulic closer complying with ANSI/BHMA A156.19.
2. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
3. Provide units with conventional door closer opening and closing forces unless power operator motor is activated. Provide door closer assembly with adjustable spring size, back-check, and opening and closing speed adjustment valves to control door
4. Provide units with on/off switch for manual operation, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay.
5. Provide drop plates, brackets, and adapters for arms as required for details.
6. Provide actuator switches and receivers for operation as specified.
7. Provide weather-resistant actuators at exterior applications.

8. Provide key switches with LED's, recommended and approved by manufacturer of automatic operator as required for function described in operation description of hardware group below. Cylinders: Refer to "KEYING" article, herein.
9. Provide complete assemblies of controls, switches, power supplies, relays, and parts/material recommended and approved by manufacturer of automatic operator for each individual leaf. Actuators control both doors simultaneously at pairs. Sequence operation of exterior and vestibule doors with automatic operators to allow ingress or egress through both sets of openings as directed by Architect. Locate actuators, key switches, and other controls as directed by Architect.
10. Provide units with vestibule inputs that allow sequencing operation of two units, and SPDT relay for interfacing with latching or locking devices.

2.13 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Trimco
b. Rockwood

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.14 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:

a. Glynn-Johnson

2. Acceptable Manufacturers:

a. No Substitute

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.
2. Provide friction type at doors without closer and positive type at doors with closer.

2.15 PUSHBUTTONS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage 660-PB Series

2. Acceptable Manufacturers and Products:

a. No Substitute

B. Requirements:

1. Provide push buttons as specified in hardware groups.

2.16 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:

a. Zero International

2. Acceptable Manufacturers:

a. National Guard
b. Reese
c. Pemko

B. Requirements:

1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.17 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Rockwood
b. Trimco

B. Requirements:

1. Provide ''push-in'' type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.18 FINISHES

A. Provide finish for each item as indicated in the sets.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
C. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
I. Lock Cylinders:

1. Install construction cores to secure building and areas during construction period.
2. Replace construction cores with permanent cores as indicated in keying section.

J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Connections to panel interface modules, controllers, and gateways.
6. Testing and labeling wires with Architect's opening number.

K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
L. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
M. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
N. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
O. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
P. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
Q. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
R. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
S. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.03 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.
B. Clean operating items per manufacturer's instructions to restore proper function and finish.
C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.05 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.
C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.
D. Hardware Sets:

75714 OPT0285390 Version 1

HARDWARE GROUP NO. 01

For use on Door #(s):
MCC-2 P-1

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	ENTRANCE LOCK	ND53BDC SPA	626	SCH
1	EA	PERMANENT CORE	1C7*2	626	BES
1	EA	SURFACE CLOSER (W/ DEAD STOP)	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 02

For use on Door #(s):
G-1 P-2 S-4

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	STOREROOM LOCK	ND80BDC SPA	626	SCH
1	EA	PERMANENT CORE	1C7*2	626	BES
1	EA	ELECTRIC STRIKE	6400 FSE 12/24 VAC/VDC	630	VON
1	EA	SURFACE CLOSER (W/ DEAD STOP)	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1 1/2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	EA	CREDENTIAL READER	MT SERIES - BY OWNER'S ACCESS CONTROL INTEGRATOR	BLK	SCE
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL 120/240 VAC (4RL BOARD FOR PUSH BUTTON DELAY)	LGR	SCE

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL TO READER, OR PUSH BUTTON AT RECEPTION DESK, MOMENTARILY RELEASES ELECTRIC STRIKE, ALLOWING ACCESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 03

For use on Door #(s):
MCC-3

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	STOREROOM LOCK	ND80BDC SPA	626	SCH
1	EA	PERMANENT CORE	1C7*2	626	BES
1	EA	ELECTRIC STRIKE	6400 FSE 12/24 VAC/VDC	630	VON
1	EA	CREDENTIAL READER	MT SERIES - BY OWNER'S ACCESS CONTROL INTEGRATOR	BLK	SCE
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL 120/240 VAC (4RL BOARD FOR PUSH BUTTON DELAY)	LGR	SCE

BALANCE OF HARDWARE EXISTING TO REMAIN. VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE. DOOR NORMALLY CLOSED AND LOCKED.

PRESENTING VALID CREDENTIAL TO READER, OR PUSH BUTTON AT RECEPTION DESK, MOMENTARILY RELEASES ELECTRIC STRIKE, ALLOWING ACCESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 04

For use on Door #(s):
MCC-1 P-3A S-2

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
1	EA	ELEC PANIC HARDWARE	SD-QEL-99-DT 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	SD-QEL-99-NL 24 VDC	626	VON
1	EA	RIM CYLINDER	1E72	626	BES
3	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	OH STOP	90S (@ AO LEAF)	630	GLY
1	EA	SURFACE CLOSER (W/ SPRING STOP)	4040XP SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642 WMS 120 VAC (FLUSH CEILING MOUNT)	689	LCN
2	EA	ACTUATOR	8310-818T (JAMB MOUNT)	630	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
2	EA	SILENCER	SR64	GRY	IVE
1	EA	CREDENTIAL READER	MT SERIES - BY OWNER'S ACCESS CONTROL INTEGRATOR	BLK	SCE
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL 120/240 VAC	LGR	SCE

DOOR NORMALLY CLOSED AND LOCKED AND EXTERIOR ACTUATOR DISABLED. PRESENTING VALID CREDENTIAL TO READER, OR PUSH AT RECEPTION DESK, RETRACTS EXIT DEVICE LATCH AND ENABLES EXTERIOR ACTUATOR. PUSHING ENABLED EXTERIOR ACTUATOR SIGNALS AUTOMATIC OPERATOR TO OPEN DOOR. INTERIOR ACTUATOR ENABLED AT ALL TIMES. PUSHING INTERIOR ACTUATOR RETRACTS LATCH AND SIGNALS AUTOMATIC OPERATOR TO OPEN DOOR. EXIT DEVICE LATCH ALSO CAPABLE OF BEING MECHANICALLY DOGGED DOWN (I.E. PUSH/PULL MODE) OR ELECTRONICALLY DOGGED DOWN AS DESIGNATED BY ACCESS CONTROL SYSTEM SCHEDULE. IF ELECTRICALLY DOGGED, EXIT DEVICE LATCHES AND LOCKS WITH LOSS OF POWER. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 05

For use on Door #(s):
G-2

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224XY EPT	628	IVE
2	EA	POWER TRANSFER	EPT10	689	VON
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
1	EA	ELEC PANIC HARDWARE	SD-QEL-99-DT 24 VDC	626	VON
1	EA	ELEC PANIC HARDWARE	SD-QEL-99-NL 24 VDC	626	VON
1	EA	RIM CYLINDER	1E72	626	BES
3	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	OH STOP	90S (@ AO LEAF)	630	GLY
1	EA	SURFACE CLOSER (W/ SPRING STOP)	4040XP SCUSH	689	LCN
1	EA	SURF. AUTO OPERATOR	4642 WMS 120 VAC (FLUSH CEILING MOUNT)	689	LCN
2	EA	ACTUATOR	8310-853T (WALL MOUNT)	630	LCN
2	EA	MOUNT BOX	8310-867S		LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
2	EA	SILENCER	SR64	GRY	IVE
1	EA	CREDENTIAL READER	MT SERIES - BY OWNER'S ACCESS CONTROL INTEGRATOR	BLK	SCE
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE
1	EA	POWER SUPPLY	PS902 900-4RL 120/240 VAC	LGR	SCE

DOOR NORMALLY CLOSED AND LOCKED AND EXTERIOR ACTUATOR DISABLED. PRESENTING VALID CREDENTIAL TO READER, OR PUSH AT RECEPTION DESK, RETRACTS EXIT DEVICE LATCH AND ENABLES EXTERIOR ACTUATOR. PUSHING ENABLED EXTERIOR ACTUATOR SIGNALS AUTOMATIC OPERATOR TO OPEN DOOR. INTERIOR ACTUATOR ENABLED AT ALL TIMES. PUSHING INTERIOR ACTUATOR RETRACTS LATCH AND SIGNALS AUTOMATIC OPERATOR TO OPEN DOOR. EXIT DEVICE LATCH ALSO CAPABLE OF BEING MECHANICALLY DOGGED DOWN (I.E. PUSH/PULL MODE) OR ELECTRONICALLY DOGGED DOWN AS DESIGNATED BY ACCESS CONTROL SYSTEM SCHEDULE. IF ELECTRICALLY DOGGED, EXIT DEVICE LATCHES AND LOCKS WITH LOSS OF POWER. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 06

For use on Door #(s):
P-3B S-1

Provide each OPENING with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224XY	628	IVE
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
1	EA	PANIC HARDWARE	SD-99-DT	626	VON
3	EA	MORTISE CYLINDER	1E74	626	BES
3	EA	SURFACE CLOSER (W/ SPRING STOP)	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 07

For use on Door #(s):
S-3

Provide each OPENING with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR

ALL HARDWARE EXISTING TO REMAIN.

END OF SECTION

DOOR #	HS #	REMARKS
G-1	02	CR, ES, PBR
G-2	05	CR, QEL, AO(WW), PBR, SD
MCC-1	04	CR, QEL, AO(JJ), PBR, SD
MCC-2	01	
MCC-3	03	CR, ES, PBR
P-1	01	
P-2	02	CR, ES, PBR
P-3A	04	CR, QEL, AO(JJ), PBR, SD
P-3B	06	SD
S-1	06	SD
S-2	04	CR, QEL, AO(JJ), PBR, SD
S-3	07	
S-4	02	CR, ES, PBR

CR = Credential Reader

ES = Electric Strike

QEL = Electric Latch Retraction Panic Device

PBR = Push Button Release

SD = Special Dogging (Keyed Dogging in addition to Electric Latch Retraction)

AO(WW) = Auto Operator, Wall Actuator x Wall Actuator

AO (JJ) = Auto Operator, Jamb Actuator x Jamb Actuator

SECTION 08800

GLAZING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes glass and glazing.

B. Section includes glass film.

1.2 REFERENCES

A. American National Standards Institute:
   1. ANSI Z97.1 - Safety Glazing Materials Used in Buildings Safety.

B. American Society of Civil Engineers:
   1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

C. ASTM International:
   1. ASTM C1036 - Standard Specification for Flat Glass.
   2. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.

1.3 SUBMITTALS

A. Division 01 - Submittal Procedures : Submittal procedures.

B. Shop Drawings:
   1. Indicate sizes, layout, thicknesses, and loading conditions for glass.

1.4 SUSTAINABLE DESIGN SUBMITTALS

A. Sustainable Design Requirements: Requirements for sustainable design submittals.

B. Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements.
   1. Materials Resources Certificates:
      a. Certify recycled material content for recycled content products.
      b. Certify source for local and regional materials and distance from Project site.
   2. Indoor Air Quality Certificates:
      a. Certify volatile organic compound content for each interior adhesive and sealant and related primer.

C. Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products.
   1. Provide cost data for the following products:

a. Products with recycled material content.
b. Local and regional products.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do not install glazing when ambient temperature is less than 50 degrees F (10 degrees C).

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

PART 2 PRODUCTS

2.1 FLOAT GLASS MATERIALS

A. Tempered Glass: ASTM C1048, Type 1 transparent flat, Quality Q3, Kind FT fully tempered, Condition A uncoated, float glass with horizontal tempering.
1. Furnish tempered glass where heat strengthened glass cannot meet specified performance requirements.

2.2 FLOAT GLASS PRODUCTS

A. Float Glass Manufacturers:
1. ACH Glass Operations.
2. AFG Industries, Inc.
3. Guardian Industries Corp.
4. PPG Industries
5. Pilkington North America, Inc.
6. Or Approved Equal.

B. Clear Glass: Tempered float glass as specified; Class 1 clear.
1. Minimum Thickness: 1/4.

2.3 SECURITY GLASS:

A. Single Pane: School Guard Glass; SG4 tempered glass composite, 3/8” thickness, PRODUCT #: SGG-L6-SG4T.

2.4 GLASS SECURITY FILM

A. Provide glass film applied to secure side of all existing windows/glazing in and directly directly adjacent to all Vestibule spaces indicated on the drawings. Provide 3M Security Window Film applied as recommended by the Manufacturer and installed by qualified and certified 3M Security Window Film Installer.

2.5 GLAZING SEALANTS

A. Elastomeric Glazing Sealants: Materials compatible with adjacent materials including glass, laminated glass core, insulating glass seals, and glazing channels.

1. Silicone Glazing Sealant: ASTM C920, Type S, Grade NS, Class and Use suitable for glazing application indicated; single component; chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining, cured Shore A hardness of 15 to 25.
    a. Color: As selected.
    b. Interior Sealants and Sealant Primers: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.
2. Polyurethane Glazing Sealant: ASTM C920, Type S, Grade NS, Class and Use suitable for glazing application indicated; single component, chemical curing, non-staining, non-bleeding, Shore A Hardness Range 20 to 35.
    a. Color: As selected.
    b. Interior Sealants and Sealant Primers: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.

B. Dense Gaskets: Resilient extruded shape to suit glazing channel retaining slot; black.
1. Neoprene: ASTM C864.
2. EPDM: ASTM C864.
3. Silicone: ASTM C1115.

C. Soft Gaskets: ASTM C509; resilient extruded shape to suit glazing channel retaining slot; black.
1. Neoprene.
2. EPDM.
3. Silicone.

D. Pre-Formed Glazing Tape: Size to suit application.
1. Preformed butyl compound 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
    a. Butyl Corner Sealant: ASTM C920 single component non-skinning butyl compatible with glazing tape; color to match tape.
    b. Interior Sealants and Sealant Primers: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.
2. Glazing Tape: Closed cell polyvinyl chloride foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent, designed for compression of 25 percent to effect an air barrier and vapor retarder seal.
    a. Interior Adhesives: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.

2.6 GLAZING ACCESSORIES

A. Setting Blocks: Elastomeric material recommended by glass manufacturer, 80 to 90 Shore A durometer hardness, length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) x width of glazing rabbet space minus 1/16 inch (1.5 mm) x height to suit glazing method and pane weight and area.

B. Spacer Shims: Elastomeric material recommended by glass manufacturer, 50 to 60 Shore A durometer hardness, minimum 3 inch (75 mm) long x one half the height of glazing stop x thickness to suit application , self adhesive on one face.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify openings for glazing are correctly sized and within acceptable tolerance.

B. Verify surfaces of glazing channels or recesses are clean, free of obstructions impeding moisture movement, weeps are clear, and ready to receive glazing.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant.

3.3 INSTALLATION

A. School Guard Glass Security Glazing to be installed as per manufacturer's recommendations.

B. 3M Security Window Film to be installed by certified 3M Window Film Installer.

C. Perform installation in accordance with GANA Glazing Manual.
   1. Glazing Sealants: Comply with ASTM C1193.
   2. Fire Rated Openings: Comply with NFPA 80.

D. Exterior Dry Method (Gasket Glazing):
   1. Cut glazing gasket to length; install on glazing pane. Seal corners by butting tape and sealing junctions with compatible butyl sealant.
   2. Place setting blocks at 1/4 points with edge block no more than 6 inches (150 mm) from corners.
   3. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.
   4. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.

E. Exterior Wet/Dry Method (Preformed Tape and Sealant) Installation:

   1. Cut glazing tape to length and set against permanent stops, 3/16 inch (5 mm) below sight line. Seal corners by butting tape and dabbing with compatible butyl sealant.
   2. Apply heel bead of butyl sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete continuity of air and vapor seal.
   3. Place setting blocks at 1/4 points with edge block no more than 6 inches (150 mm) from corners.
   4. Rest glazing on setting blocks and push against tape with sufficient pressure to attain full contact at perimeter of pane or glass unit.
   5. Install removable stops, with spacer strips inserted between glazing and applied stops, 1/4 inch (6 mm) below sight line

6. Fill gap between glazing and stop with elastomeric glazing sealant to depth equal to bite of frame on glazing, but not more than 3/8 inch (9 mm) below sight line.
7. Apply cap bead of elastomeric glazing sealant along void between stop and glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

F. Exterior Wet Method (Sealant and Sealant) Installation:
1. Place setting blocks at 1/4 points and install glazing pane or unit.
2. Install removable stops with glazing centered in space by inserting spacer shims both sides at 24 inches (600 mm) intervals, 1/4 inch (6 mm) below sight line.
3. Fill gaps between glazing and stops with elastomeric glazing sealant to depth of bite on glazing, but not more than 3/8 inch (9 mm) below sight line to ensure full contact with glazing and continue the air and vapor seal.
4. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

G. Exterior and Interior Butt Glazed Method (Sealant Only) Installation:
1. Temporarily brace glass in position for duration of glazing process. Mask edges of glass at adjoining glass edges and between glass edges and framing members.
2. Temporarily secure small diameter non-adhering foamed rod on back side of joint.
3. Apply sealant to open side of joint in continuous operation; thoroughly fill joint without displacing foam rod. Tool sealant surface smooth to concave profile.
4. Permit sealant to cure then remove foam backer rod. Apply sealant to opposite side, tool smooth to concave profile.
5. Remove masking tape.

H. Interior Wet/Dry Method (Tape and Sealant) Installation:
1. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch (1.6 mm) above sight line.
2. Place setting blocks at 1/4 points with edge block no more than 6 inches (150 mm) from corners.
3. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
4. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch (600 mm) intervals, 1/4 inch (6 mm) below sight line.
5. Fill gaps between pane and applied stop with elastomeric glazing sealant to depth equal to bite on glazing, to uniform and level line.
6. Trim protruding tape edge.

I. Interior Wet Method (Compound and Compound) Installation:
1. Install glazing resting on setting blocks. Install applied stop and center pane by use of spacer shims at 24 inch (600 mm) centers, kept 1/4 inch (6 mm) below sight line.
2. Locate and secure glazing pane using spring wire clips or glazers' clips.
3. Fill gaps between glazing and stops with glazing compound until flush with sight line. Tool surface to straight line.

3.4 CLEANING

A. Remove glazing materials from finish surfaces.

B. Remove labels after Work is complete.

C. Clean glass and adjacent surfaces.

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes metal stud wall framing; metal channel ceiling framing, special trim pieces; gypsum board and joint treatment.

1.2 REFERENCES

A. ASTM International:
1. ASTM C475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
2. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members.
3. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
4. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
5. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
6. ASTM C1002 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases.
7. ASTM C1280 - Standard Specification for Application of Gypsum Sheathing.
8. ASTM C1396 – Standard Specification for Gypsum Board.
9. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
10. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

B. Gypsum Association:
1. GA 214 - Recommended Levels of Gypsum Board Finish.
2. GA 216 -Application and Finishing of Gypsum Board.
3. GA 600 - Fire Resistance Design Manual Sound Control.

C. Underwriters Laboratories Inc.:
1. UL - Fire Resistance Directory.

D. Intertek Testing Services (Warnock Hersey Listed):
1. WH - Certification Listings.

1.3 SUBMITTALS

A. Division 01 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate special details associated with fireproofing, acoustic seals, and trim.

C. Product Data: Submit data on metal framing, gypsum board, joint tape; and trim.

D. Evaluation Reports: Submit evaluation reports certified under an independent third-party inspection program administered by an agency accredited by IAS to ICC-ES AC98 IAS accreditation criteria for inspection agencies.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ASTM C840, ASTM C1280, GA-214, GA-216 and GA-600.

B. Code-Compliance Certification of Studs and Tracks: Provide documentation that framing members are certified in accordance with the product-certification program of the Steel Framing Industry Association (SFIA) or a similar organization that provides a verifiable code compliance program.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect cold-formed metal framing from corrosion, deformation, and other damage during delivery, storage, and handling as required by AISI S202 "Code of Standard Practice."

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

C. Design framing systems in accordance with ASTM C645.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

A. Steel Framing Manufacturers:
1. ClarkDietrich.
2. MarinoWare.
3. MBA Building Supplies.

B. Gypsum Board and Related Product Manufacturers:
1. CertainTeed Gypsum
2. G-P Gypsum Corp.
3. Lafarge.
4. National Gypsum Co.
5. United States Gypsum Co.

2.2 COMPONENTS

A. Framing Materials, General: Comply with ASTM C645, AISI S220 and ASTM C645, Section 10, AISI S220 for conditions indicated.

1. Protective Coating: Comply with ASTM C645; ASTM A653/A653M, G40 (Z120) or coating with equivalent corrosion resistance of ASTM A653/A653M, G40 (Z120). Galvannealed products are not acceptable.
    a. Coating: ClarkDietrich; DiamondPlus® Coating, or comparable.
        1) Coating roll-formed from steel complying with mechanical and chemical requirements of ASTM A1003 with a zinc-based coating.
    b. Coatings shall demonstrate equivalent corrosion resistance with an evaluation report acceptable to authorities having jurisdiction.

B. Studs and Tracks:
1. Typical Locations: ASTM C645; galvanized sheet steel, 20 gauge (0.0296 inch) minimum thick, C shape.
2. Locations receiving abuse resistant gypsum panels, high impact resistant panels or exterior sheathing shall be 20 gauge (0.0296 inch) minimum thickness.

C. Equivalent Gauge Studs and Tracks:
1. ClarkDietrich; ProSTUD 20 (20EQ) and ProTRAK 20 (20EQ) with Smart Edge technology or comparable product.
2. Minimum Base-Steel Thickness: 0.0181 inch (0.4597 mm).
3. Equivalent Gauge Thickness ("EQ") Steel Studs and Runners: Members that can show certified third-party testing with gypsum board in accordance with ICC-ES AC86 (Reapproved August 2015) need not comply with minimum thickness limitation or minimum section properties set forth in ASTM C645. Submission of an evaluation report is acceptable to show compliance with this requirement.

D. Furring, Framing, and Accessories: ASTM C645.
1. ClarkDietrich; Hat-Shaped, Rigid Furring Channels, or comparable product.
    a. Minimum Base-Steel Thickness: 0.0179 inch (0.45 mm).
2. Fasteners: ASTM C1002.
3. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

E. Gypsum Board Materials:
1. Standard Gypsum Board: ASTM C1396; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.
2. Fire Rated Gypsum Board: ASTM C1396; fire resistive type, UL or WH rated; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.
3. Moisture Resistant Gypsum Board: ASTM C630; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.

2.3 ACCESSORIES

A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced, thickness to match stud depth.

B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board; manufactured by Pecora, USG or ChemRex.

C. Comer Beads: Metal.

D. Edge Trim: Type U exposed reveal bead.

E. Special Trim Pieces, Expansion Joints and Reveals: As manufactured by Fry Reglet to suit installation as indicated on the drawings.

F. Joint Materials:
1. Typical: ASTM C475; reinforcing tape, joint compound, adhesive, and water.
2. For abuse resistant gypsum panels, high impact resistant panels or exterior sheathing use sheetrock joint tape and sheetrock setting type (Durabond 45 or 90) or lightweight setting-type (Easy Sand 45 or 90) joint compound as manufactured by United States Gypsum Co. Follow manufacturer's recommendations for each application.
3. For mold resistant gypsum board use joint materials as recommended by the Manufacturer.

G. Fasteners: ASTM C1002, Type S12 for steel studs.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions are ready to receive work and opening dimensions are as indicated on shop drawings.

3.2 INSTALLATION

A. Metal Stud Installation:
1. Install studs in accordance with ASTM C754 and the Manufacturer's instructions.
2. Metal Stud Spacing: 16 inches on center.
3. Refer to Drawings for indication of partitions extending stud framing through ceiling to structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
4. Door Opening Framing: Install double studs at door frame jambs. Install stud tracks on each side of opening, at frame head height, and between studs and adjacent studs.
5. Blocking: Bolt or screw steel channels to studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, wood frame opening, toilet accessories, hardware, and all other items indicated on the drawings to attach to the wall.

B. Wall Furring Installation:
1. Erect wall furring for direct attachment to concrete masonry and concrete walls.
2. Erect furring channels vertically; space maximum 16 inches oc, not more than 4 inches from floor, ceiling lines and abutting walls.
3. Install thermal insulation between Z-furring channels directly attached to concrete masonry and concrete walls.

C. Furring For Fire Ratings: Install furring as required for fire resistance ratings indicated.

D. Ceiling Framing Installation:
1. Install in accordance with ASTM C754.
2. Coordinate location of hangers with other work.
3. Install ceiling framing independent of walls, columns, and above ceiling work.

4. Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 24 inches past each end of openings.
5. Laterally brace entire suspension system.

E. Acoustic Accessories Installation:
1. Install resilient channels at maximum 24 inches on center. Locate joints over framing members.
2. Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
3. Install acoustic sealant within partitions.

F. Gypsum Board Installation:
1. Install gypsum board in accordance with GA-216 and GA-600.
2. Erect single layer standard gypsum board vertical, with ends and edges occurring over firm bearing.
3. Erect single layer fire rated gypsum board vertically, with edges and ends occurring over firm bearing.
4. Erect exterior gypsum sheathing in accordance with ASTM C1280, horizontally, with edges butted and ends occurring over firm bearing.
5. Use screws when fastening gypsum board to metal furring or framing.
6. Double Layer Applications: Use gypsum backing board for first layer, placed perpendicular to framing or furring members. Use fire rated gypsum backing board for fire rated partitions and ceilings.
7. Double Layer Applications: Secure second layer with fasteners.
8. Place second layer perpendicular to first layer. Offset joints of second layer from joints of first layer.
9. Use moisture resistant gypsum board in all restrooms, kitchens or similar wet areas. Treat cut edges and holes in moisture resistant gypsum board with sealant.
10. Place control joints consistent with lines of building spaces. Distance between control joints shall not to exceed 30 ft.
11. Place comer beads at external comers. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
12. Install cementitious backing board over metal studs.
13. Apply gypsum board to curved walls in accordance with GA-216.

G. Joint Treatment:
1. Finish in accordance with GA-214 Level 4.
2. Fill and finish joints and comers of cementitious backing board.

3.3 ERECTION TOLERANCES

A. Division 01 - Quality Requirements: Tolerances.

B. Maximum Variation of Finished Gypsum Board Surface from Flat Surface: 1/8 inch in 10 feet.

3.4 SCHEDULES

A. Finishes in accordance with GA-214 Level:

1. Level 1: Above finished ceilings concealed from view unless a higher level of finish is required for fire-resistance-rated assemblies.
2. Level 4: Walls exposed to view.
3. Level 4: Ceilings exposed to view.
4. Level 5: All surfaces adjacent to and exposed to exterior glass where light will "wash" gypsum board surfaces.

END OF SECTION

SECTION 09 91 00

PAINTING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes surface preparation and field application of paints and coatings as indicated.

B. Work includes all painting and finishing of interior and exterior exposed items and surfaces, throughout project, except as otherwise indicated.
   1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified as work of other sections.

C. Work includes field painting of exposed bare and covered pipes and ducts, and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under mechanical and electrical work, except as otherwise indicated.

D. "Paint" as used herein means all coating systems materials including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as primer, intermediate or finish coats.

E. Surfaces to be Painted: Except where natural finish of material is specifically noted as a surface not to be painted, paint exposed surfaces whether or not colors are designated in "schedules". Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas. If color or finish is not designated, the Architect will select these from manufacturer's standard range of colors or finishes.

F. Sheen to specific applications is as follows:
   1. Flat (0-10)
   2. Eggshell (10-20)
   3. Satin (20-40)
   4. Semi-Gloss (45-65)
   5. Gloss (75+)

1.2 RELATED WORK NOT INCLUDED

A. Pre-finished Items: Unless otherwise indicated, do not include painting when factory finishing or Installer-finishing is specified for such items as (but not limited to) metal toilet partitions, pre-finished partition systems, acoustic materials, pre-finished casework, elevator entrance doors and frames, elevator equipment, and finished mechanical and electrical equipment, including light fixtures, switchgear and distribution cabinets.

B. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, foundation spaces, furred areas, utility tunnels, pipe spaces, duct shafts and elevator shafts.

C. Finished Metal Surfaces: Unless otherwise indicated, metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require finish painting.

D. Operating Parts: Unless otherwise indicated, moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor and fan shafts will not require finish painting.

E. Shop Priming: Unless otherwise indicated, shop priming of ferrous metal items is included under various sections for structural steel, metal fabrications, hollow metal work and similar items.

F. Do not paint over any code required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature plates.

1.3 REFERENCES

A. ASTM International:
   1. ASTM D16 - Standard Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
   2. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.

B. Painting and Decorating Contractors of America:
   1. PDCA - Architectural Painting Specification Manual.

C. SSPC: The Society for Protective Coatings:
   1. SSPC - Steel Structures Painting Manual.

1.4 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this section.

1.5 SUBMITTALS

A. Division 01 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data on all finishing products.

C. Samples:
   1. Submit two paper chip samples, illustrating range of colors and textures available for each surface finishing product scheduled.

2. Submit two painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded. Submit on, 8-1/2 x 11 inch in size.

D. Manufacturer's Installation Instructions: Submit special surface preparation procedures, substrate conditions requiring special attention, and conditions.

1.6 CLOSEOUT SUBMITTALS

A. Section 01700 - Execution Requirements: Closeout procedures.

B. Operation and Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.8 MOCKUP

A. Division 01 - Quality Requirements: Mock-up requirements.

B. Construct mockup panel, 8 feet tall by 8 feet wide, illustrating coating color, texture, and finish.

C. Locate where directed.

D. Incorporate accepted mockup as part of Work.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01600 - Product Requirements: Product storage and handling requirements.

B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

C. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

D. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.

B. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.

C. Minimum Application Temperatures for Latex Paints: 45 degrees F (7 degrees C) for interiors; 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.

D. Minimum Application Temperature for Varnish and Finishes: 65 degrees F (18 degrees C) for interior or exterior, unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 ft candle (860 lx) measured mid-height at substrate surface.

1.11 EXTRA MATERIALS

A. Supply 2 gallons (8 L) of each color, type, and surface texture; store where directed.

B. Label each container with color, type, texture, room locations, and in addition to manufacturer's label.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

A. Manufacturers:
1. Benjamin Moore & Co.
2. PPG Architectural Finishes, Inc.
3. Sherwin-Williams.

2.2 COMPONENTS

A. Coatings: Ready mixed, except field catalyzed coatings. Prepare coatings:
1. To soft paste consistency, capable of being readily and uniformly dispersed to homogeneous coating.
2. For good flow and brushing properties.
3. Capable of drying or curing free of streaks or sags.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve finishes specified; commercial quality.

C. Patching Materials: Latex filler.

D. Fastener Head Cover Materials: Latex filler.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify surfaces and substrate conditions are ready to receive Work as instructed by product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report conditions capable of affecting proper application.

C. Test shop applied primer for compatibility with subsequent cover materials.

D. Measure moisture content of surfaces using electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Plaster and Gypsum Wallboard: 12 percent.
   2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
   3. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
   4. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.
   5. Concrete Floors: 8 percent.

3.2 PREPARATION

A. Surface Appurtenances: Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

B. Surfaces: Correct defects and clean surfaces capable of affecting work of this section. Remove or repair existing coatings exhibiting surface defects.

C. Marks: Seal with shellac those which may bleed through surface finishes.

D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

E. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.

F. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish: Remove foreign particles to permit adhesion of finishing materials. Apply compatible sealer or primer.

G. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.

H. Concrete Floors: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.

I. Copper Surfaces Scheduled for Paint Finish: Remove contamination by steam, high pressure water, or solvent washing. Apply vinyl etch primer immediately following cleaning.

J. Copper Surfaces Scheduled for Natural Oxidized Finish: Remove contamination by applying oxidizing solution of copper acetate and ammonium chloride in acetic acid. Rub on repeatedly for required effect. Once attained, rinse surfaces with clear water and allow to dry.

K. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.

L. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

M. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.

N. Plaster Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

O. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by power tool wire brushing or sandblasting; clean by washing with solvent. Apply treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

P. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

Q. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

R. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.

S. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior paintable caulking compound after prime coat has been applied.

T. Exterior Wood Scheduled to Receive Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted exterior caulking compound after sealer has been applied.

U. Glue-Laminated Beams: Prior to finishing, wash surfaces with solvent, remove grease and dirt.

V. Wood Doors Scheduled for Painting: Seal wood door top and bottom edge surfaces with tinted primer.

W. Hollow Metal Doors, Frames, Stops and Trim: Paint all exposed surfaces of hollow metal doors, frames, stops and trim. At locations where frames have been installed utilizing fasteners through the jambs, all dimpled/recessed locations shall be filled with Bondo and sanded smooth to uniform appearance prior to painting. Prime metal door top and bottom edge surfaces.

X.

3.3 APPLICATION

A. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

B. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless specified otherwise.

C. Sand wood and metal surfaces lightly between coats to achieve required finish.

D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

E. Where clear finishes are required, tint fillers to match wood. Work fillers into grain before set. Wipe excess from surface.

F. Prime concealed surfaces of interior and exterior woodwork with primer paint.

G. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.

H. Finishing Mechanical And Electrical Equipment:
1. Refer to Section 15075 and Section 16075 for schedule of color coding and identification banding of equipment, duct work, piping, and conduit.

2. Paint shop primed equipment.
3. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
4. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, and except where items are shop finished.
5. Paint interior surfaces of air ducts and convector and baseboard heating cabinets visible through grilles and louvers with one coat of flat black paint to visible surfaces. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
6. Paint exposed conduit and electrical equipment occurring in finished areas.
7. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.

8. Color code equipment, piping, conduit, and exposed duct work in accordance with requirements indicated.
9. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
10. Paint tanks, heat exchangers, ductwork and insulation, motors and accessories.

3.4 CLEANING

A. Collect waste material which may constitute fire hazard, place in closed metal containers, and remove daily from site.

3.5 SCHEDULE - SHOP PRIMED ITEMS FOR SITE FINISHING

A. Metal Fabrications (Section 05 50 00): Exposed surfaces of lintels, elevator pit ladders, access ladders, and handrails.

3.6 SCHEDULES OF PAINT PRODUCTS

A. All paints and related products are to be the best in quality for each application designated. If technology and products have been developed or upgraded, the Contractor shall include in his original cost the best product from each manufacturer for the application specified. No cost increases will be accepted for failure to include the best in quality for each application.

B. Existing Surfaces: The Contractor shall examine the existing surfaces of the project and include the proper primer in his original cost. No cost increases will be accepted for failure to examine existing surfaces and include the proper primer.

3.7 SCHEDULE - EXTERIOR SURFACES

A. Wood - Painted (Opaque):
1. One coat of latex or alkyd primer sealer.
   a. Sherwin Williams Exterior Latex Wood Primer B42 Series
2. Two coats of alkyd or latex enamel, gloss.
   a. Sherwin Williams A-100 Exterior Latex Gloss A8 Series

B. Wood - Transparent:
1. Two coats of stain.
   a. Sherwin Williams Woodscapes Exterior Semi-Transparent Polyurethane Stain A15T5

C. Wood - Shingles and Shakes:
1. Two coats of stain.
   Sherwin Williams Woodscapes Exterior Semi-Transparent Polyurethane Stain A15T5

D. Glue-Laminated Wood and Wood Timber Members:
1. Two coats of stain.
   Sherwin Williams Woodscapes Exterior Semi-Transparent Polyurethane Stain A15T5

E. Concrete, Cement Plaster & Masonry other than concrete masonry units:
1. One coat of block primer.
a. Sherwin Williams Loxon Masonry Primer A24 Series
2. Two coats of latex or alkyd, flat.
a. Sherwin Williams A-100 Exterior Flat A6 Series

F. Concrete Masonry Units:
1. Filler coat:
2. Sherwin Williams Heavy Duty Blockfiller B42W46 Two coats of latex or alkyd, flat.
a. Sherwin Williams A-100 Exterior Latex Flat A6 Series

G. Concrete Masonry Units with Heavy Duty Textured Coating:
1. Two coats heavy duty textured coating with a total dry film thickness of 9.4-11mils DFT
a. Sherwin Williams ConFlex XL High Build Textured Coating A5-800 Series)

H. Steel - Unprimed:
1. One coat of latex or alkyd primer.
a. Sherwin Williams Pro Industrial Pro -Cryl Acrylic Primer B66 Series
2. Two coats of alkyd or latex enamel, gloss.
a. Sherwin Williams Sher-Cryl High Performance Acrylic Coating B66 Series

I. Steel - Shop Primed:
1. Touch-up with Anti-Corrosive Primer
2. Sherwin Williams Pro Industrial Pro-Cryl Acrylic Primer B66 SeriesTwo coats of alkyd or latex enamel, gloss.
a. Sherwin Williams Sher-Cryl High Performance Acrylic Coating B66 Series

J. Steel - Galvanized:
1. One coat galvanize primer.
a. Sherwin Williams Pro Industrial Pro-Cryl Primer B66 Series
2. Two coats of alkyd or latex enamel, gloss.
a. Sherwin Williams Sher-Cryl High Performance Acrylic Coating B66 Series

K. Aluminum - Mill Finish:
1. One coat primer.
2. Sherwin Williams Pro Industrial Pro-Cryl Primer B66 SeriesTwo coats of alkyd enamel, gloss.
a. Sherwin Williams Sher-Cryl High Performance Acrylic Coating B66 Series

3.8 SCHEDULE - INTERIOR SURFACES

A. Wood - Painted:

1. One coat of latex or alkyd prime sealer.
    a. Sherwin Williams Premium Wall and Wood Primer B28 Series
2. Two coats of alkyd or latex enamel, semi-gloss.
    a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Semi-Gloss B31-2600 Series

B. Wood - Transparent:
1. Filler coat (for open grained wood only).
    a. MAB – None required
2. Two coats of stain.
    a. Sherwin-Williams Wood Classics 250Interior Wood Stain A49 Series
3. One coat sealer.
    a. Sherwin Williams Wood Classics Waterborne Polyurethane A68 Series
4. Two coats of varnish, gloss or satin.
    a. Sherwin Williams Wood Classics Waterborne Polyurethane A68 Series

C. Glue-Laminated Wood or Wood Timber Members:
1. One coat of stain.
    a. MAB – Interior Alkyd Wood Stain
    b. Sherwin Williams Wood Classics 250 Interior Wood Stain A49 Series
    Sherwin Williams Wood Classics Waterborne Polyurethane A68 Series

D. Concrete, Cement Plaster or Masonry other than Concrete Masonry Units:
1. One coat of primer sealer latex or alkyd.
    a. Sherwin-Wiliams Loxon Concrete and Masonry Primer B28 Series
2. Two coats of latex or alkyd satin.
    a. Sherwin-Wiliams ProMar 200 Zero VOC Interior Latex Low Sheen B24-2600 Series

E. Concrete Masonry Units:
1. Filler coat:
    a. Sherwin Williams Interior/Exterior Blockfiller B25W25
2. Two coats of latex or alkyd, satin.
    a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Eg-Shel B20-2600 Series

F. Steel - Unprimed:
1. One coat of alkyd or latex primer.
    a. Sherwin Williams ProIndustrial Pro Cryl Primer B66 Series
2. Two coats of alkyd or latex enamel, semi-gloss.
    a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Semi-Gloss B31-2600 Series

G. Steel - Primed:
1. Touch-up with alkyd or latex primer.
    a. Sherwin Williams Pro Industrial Pro Cryl Primer B66 Series
2. Two coats of alkyd or latex enamel, semi-gloss.
    a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Semi-Gloss B31-2600 Series

H. Steel - Galvanized:
1. One coat galvanize primer.
a. Sherwin Williams Pro Industrial Pro Cryl Primer B66 Series
2. Two coats of alkyd or latex enamel, semi-gloss.
a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Semi-Gloss B31-2600 Series

I. Aluminum - Mill Finish:
1. One coat primer:.
a. Sherwin Williams Pro Industrial Pro Cryl Primer B66 Series
2. Two coats of latex enamel, gloss.
a. Sherwin Williams DTM Acrylic Gloss Coating B66 Series

J. Concrete Floors:
1. One coat of alkali resistant catalyzed epoxy primer.
a. Sherwin Williams armor Seal Floor Plex 7100 B70W410
2. One coat of catalyzed epoxy enamel, semi-gloss
a. Sherwin Williams Armor Seal Floor Plex 7100 B70W400

K. Gypsum Board and Plaster Walls and Ceilings:
1. One coat of latex primer sealer.
a. Sherwin Williams Pro Green 200 Latex Primer B28W600
2. Two coats of latex enamel, satin.
a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Eg-Shel B20-2600 Series

L. Insulated Coverings - Canvas and Cotton:
1. One coat of latex primer sealer with fungicidal agent added to render fabric mildew-proof.
a. Sherwin Williams ProGreen 200 Latex Primer B28W600
2. Two coats of latex, flat.
a. Sherwin Williams ProMar 200 Zero VOC Interior Latex Flat B30-2600 Series

3.9 SCHEDULE - COLORS

A. Match Existing

END OF SECTION

SECTION 10 44 00

SIGNAGE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes specialty signs.

B. Forms of specialty signs required include the following:
   1. Room rooms signs
   2. Interior directional signage.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Before preparation of shop drawings and schedules, the signage supplier shall meet with the Owner to review signage requirements. The signage supplier shall then prepare a complete sign schedule indicating sign styles, layout and content of each sign, lettering font, foreground and background colors, locations, overall dimensions of each sign.

C. Samples: Submit two signs, full size illustrating type, style, letter font, and colors specified; method of attachment.

D. Manufacturer's Installation Instructions: Submit installation template and attachment devices.

1.3 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Package signs, labeled in name groups.

C. Store adhesive attachment tape at ambient room temperatures.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.

B. Do not install signs when ambient temperature is lower than recommended by manufacturer.

C. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers of Signs:
1. Green Signs.
2. Ace.
3. APCO Graphics.
4. ACS Sign Systems.
5. ASI Sign Systems.
6. Essential Architectural Signs, Inc.
7. Sign Solutions.
8. Indianapolis Badge & Nameplate Company.
9. Inpro.

2.2 COMPONENTS

A. Room Signs: Provide one (1) sign at each new door indicated on the Floor Plans and Door Schedule. Corridor doors to receive two (2) signs. The sign supplier shall meet with the Owner to finalize exact text to be provided on signs. Submit to the Architect for review. Signs shall be equal to ASI 390 Molded Plastic Frame with SPE plaque. Provide Men's and Women's Restroom Signs and other pictorial signs. All signs shall have information in braille.
1. Text: two rows plus braille.
2. Colors: Colors as selected by the Architect.
3. Total Thickness: 1/8 inch.
4. Size: 6 inch wide x 8 inch tall.

B. Interior Directional Signs: Provide five (5) interior directional signs at each elementary school. All signs shall have information in braille.
1. Text: As provided by the Owner.
2. Colors: Colors as selected by the Architect.
3. Total Thickness: 1/8 inch.
4. Size: Up to 24 inch wide x 8 inch tall.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verification of existing conditions before starting Work.

3.2 INSTALLATION

A. Install signs after surfaces are finished, in locations scheduled.

B. Install signs level, plumb and at heights required by applicable code.

C. Wall Mounted Signs: Use manufacturer's standard brackets, fittings and hardware as appropriate for mounting signs.

D. Metal Letters and Numbers: Mount letters and numbers using standard fastening methods recommended by the Manufacturer for letter form, type of mounting, indicated wall construction and condition of exposure. Provide heavy weight paper template to establish letter spacing and to locate holes for fasteners.
   1. Flush Mounting: Mount letters with backs in contact with wall surfaces.

3.3 CLEANING AND PROTECTION

A. At completion of installation, clean soiled sign surface in accordance with manufacturer's instructions. Protect units from damage until acceptance by Owner.

END OF SECTION