PROJECT MANUAL

FOR

101 CASS ST. CONDOMINIUM AND CITY OFFICE RENOVATIONS

101 W. Cass St.
St. Johns, MI 48879

PRE-BID CONFERENCE:	As noted in documents
SITE TOUR:	Following pre-bid conference
OWNER'S REPRESENTATIVE:	Chad A. Gamble, P.E.
BIDS DUE:	2:00 p.m., July 17, 2025 City of St. Johns
DESIGN PROFESSIONAL:	Studio Intrigue Architects
CONTACT PERSON:	Matt Guzinski
ADDRESS:	1114 S. Washington Ave. Lansing, MI, 48910
PHONE:	(517) 372-8804
Direct Line:	(517) 908-8355

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ADVERTISEMENT FOR BID

BIDS DUE:	July 17, 2025 2:00 p.m. EDT City of St. Johns 100 E. State St. Suite 1100 St. Johns, MI 48879
PROJECT:	101 Cass St. Condominium and City Office Renovations
OWNER:	City of St. Johns 100 E. State St. Suite 1100 St. Johns, MI 48879 & 101 W. Cass St. Condominium Association 101 W. Cass St. St. Johns, MI 48879
ARCHITECT/ENGINEER:	Studio Intrigue Architects 1114 S. Washington Ave. Lansing, MI 48910 Phone 517-372-8804
PREBID MEETING:	July 8, 2025 2:00 p.m. EDT On-Site, 101 E. Cass St. St. Johns, Michigan Attendance is mandatory and will be noted during bid opening.

Sealed bids will be received by the Owner at the City Offices at 100 E. State St. Suite 1100, St. Johns, Michigan until 2:00 p.m. EDT, on July 17, 2025.

Sealed bids will be opened and publicly read at the City Conference Room within the City offices, 100 E. State St. Suite 1100, St. Johns, Michigan at 2:15 p.m., EDT, on July 17, 2025, or at such later time and place as may then be fixed.

Bids will be considered by the Owner at a public meeting to be held at Commission Chambers, 100 E. State St. Room 2200, St. Johns, Michigan at such later time and place as may then be fixed per Commission Agenda.

The general nature of the work is as follows:
Division #1 (Unit #1): The renovation and utility upgrades of the old St. Johns High School gymnasium, Auditorium, and officed into City's use as a community center. The work involves the repair / replacement of finishes, repair of historic windows and upgrades to HVAC, Electrical and Plumbing.
Division #2(Condo Common Space): The renovation and utility upgrades of the old St. Johns High School and hallways as use as condo common space areas. The work involves the repair / replacement of finishes and upgrades to HVAC, Electrical and Plumbing.
Division #3 (City Offices): renovation and utility upgrades of the old St. Johns City office space in the existing country courthouse building. The work involves minor demolition and construction of walls, flooring removal/replacement, painting and minor plumbing.

SECTION 00 11 13
ADVERTISEMENT FOR BID

The onsite work for Divisions #1 and #2 are scheduled to start on or around August 18, 2025 and shall be substantially completed by March 20, 2026.
The onsite work for Division #3 must commence no later than August 11, 2025 and shall be substantially completed by October 6, 2026.

Bidding documents may be examined at the following locations:

City of St. Johns, 100 E. State St., Sutie 1100, St. Johns, MI, 48879
Studio Intrigue Architects, 1114 S. Washington Ave. Suite 100, Lansing MI, 48910
Builders Exchange of Lansing & Central Michigan, 1240 East Saginaw. Lansing, MI 48906
Capital City Reprographics, 1110 Center St. Lansing, MI 48906

Copies of the Bidding documents may be obtained by Bidders and Sub-bidders at Capital City Reporgraphics, 1110 Center St. Lansing, MI, 517-482-5431 in accordance with the Instructions to Bidders. It is requested that bidders return the documents in good condition within ten days after submission of bids.

Each Bidder shall accompany the Bid with a Bid security, in a separate envelope, as security that the successful bidder will enter into a contract for the work bid upon and will furnish after the award of the contract corporate surety bond or bonds, acceptable to the Owner, for the faithful performance of the contract, in an amount equivalent to one hundred percent of the amount of the contract. The bidder's security shall be in an amount equivalent to five percent (5%) percent of the bid amount, and shall be in the form of a cashier's or certified check drawn on a bank in Michigan or a bank chartered under the laws of the United States of America, or a bid bond with corporate surety satisfactory to the Owner. The bid security will be held by the Owner until a contract is fully executed and bonds are approved by the Owner.

No bid may be withdrawn for a period of 30 calendar days after the date of the scheduled closing time for the receipt of bids.

Bidders shall be prepared to submit a performance and payment bond conditioned on the faithful performance of the contract. Out-of-state bidders shall be prepared to submit an Out-of-State Contractor Bond to the Michigan Division of Labor in accordance with MCL 129.201 of the Code of Michigan.

By virtue of statutory authority, a preference will be given to products and provisions grown and produced within the State of Michigan, and to Michigan labor to the extent lawfully required under Michigan law.
Michigan law provides that on public improvements a resident bidder shall be allowed preference as against a nonresident bidder from a state or foreign country which gives or requires a preference to bidders from that state or foreign country. The preference so allowed shall be equivalent to the preference given or required by the state or foreign country in which the nonresident bidder is a resident.

It is the intent of the Owner to award a contract to the lowest responsible, responsive bidder provided the bid has been submitted in accordance with the bidding requirements. The Owner reserves the right to waive informalities or irregularities. The Owner reserves the right to reject any or all bids.

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INSTRUCTION TO BIDDERS

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INSTRUCTION TO BIDDERS

ARTICLE 1 - RECEIPT AND OPENING OF BIDS

1.1 The "Owner", will receive Sealed bids at the City Offices at 100 E. State St. Suite 1100, St. Johns, Michigan until 2:00 p.m. EDT, on July 17, 2025**.** Properly received bids will then be publicly opened, then results discussed at the first Commissioner's meeting following bid opening.

1.2 Any bid received after the time specified for the receipt of bids will not be considered and will be returned unopened.

1.3 Each Bidder shall be solely responsible for the delivery of their bid to the Owner at the place and before the time specified in Paragraph 1.1 above.

ARTICLE 2 - PREPARATION OF BIDS

2.1 Bids shall be prepared on an exact copy of the "Form of Bid" included in these Contract Documents. All applicable blank spaces shall be filled in, typewritten or in ink, and amounts shall be in both words and figures. If words and figures do not agree, the amount as written in words shall govern.

2.2 Bids shall indicate the full name of the Bidder, shall be signed in the firm or corporate name of the Bidder and shall bear the longhand signature of a principal duly authorized to execute contracts for the Bidder. Bids signed by an agent of the Bidder must be accompanied by evidence of the agent's authority to execute contracts for the Bidder. The name of each person signing the bid shall be typed or printed below the signature.

2.3 All erasures or corrections shall be initialed by the person signing the bid.

ARTICLE 3 - SUBMITTAL OF BIDS

3.1 The Form of Bid for Construction Contract (Document 00 41 00) shall be enclosed in a sealed envelope, and identified with the name of the Bidder and the designation, "Sealed Bid for Construction, **101 Cass St., Condominium and City Office Renovations**. If the bid is mailed, it should be addressed to the Owner's representative at 100 E. State St. Suite 1100, St. Johns, MI 48879

ARTICLE 4 - MODIFICATION OF BIDS

4.1 The Form of Bid shall not be modified in any way, and the bid shall not be qualified or conditioned in any way. Modifications, qualifications or conditions placed on the Form of Bid or submitted with the bid may result in the rejection of the bid.

ARTICLE 5 - WITHDRAWAL OF BIDS

5.1 Any bid may be withdrawn prior to the time set for the receipt of bids. No bid may be withdrawn for a period of Thirty (30) calendar days thereafter.

ARTICLE 6 - SUBCONTRACTORS

6.1 The Bidder is requested to name persons, firms or other parties to whom it is intended to award a subcontract under this Contract, if and as requested on the Form of Bid.

6.2 The successful Bidder shall furnish in writing to the Owner within forty-eight (48) hours after receipt of Notice of Award, a list of the names of subcontractors who will work on the project.

ARTICLE 7 - BIDDER'S REPRESENTATION

7.1 Each Bidder by submitting a bid, represents that Bidder has:

7.1.1 Read and completely understands the Contract Documents.

7.1.2 Visited the site and is totally familiar with the conditions under which the Work is to be performed including availability and cost of labor and materials. Tours of the site are available as defined in the Project Requirements.

7.1.3 Based the bid upon the materials and equipment described in the Contract Documents.

7.1.4 Agreed that the Contract Time will be as defined in the Project Requirements.

7.1.5 Given preference to use of products and provisions grown and coal produced within the state of Iowa.

7.2 Failure of the selected Bidder to fulfill the representations of this Article shall in no way relieve the obligation of the Bidder to furnish all material and labor necessary to carry out the provisions of the Contract, nor shall such failure constitute grounds for extra compensation over the price stated in the accepted bid.

ARTICLE 8 - SUBSTITUTIONS

8.1 No substitution for the materials and equipment described in the Contract Documents will be considered during the bidding period unless written request has been submitted to the Design Professional for approval prior to the date set for receipt of bids. Each such request shall include a complete description of the proposed substitute, the name of the material or equipment for which it is to be substituted, drawings, cut sheets, performance and test data and any other data or information necessary for a complete evaluation. Incomplete information will be unanswered and shall be considered not approved.

8.2 If the Design Professional approves any proposed substitution, such approval shall not be considered official until it is set forth in an addendum. Bidders are cautioned to refrain from including in their bid any substitutions which are not confirmed by written addenda. The contractor shall not assume their submittal equals approval. Contractors MUST bid what is indicated in the contract documents and items issued through the addendums.

ARTICLE 9 - ADDENDA AND INTERPRETATIONS

9.1 Each Bidder shall examine the Contract Documents carefully and, not later than seven (7) calendar days prior to the date set for receipt of bids, shall make written request to the Design Professional for interpretation or correction of any ambiguity, inconsistency or error therein which may be discovered.

9.2 Any and all interpretations, corrections, revisions, and amendments shall be issued by the Design Professional to all holders of bidding documents in the form of written addenda. Such addenda shall be issued so as to be received at least forty-eight (48) hours prior to the time set for the receipt of bids. All addenda so issued shall become part of the Contract Documents and shall be acknowledged in the Form of Bid.

9.3 Only those interpretations, corrections, revisions and amendments confirmed by written addenda shall be binding. Bidders are cautioned to refrain from including in their bid any interpretations, omissions, revisions, and/or amendments which are not confirmed by written addenda.

ARTICLE 10 – METHOD OF AWARD

10.1 The Owner may reject any or all bids, waive irregularities or technicalities in any bid, and accept any bid in whole or in part which it deems to be in its best interests.

10.2 Contract shall be considered awarded when the selected Bidder receives a written "Notice of Award" from the Owner.

ARTICLE 11 - EXECUTION OF CONTRACT

11.1 Selected Bidder shall, within ten (10) calendar days after receipt of Notice of Award, enter into written Contract with the Owner in the Form of Agreement for performance of the Work described in the Contract Documents. Simultaneously with the delivery of the executed Contract, the Contractor shall furnish a performance and payment surety bond in the amount of 100% of the Contract Sum as security for faithful performance of the Contract and for the payment of all persons performing labor and furnishing materials for the Work.

16.1 Completed Contract and Contract Performance and Payment Bond shall be dated the same and executed in two (2) original counterparts.

16.2 The Contract, when duly executed, shall represent the entire agreement between parties.

END OF SECTION

00 21 15
SUPPLMENTARY INSTRUCTIONS TO BIDDERS

The following Supplements modify, change, delete from or add to the "Instructions to Bidders", American Institute of Architects (AIA) Document A701 - 2018. Where any Article, Paragraph, Subparagraph or clause or portion thereof is modified or deleted by these Supplementary Instructions to Bidders, the unaltered portions of that Article, Paragraph, Subparagraph or clause or portion thereof shall remain in effect.

ARTICLE 1: DEFINITIONS

No Supplements

ARTICLE 3: BIDDING DOCUMENTS

Add subparagraphs 3.2.1.1, 3.2.1.2 and 3.2.1.3 as follows:

3.2.1.1 If a discrepancy between different parts of the contract documents exists, the more stringent or higher cost requirement shall apply.

3.2.1.2 Bidders will not be entitled to any additional compensation or any extension of the Contract Time for conditions that can be determined by examining the site and the Bidding and Contract Documents.

3.2.1.3 Prior to bid, it is the responsibility of each bidder, sub-contractor, and material supplier to examine the documents for the work of all trades that may have an effect on the work that the bidder, sub-contractor, or supplier intends to perform.

Add subparagraphs 3.3.2.1 and 3.3.2.2 as follows:

3.3.2.1 Substitution requests must be submitted by prospective bidders on Document included in these specifications, Section 00 43 25.1. Substitution requests from manufacturers, distributors, or other entities that are not bidding as a general contractor will be rejected without review.

3.3.2.2 Approval of a substitution request does not in any way diminish the contractor's obligation to meet the specified requirements or the Architect's design intent.

Delete Subparagraph 3.4.3 and substitute the following Subparagraph:

3.4.3 Addenda will be issued in order to be received by all plan holders of record not less than 48 Hours prior to the date and time that bids are due, except an addendum withdrawing the Request for Bids or one which includes postponement of the date for receipt of bids.

ARTICLE 4: BIDDING PROCEDURES

4.1 Preparation of Bids

Add the following Subparagraph 4.1.9:

4.1.9 The Contractor shall take note and comply with all governing laws, rules, and regulations affecting the Work. This may include such laws, rules, and regulations as:

4.1.9.1. Licensing of Contractors for special requirements, e.g. hazardous waste removal.

4.1.9.2. Requirements for special construction permits.

4.1.9.3. Exemption from sales tax, if applicable.

4.1.9.4. Wage rates and employment requirements when required by law or by Owner.

4.1.9.5. Local labor requirements.

4.1.9.6. Non-discriminatory hiring practices.

4.2 Bid Security

Delete Subparagraph 4.2.1 and substitute the following Subparagraph:

4.2.1 Each Bidder shall accompany the bid with a bid security, in a separate envelope, as security that the successful Bidder will enter into a Contract for the work bid upon and will furnish after the award of the Contract, a corporate surety bond or bonds, acceptable to the Owner, for the faithful performance of the Contract, in an amount equivalent to 100% of the amount of the Contract. The Bidder's security shall be in an amount equivalent to 5% of the Bid Amount, and shall be in the form of a cashier's or certified check drawn on a bank in Michigan or a bank chartered under the laws of the United States, or a bid bond from a corporate surety satisfactory to the Owner. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Paragraph 6.2. Bid security of the successful bidder will be held by the Owner until an Agreement is fully executed and bonds are received and acceptable to the Owner.

4.3 Submission of Bids

Delete Subparagraph 4.3.1 and substitute the following Subparagraphs 4.3.1 and Subparagraph(s):

4.3.1 All copies of the Bid and other documents, not including the bid security, required to be submitted with the Bid, shall be enclosed in a sealed opaque envelope. The bid security, if any, shall be submitted in a separate sealed opaque envelope. Each envelope shall bear the return address of the bidder and shall be addressed as follows:

TO: Chad A. Gamble, City of St. John’s

Address: 100 E. State St. Suite 1100, St. Johns, MI 48879

BID FOR: 101 Cass St. Condominium and City Office Renovations

4.3.1. If the Bid, the bid security, if any, and other documents required to be submitted with the Bid are sent by mail, the sealed envelopes shall be enclosed in a separate mail envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

4.4 Modification or Withdrawal of Bid

Add Subparagraph 4.4.1.1 as follows:

4.4.1.1 The specific time period during which Bids may not be withdrawn shall be as stated on the Bid Form bound herein.

Add Article 4.5 Pre-Bid Conference as follows:

4.5 Pre-Bid Conference

4.4.5 The Advertisement for Bid includes notification of a pre-bid conference for the purpose of answering questions and providing information to prospective Bidders. The pre-bid conference will be held via ZOOM conferencing software. This call is not mandatory but is encouraged. A site walk-through visit will be available for all bidders to familiarize themselves with the unique requirements of this project. The date and time of the site visit will be determined at the time of the call and will be issued in the addenda.

00 21 15
SUPPLMENTARY INSTRUCTIONS TO BIDDERS

ARTICLE 5: CONSIDERATION OF BIDS

5.1 Opening of Bids

Paragraph 5.1 No Supplements

Delete subparagraph 5.3.1 and substitute the following subparagraph:

5.3.1 It is the intent of the Owner to award a contract or multiple contracts to the lowest responsible, responsive Bidder(s) provided the Bid(s) has/have been submitted in accordance with the requirements of the Bidding Documents and does/do not exceed the funds available.

ARTICLE 6: POST-BID INFORMATION

No Supplements.

ARTICLE 7: PERFORMANCE BOND AND PAYMENT BOND

No Supplements.

ARTICLE 8: FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Add the following Paragraph 8.1 Execution of Agreement:

8.1 The selected Bidder shall, within ten (10) calendar days after receipt of Notice of Award, sign and deliver the required number of executed counterparts of the Agreement along with any required attached documents. Within ten (10) calendar days after receipt of executed documents from the selected Bidder, the Owner shall deliver one fully executed counterpart to the Contractor.

END OF SECTION

SECTION 00 41 00
BID FORM

PROJECT: 101 Cass St. Condominium and City Office Renovations

BID TO: City of St. Johns
100 E. State St.
St. Johns, Michigan 48879

SUBMITTED BY: _____

_____

_____
(Bidder's name and address).

NOTE: Submit one original of this Bid Form. All blanks shall be completed. Only bids on this form will be accepted. Submit Bid Security, if required, in separate envelope. Bidder shall carefully review the Instructions to Bidders and Supplementary Instructions to Bidders prior to completing this form.

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the schedule indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents. Bidder accepts all of the terms and conditions of the Advertisement for Bids and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 30 days after the day of Bid opening.
2. The undersigned Bidder submits, herewith, bid security in accordance with the terms set forth in the Advertisement for Bids.
3. The Bidder has examined and carefully studied the Bidding Documents and the following Addenda, receipt of all which is hereby acknowledged:

Date	Number
_____	_____
_____	_____
_____	_____

4. BIDDER has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
5. BIDDER is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
6. BIDDER will complete the Work in accordance with the following Price(s):

BASE BID:

_____ DOLLARS ($ _____)
(words)

Amount shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words will govern.

SECTION 00 41 00
BID FORM

ALTERNATE BID NO. 1: Provide cost to replace lighting in Gymnasium.

_____ DOLLARS ($_____)
(words)

ALTERNATE BID NO. 2: Deduct cost of labor and materials for refinishing Gymnasium floor.

_____ DOLLARS ($_____)
(words)

ALTERNATE BID NO. 3: Deduct cost of labor and materials for striping Gymnasium floor.

_____ DOLLARS ($_____)
(words)

ALTERNATE BID NO. 4: Deduct cost for of labor and materials installing new flooring on Auditorium Stage.

_____ DOLLARS ($_____)
(words)

UNIT PRICE #1: Price per square foot to repair/replace damaged plaster.

_____ DOLLARS ($_____)
(words)

Amount shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words will govern.

7. BIDDER agrees that the Work will be completed in accordance with the project schedule in the Advertisement for Bids.
8. Bidder certifies that this proposal is made in good faith, without collusion or in connection with any other person, organization, or corporation bidding on the work.
9. The following documents are attached to and made a condition of this Bid:
   a. Required Bid Security in the amount of _____ and in the form of _____. (SUBMITTED IN A SEPARATE ENVELOPE)
   b. Schedule of Bid Price.
   c. Non-Collusion Affidavit
   d. Statements or evidence of bidder's qualifications.
10. This Bid submitted on _____, 20____.
11. State Contractor License No._____.

12. The bidder shall not make any revisions to the bid forms or the Schedule of Bid Prices and shall not devise any alternates other than those provided. Any such notes, revisions, or comments shall be grounds for rejection of the bid as not being responsive.

13. Complete the applicable item(s) listed below. If this Bid is submitted by an agent of BIDDER, attach a current Power-of-Attorney certifying the agent's authority to bind the BIDDER.

If BIDDER IS:

An Individual

By: _____ _____

(signature of individual) (typed or printed name)

Doing business as: _____

Business Address: _____

Phone No. _____

A Partnership

By: _____

(Firm Name)

_____ _____

(signature of general partner) (typed or printed name)

Business Address: _____

Phone No. _____

A Corporation

By: _____

(Corporation Name)

State of Incorporation: _____

By: _____

(signature of person authorized to sign)

_____

(typed or printed name and title)

Attest: _____

(Secretary)

Business Address: _____

Phone No. _____

SECTION 00 41 00
BID FORM

Schedule of Bid Price

Work Items	Cost
General Conditions, Overhead & Profit	$
Demolition	$
Concrete & Masonry	$
Framing, Gypsum Board and Plaster	$
Millwork, Trim & Cabinets	$
Roofing, Sealants & Weatherproofing	$
Doors & Windows	$
Finishes	$
HVAC, Mechanical	$
Plumbing	$
Electrical	$
Other (please indicate)_____	$

END OF SECTION

00 41 00.3
NON-COLLUSION AFFIDAVIT

THE UNDERSIGNED BIDDER OR AGENT, BEING DULY SWORN ON OATH, SAYS THAT HE/SHE 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/SHE 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.

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 THIS _____ DAY OF _____, _____.

NAME OF ORGANIZATION: _____

TITLE OF PERSON SIGNING: _____

SIGNATURE: _____

ACKNOWLEDGEMENT

STATE OF _____

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 ME THIS _____ DAY OF _____,

NOTARY PUBLIC SIGNATURE: _____

MY COMMISSION EXPIRES: _____

END OF SECTION

SECTION 00 21 15.1
MATERIAL, PRODUCT OR EQUIPMENT SUBSTITUTION REQUEST

PROJECT: 101 Cass St. Condominium and City Office Renovations

A/E: Studio Intrigue Architects
1114 S. Washington Ave. Suite 100
Lansing, MI 48910

CONTRACTOR: _____

OWNER: City of St. Johns
100 E. State St. Suite 1100
St. Johns, Michigan 48879

BY: _____

DATE: _____

SPECIFIED MATERIAL, PRODUCT OR EQUIPMENT: _____

Related Specification Sections: _____

Related Drawing Numbers: _____

PROPOSED SUBSTITUTION: _____

_____

REASON FOR PROPOSED SUBSTITUTION: _____

_____

_____

_____

ATTACHED DATA: Attach additional pages, if necessary.

Item No.	Description

For Use by the Architect/Engineer:

SUBSTITUTION:
- ☐ Approved
- ☐ Approved as Noted
- ☐ Not Approved
- ☐ Not Approved – Received too Late

By: _____ Date: _____

END OF SECTION

FORM OF GENERAL CONDITIONS

PART 1 GENERAL

1.1 FORM OF GENERAL CONDITIONS

A. AIA Document A201- 2017 "General Conditions of the Contract for Construction" is the General Conditions between the Owner and the Contractor and is hereby made a part of these documents to the same extent as if bound herein. The document can be purchased from the American Institute of Architects state office as follows:

1. AIA Michigan
37637 Five Mile Rd. #269
Livonia, Michigan 48154
Phone: 313-965-4100
www.aiami.com
www.shop.aiacontracts.com

1.2 RELATED REQUIREMENTS

A. Refer To Document 00 73 00 - Supplementary Conditions for amendments to these General Conditions

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

00 73 00
SUPPLEMENTARY CONDITIONS

The following Supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction," American Institute of Architects (AIA) Document A201 - 2007. Where any Article, Section, Section or clause or portion thereof of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of that Article, Section, Section or clause or portion thereof shall remain in effect.

ARTICLE 1: GENERAL PROVISIONS

No Supplements

ARTICLE 2: OWNER

2.1 GENERAL

Add the following Clause 2.1.1.1 to Section 2.1.1:

2.1.1.1

Client: City of St. Johns
Address: 100 E. State St.
Suite 1100
St. Johns, MI 48879

Add the following Clause 2.1.1.2 to Section 2.1.1:

2.1.1.2 The Owner's Authorized contract Representative is:

Name:	Chad A. Gamble, P.E.,
Title:	City Manager
Address:	100 E. State St. Suite 1100 St. Johns, MI 48879
Phone:	989-224-8944 ext: 231
Email:	cgamble@stjohsmi.gov

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

Add Section 2.3.7 as follows:

2.3.7 The Owner shall furnish surveys and testing of any hazardous materials. The furnishing of this information does not make the Owner responsible for the accuracy of the information and it shall be the responsibility of the Contractor to satisfy themselves relative to the accuracy and completeness of such information**.** The Contractor shall exercise proper precautions relating to the safe performance of the work.

00 73 00
SUPPLEMENTARY CONDITIONS

ARTICLE 3: CONTRACTOR

3.2 REVIEW OF CONTRACT DOCUMENTS & FIELD CONDITIONS BY CONTRACTOR

Add the following sentence to the end of 3.2.2:

3.2.2 The Contractor also represents that all Contract Documents for the Project have been examined, including those intended for work of trades not normally performed by the Contractor's own forces, and that it has become thoroughly familiar with all conditions which may pertain to or affect the Work under the Contract.

Add the following Section 3.2.5 to Section 3.2:

3.2.5 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for evaluating and responding to the Contractor's Requests For Information (RFI) that are not prepared in accordance with the Contract Documents or where the requested information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Sections 3.3.4 and 3.3.5:

3.3.4 The Owner reserves the right to retain ownership to any materials or equipment that is part of the existing facility. If material or equipment is to be removed from the site, the Contractor shall detach such items and before removing from site, obtain permission from the Owner, or his designee, to do so. All items not retained by Owner shall be removed in a proper manner by the Contractor.

3.3.5 The Contractor shall submit to the Owner before construction begins one copy of Material Safety Data Sheets of hazardous substances to be stored on the Owner's premises or incorporated in the performance of this contract. The Contractor shall also keep Material Safety Data Sheets posted at the work site for all substances while these substances are on the Owner's premises. Hazardous substances shall be any substance which is covered by Law (Right to Know Rules).

3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

Add Clauses 3.7.5.1 through 3.7.5.3 to Section 3.7.5:

3.7.5.1 Upon securing building permits, any plan reviews and fees which may be required by the Local Jurisdiction Having Authority in which the project resides shall be borne by the Contractor.

3.7.5.2 The Contractor is responsible for scheduling inspections related to the performance of its Work and ensuring Work is complete for inspections. The Contractor is responsible for any costs associated with re-inspection caused by Work that is not in accordance with the requirements of the Contract Documents. In addition, the Contractor is responsible for costs associated with Architectural/ Engineering services, and the Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect/ Engineer or Architect/Engineer's Consultants for services related to evaluation of the deficiencies and development of an acceptable solution.

3.9 SUPERINTENDENT

Delete Section 3.9.1 and substitute the following Section 3.9.1:

3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site at all times during performance of the Work, including work of the Contractor's subcontractors. Any change in superintendent personnel must be approved by the Owner. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Other communications shall be similarly confirmed on written request in each case. This individual shall be fluent in all languages necessary to communicate with Contractor's employees and subcontractors. Owner shall be furnished with the e-mail address and pager, home and cell phone numbers for the Superintendent.

In the first sentence of Subparagraph 3.9.2, replace "as soon as practicable after award of the Contract" with "within ten (10) days of the date of the Agreement between Owner and Contractor".

In the first sentence of Subparagraph 3.9.3, add the following language after the word "superintendent": "or other key personnel".

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULE

Delete the last sentence of Section 3.10.2 so that the Section now reads:

3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. The Contractor’s submittal schedule shall include coordination and sequence of submittals that affect future submittals when selection of colors, materials and options will affect other submittals.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Add the following Section 3.12.11:

3.12.11 The Architect's and its Consultants' review of Contractor's submittals will be limited to examination of an initial submittal and one (1) re-submittal. The Architect's review of additional submittals will be made only with the consent of the Owner after written notification to the Contractor and Owner by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for evaluation of such additional re-submittals.

3.13 USE OF SITE

Add the following Sections 3.13.1 and 3.13.2:

3.13.1 Contractor shall perform the Work so as to cause a minimum of inconvenience to and interruption of the Owner's operations. Any and all interruptions of the operations of the Owner necessary for the performance of the Work shall be noted in the Progress Schedule and the Contractor shall additionally give the Owner sufficient advanced written notice of such interruption as to allow the Owner to adjust operations accordingly. Contractor's failure to give the Owner timely written notice of such intentions shall place the responsibility of any resulting delays or additional costs solely with the Contractor.

3.13.2 The Contractor shall be aware that their contract is a portion of the work being carried out on the site and that the Contractor's operations must coordinate with the work of other contracts. The Owner shall, upon availability, share scheduling and coordination requirements for other work, not part of this contract, which may affect the Contractor's sequence of work.

3.14 CUTTING AND PATCHING

Delete Section 3.14.1 and replace with the following:

3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. Contractor shall be responsible for cutting and patching not specifically indicated on the drawings, but required for completion of their Work. No structural member shall be cut unless approved by the Architect or Architect's Consultants. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

ARTICLE 4: ARCHITECT

4.1 GENERAL

Delete Section 4.1.1 and substitute the following Section 4.1.1:

4.1.1 The "Architect" is defined in this Contract as the Engineer or Architect lawfully licensed by the State to practice architecture or engineering or an entity licensed by the State to lawfully practice architecture or engineering identified as such in this Contract and as is referred to throughout the Contract documents as if singular in number. The term "Engineer," "Architect/Engineer," "Engineer/Architect," "Architect's authorized representative," "Engineer's authorized representative," or "Architect/Engineer's authorized representative" shall mean "Architect" as defined in this Section.

Add the following Clause:

4.1.1.1 The Architect is:

Name:	Studio Intrigue Architects
Address:	1114 S Washington Ave. Lansing, MI 48910 Suite 100
Phone:	(517) 372-8804
Project Contact Person:	Matt Guzinski
Contact Person Email:	mattg@studiointrigue.com

4.2 ADMINISTRATION OF THE CONTRACT

Add Section 4.2.2.1 to Section 4.2.2:

4.2.2.1 The Owner is entitled to reimbursement from the Contractor for amounts paid the Architect for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for such site visits.

Add to paragraph 4.2.13 the following sentence:

4.2.13 The term aesthetic effect includes, but is not limited to color, texture, profile, and relationship of materials.

ARTICLE 5: SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Section 5.2.1 and substitute with the following Section 5.2.1:

5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, within seven (7) calendar days after award of the contract and prior to execution of the contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will reply within seven (7) calendar days to the Contractor in writing stating (1) whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity, or (2) to state that the Architect requires additional time and/or information to complete the review. Failure of the Owner or Architect to reply within this time period shall constitute notice of no reasonable objections.

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

No Supplements

ARTICLE 7: CHANGES IN THE WORK

7.1 GENERAL

Add Sections 7.1.4.7, 7.1.4.8 and 7.1.4.9:

7.1.4.7 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their property can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, and subcontracts. Itemize labor by trade, tasks, hour quantities and labor rates. Itemize materials by product, quantity and unit price. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over $500 be approved without such itemization.

7.1.4.8 The Architect's review of the Contractor's proposals will be limited to one initial submittal and one re-submittal. The Owner is entitled to obtain reimbursement from the Contractor for amounts paid to the Architect for evaluation and response to additional re-submittals, wherein the first two submittals were not prepared in accordance with the Contract Documents.

7.1.4.9 The Contractor represents that proposals will include all related costs prior to presentation to the Owner or Architect for consideration.

7.2 CHANGE ORDERS

Add the following Section 7.2.2:

7.2.2 The forms used to process a Change Order will include AIA Document G701, Change Order.

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SUPPLEMENTARY CONDITIONS

ARTICLE 8: TIME

8.1 DEFINITIONS

Delete Section 8.1.4 and substitute the following Section 8.1.4:

8.1.4 The term "Day" as used in the Contract Documents shall mean working day, excluding weekends and legal holidays.

8.2 PROGRESS AND COMPLETION

8.2.2 Delete the word "knowingly" in the first sentence.

8.2.3 Insert after "Substantial Completion" the following:

8.2.3 "...and Final Completion within the Contract Times specified."

ARTICLE 9: PAYMENTS AND COMPLETION

9.3 APPLICATION FOR PAYMENT

Delete Section 9.3.1 and substitute the following Section 9.3.1:

9.3.1 At least 30 (thirty) days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the schedule of values. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers. If the Contract Documents require the Owner to retain a portion of the payments until some future time, the Applications for Payment shall clearly state the percentage and the amount to be retained.

Add the following sentence to Section 9.3.1:

9.3.1 AIA Form G702 and G703 Application for Payment, shall be the form to be included with all pay application materials.

Add the following Clause 9.3.1.3 to Section 9.3.1:

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Delete Section 9.5.3 in its entirety.

9.6 PROGRESS PAYMENTS

Delete Section 9.6.1 and substitute the following Section 9.6.1:

9.6.1 After the Architect has approved the pay application and the Owner’s representative has approved the Application for Payment the Owner shall make payment in the manner provided in the contract Documents, and by the codes of the State of Michigan.

Delete the first two sentences of Section 9.6.4 so that it reads as follows:

9.6.4 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

9.8 SUBSTANTIAL COMPLETION

Add the following Clause 9.8.3.1 to Section 9.8.3:

9.8.3.1 The Architect will perform no more than one inspection per discipline (mechanical, electrical, architectural, structural, civil) to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for the amounts paid to the Architect for additional inspections required to verify that the project is substantially complete.

9.10 FINAL COMPLETION AND FINAL PAYMENT

Add the following Clause 9.10.1.1 to Section 9.10.1:

9.10.1.1 The Architect will perform no more than one inspection to determine whether the Work or a designated portion thereof has attained Final Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for the amounts paid to the Architect for any additional inspections.

Delete Section 9.10.2 and substitute the following Section:

9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect. (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees

Add the following Section 9.10.6:

9.10.6 Final payment will be made not less than (30) calendar days after the date of acceptance of the Work by the Owner subject to the provisions of Sections 9.10.1 through 9.10.5. The following documents shall be completed by the contract completion date listed on the Form of Agreement and shall be received prior to making final payment:

a. Letter of Completion from Contractor

b. Contractor's Affidavit of Payment of Debts and Claims – AIA G706

c. Contractor's Affidavit of Release of Liens – AIA G706A

d. Consent of Surety to Final Payment – AIA G707

e. Lien Waiver for full amount of contract from the Contractor

f. Guarantees/warranties

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.2 SAFETY OF PERSONS AND PROPERTY

Delete Section 10.2.2 and substitute the following Section 10.2.2:

10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, regulations and lawful orders of public authorities bearing safety of persons or property or their protection from damage, injury or loss.

Delete Section 10.2.4 and substitute the following Section 10.2.4:

10.2.4 When use, handling, and/or storage of explosives or other hazardous materials or equipment or unusual methods is necessary for execution of the work, the Contractor shall give the Owner reasonable advance notice and shall exercise utmost care and carry on such activities under the supervision of properly qualified personnel.

10.3 HAZARDOUS MATERIALS

Add the following sentence to Section 10.3.4.

10.3.4 No product containing asbestos, Polychlorinated Biphenyl (PCB), lead-based materials or any other hazardous material identified by the United State Environmental Protection Agency shall be incorporated into the Work.

Add the following Section 10.3.7

10.3.7 The Owner's facility located at 101W. Cass St. where Division #1 and #2 work is being constructed, has been mitigated of asbestos, with the exception of the cores of fire rated doors. The project site likely contains lead based paint. The location of asbestos materials (ACM) and lead based paint (LBP) will be provided by the Owner. The Contractor shall not remove or disturb any materials unless licensed to do so in the state of Michigan. If hazardous materials must be removed and such removal is not already a part of this Contract, contact the Owner who will arrange for the proper removal of the ACM and LBP by others if it is mutually agreed the materials must be removed to complete proper work by the contractor. It is the desire of the project to encapsulate LBP and to not modify the fire rated doors with ACM cores.

ARTICLE 11: INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

Add the following Clauses 11.1.2.1 through 11.1.2.4 to Section 11.1.2:

11.1.2.1 Worker's Compensation Insurance and Employer's Liability insurance shall be carried by the Contractor in accordance with the requirements of the statutes of the State or States in which the work will be performed plus Federal Laws.

11.1.2.2 The limits for Commercial General Liability Insurance coverage for Premises-Operations, Independent Contractors' Protective, Products-Completed Operations, Contractual Liability, Personal Injury and Broad Form Property Damage (including coverage for Explosion, Collapse and Underground hazards) shall be as follows:

$2,000,000 general aggregate

$2,000,000 products/completed operations aggregate (Maintain for two (2) years after final payment.)

$1,000,000 personal and advertising injury

$1,000,000 each occurrence personal injury

$250,000 for damage to premises rented to Contractor

$10,000 on medical expenses on any one person

Products/Completed Operations Aggregate, maintain for two (2) years after final payment:

$1,000,000; Broad form property damage coverage shall include completed operations Aggregate Limits per Project Endorsement or Equivalent

.1 The policy shall be endorsed to have the General Aggregate apply on a per project basis.

.2 The policy shall be written on an occurrence form of coverage.

.3 The policy shall include coverage for the hazards of underground explosion and collapse.

11.1.2.3 Business automobile liability including hired and non-owned automobile liability with limits not less than:

$1,000,000 per accident for bodily injury and property damage

11.1.2.4 Excess/umbrella liability coverage shall be provided with limits of:

$2,000,000 each occurrence

$2,000,000 general aggregate

Delete Section 11.1.3 and replace it with the following Section 11.1.3

11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness. The Owner shall provide written notification to the Contractor of the cancellation or expiration of any insurance required by Section 11.3 The Owner shall provide such written notice within five (5) business days of the date the Owner is first aware of the cancelation or expiration, or is first aware that the cancelation or expiration is threatened or otherwise may occur, whichever comes first

Add the following Clause 11.1.3.1 to Section 11.1.3:

11.1.3.1 If this insurance is written on the Comprehensive General Liability policy form, the Certificates shall be on an ACORD form, completed and supplemented in accordance with AIA Document G715, Instruction Sheet and Supplemental Attachment for an ACORD Certificate of Insurance form.

Delete Section 11.1.4 and replace it with the following Section 11.1.4:

11.1.4 The Contractor shall cause the commercial liability coverage and excess umbrella liability coverage required by the Contract Documents to include 1) the Owner, Architect, Architect's consultants, and agents and employees as additional insureds for the claims caused in whole or in part by the Contractor's negligent acts or omissions during Contractor's operations and 2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during Contractor's

completed operations. The commercial liability coverage shall be primary and non-contributory for benefit of additional insureds and provide for severability of interest for additional insureds.

Add the following Section 11.1.5:

11.1.5 All insurance coverages provided by the Contractor under Section 11 shall provide for a waiver of subrogation to the Owner, Architect and Architect's consultants, and agents and employees.

11.2 OWNER'S INSURANCE

Add the following Section 11.2.4:

11.2.4 Before an exposure to loss may occur, the Contractor shall file with the Owner a certified copy of each policy that includes insurance coverage required by this Section 11.2 as modified by these SUPPLEMENTARY CONDITIONS. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. The Owner shall provide written notification to the Contractor of the cancellation or expiration of any insurance required by Section 11.2. The Owner shall provide such written notice within five (5) business days of the date the Owner is first aware of the cancellation or expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first.

11.6 PERFORMANCE AND PAYMENT BONDS

Add the following Section 11.6:

11.6.1 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 shall be included in the Contract sum. The amount of each bond shall be equivalent to 100 percent of the Contract Sum.

11.6.1.1 The Contractor shall deliver the required bonds to the Owner not later than 7 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 commencement of the work, submit evidence satisfactory to the Owner that such bonds will be furnished.

11.6.1.2 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.

11.6.1.3 The bonds shall be binding on all parties from date of issuance and for a period of two (2) years after the date of Substantial Completion.

ADD THE FOLLOWING SECTION 13.6 TO ARTICLE 13:

13.6 EQUAL EMPLOYMENT OPPORTUNITY

Add the following Section:

13.6.1 The Contractor shall conform in all respects with the provisions of the Federal Civil Rights Act, State of Michigan Public Act 312, and the rules and regulations adopted thereto by the Michigan Employment Relations Commission. The Contractor shall not discriminate against any employee or applicant because of race, color, religion, sex, national origin, sexual orientation, gender identity, ancestry, age, marital status, physical or mental handicap. The Contractor shall require similar clauses in all of its subcontracts for service or materials.

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SUPPLEMENTARY CONDITIONS

ADD THE FOLLOWING SECTION 13.7 TO ARTICLE 13:

13.7 TOBACCO PRODUCTS

Add the following Section:

13. 7.1 Smoking is not allowed on the Owner's premises which includes personal or company vehicles parked on the Owner's property.

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

No Supplements

ARTICLE 15: CLAIMS AND DISPUTES

Change Section 15.1.6.1 as follows:

15.1.6.1 If the Contractor wishes to make a claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The claim shall include such supporting documentation as the Owner may require. Including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.

Change Section 15.1.6.2 as follows:

15.1.6.2 If adverse weather conditions are the basis for a Claim for Additional Time, such claim shall be documented by data substantiating the weather conditions were abnormal when compared to the historical data and expected standard weather patterns for the time of year. The data shall enforce the claim that the weather delays could not have been reasonably anticipated, AND that the weather had an adverse effect on the scheduled construction operations. The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

15.2 INITIAL DECISION MAKER

Delete last sentence of Section 15.2.5 and substitute the following:

15.2.5 "If the parties do not mutually agree with the decision of the Initial Decision Maker, then resolution shall be subject to litigation, unless an alternative dispute resolution process such as mediation or arbitration is mutually agreeable to by the parties involved in the dispute."

END OF DOCUMENT

SECTION 01 10 00
SUMMARY

PART 1 GENERAL

1.1 PROJECT

A. Project Name: 101 Cass St. Condominium and City Office Renovations

B. Owner's Name: City of St. Johns, 100 E. State St., Suite 1100, St. Johns, MI 48879.

C. Owner's Representative:
Chad A. Gamble, P.E. City Manager
100 E. State St., Suite 1100, St. Johns, MI 48879
Phone: 989-224-8944, ext: 231
Email: cgamble@stjohnsmi.gov

D. Architect's Name:
Studio Intrigue Architects
1114 S. Washington Ave., Lansing, MI 48910
Phone: 517-372-8804
Contact: Matt Guzinski, mattg@studiointrigue.com

E. The Project Scope: Division 1 and 2 Improvements: Renovations and utility upgrades to the city's original High School building located at 101 E. Cass St. St. Johns, Michigan. The work is predominantly repair and replacement of existing finishes, window refinishing and replacement and upgrades to HVAC, Electrical and replacement of plumbing fixtures.

Division 3 work: Minor modifications of walls and replacement of finishes at City of St. Johns Administrative Offices located at 100 E. State St. Suite 1100, St. Johns, Michigan.

F. Work Schedule: Per the following:

1. Division 1: work is scheduled to start on or around August 18, 2025 and must be substantially completed by March 20, 2026.
2. Division 2: work is scheduled to start on or around August 18, 2025 and must be substantially completed by March 20, 2026.
3. Division 3: work is scheduled to start on or around August 11, 2025 and must be substantially completed by October 6, 2025.

1.4 PROJECT COORDINATION

A. The Division 1 work site is owned fully be the City of St. Johns. Division 2 work site is common space of the condominium development owned jointly by the City of St. Johns and Dymaxium Development. Division 3 work lies within the City of St. Johns' Administrative Offices in the County Courthouse building.The City staff will vacate the office space between August 4 and October 10, 2025 to permit the contractor full access to the area.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or portions of the facilities that are under another contract. Do not close or obstruct walkways, corridors, or other areas without written permission from Building Owner and authorities having jurisdiction.

2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations or which may impact other contractors and trades completing work as part of other contracts.

3. The City will vacate their office space as part of the Division C work. The contractors will have full access to that space to complete their work.

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

1.5 CONTRACTOR USE OF SITE AND PREMISES

A. General: Contractor shall have full use of 101 W. Cass St. premises for construction operations of Division 1 and 2, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project. Division 3 of the project will be within the County Courthouse Building. Coordination, access and staging of materials and equipment must be coordinated with the County Courthouse Building Manager.

B. Arrange use of site and premises to allow:

1. Work by Owner: Paving, Landscaping, Parking Lot repairs and stripping.

C. Provide access to and from site as required by law and by Owner:

1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.

2. Do not obstruct roadways, sidewalks, or other public ways without permit.

3. The restrooms within the building are being refinished and may NOT be used by construction personnel.

4. Contractor shall have use of the existing water, gas and electricity on site at the Contractor’s expense. Sub-meters shall be installed to monitor use of utilities.

5. Contractor shall not use existing plumbing for washing construction tools, especially concrete finishing tools, gypsum compound or plaster tools, or any painting buckets, brushes or rollers.

7. Construction materials testing shall be provided and paid for by the Contractor and included in the bid.

8. Contractor is responsible for security and protection of all Work. Fencing by the Contractor is optional, but all damage caused by installation of fencing shall be repaired prior to project closeout.

9. The Contractor shall include costs for coordination of Owner’s separate contracts for additional work. This includes a re-roofing project of the old High School Building. The contractor shall assume coordination of installation of curbs and other roof mounted and roof penetration items with roofing contract. It is unknown if roof will be installed prior to the work of this contract. Contractor shall work with owner to schedule work that is advantageous to complete the work of this contract with the least disruption. If penetrations are required as part of this contract, following the completion of the roofing work, the contractor shall utilize a roofing company that is approved by the roof membrane manufacturer which will not void or alter the roof warranty.

10. The Contractor shall assist the Owner in coordination of and maintaining the existing fire doors in their existing frames, pending installation of new doors which are to be functional, commissioned and tested prior to full acceptance.

D. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 012000
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SCHEDULE OF VALUES

A. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.

1.02 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Monthly

B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.

C. Forms filled out by hand will not be accepted.

D. For each item, provide a column for listing each of the following:
   1. Item Number.
   2. Description of work.
   3. Scheduled Values.
   4. Previous Applications.
   5. Work in Place under this Application.
   6. Authorized Change Orders.
   7. Total Completed to Date of Application.
   8. Balance to Finish.
   9. Retainage.

E. Execute certification by signature of authorized officer.

F. Submit one electronic and three hard-copies of each Application for Payment.

1.03 MODIFICATION PROCEDURES

A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.

B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change.

C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change . Contractor shall prepare and submit a estimated price quotation within 10 days.

D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

1.04 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 017000.
   2. Completion of Punchlist.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

GENERAL **SECTION 01 23 00**
ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, labor, equipment costs and similar items incidental to or required to complete work, whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Added cost for replacement of lighting in Gymnasium.

1. Alternate: Remove existing chain hung fluorescent lighting with new LED light fixtures as scheduled in Electrical Drawings. Price shall include wiring and switching as indicated, and include removal of all original light supporting chains, anchors and miscellaneous supports.

B. Alternate No. 2: Deduct cost of labor and materials for refinishing Gymnasium floor.

1. Alternate: Provide cost savings for not refinishing the existing maple gymnasium floor.

C. Alternate No. 3: Deduct cost of labor and materials for striping Gymnasium floor.

1. Alternate: Provide cost savings for not completing striping of floor.

D. Alternate No. 4: Deduct cost for of labor and materials installing new flooring on Auditorium Stage.

1. Alternate: Provide cost savings for not removing the existing stage flooring and installing new.

END OF SECTION

SECTION 012700
UNIT PRICES

PART 1 GENERAL

1.1 SUMMARY

A. Procedures and submittal requirements for schedule of values, applications for payment, and unit prices.

1.2 STANDARDS OF MEASUREMENTS

A. The unit quantities shall be measured by the Contractor and reviewed by the Owner's Representative. The Contractor shall provide documentation of all unit quantities beyond those included in the Base Bid. The Contractor shall notify the Design Professional should the quantities vary from the estimates provided for bid purposes. The Contractor shall in no case exceed 10% of the bid quantity estimate without approval from the Owner.

1.3 SCOPE OF PAYMENT

A. The Contractor shall accept the compensation as herein provided as full payment for furnishing materials, labor, tools and equipment, and for performing work under the contract; also, for costs arising from the action of the elements, or from any unforeseen difficulties which may be encountered during the execution of the work and up to the time of acceptance.

B. Construction items may be bid as a lump sum or as itemized work, which will be paid on a unit cost basis. In either case, some work may be required for which a separate pay item is not provided. Completion of this work is required. If a separate pay item is not provided for this work, it is to be considered incidental to the project and no separate payment will be made.

PART 1 PRODUCTS

NOT USED

PART 2 EXECUTION

2.1 DESCRIPTION

A. The following subsections describe the measurement of and payment for the work to be done under the items listed in the BID. Each unit or lump sum price stated in the BID shall constitute full compensation as herein specified for each item of work completed in accordance with the Drawings and Specifications, including cleaning up and protection for workers and users of the ramps. Incidental costs to all Bid Items shall include traffic control, construction signage, and protection of pedestrians and vehicles. No separate payment shall be made for incidental costs.

2.2 SCHEDULE OF UNIT PRICES

A. Plaster Repair; SF

1. Water damaged, cracked and missing portions of existing plaster is identified in the drawings. Unit price for plaster shall include all costs associated with cutting and removing damaged portions of plaster by sounding method to determine if plaster is adhered to substrate, or if identified areas exceed areas as scheduled. Plaster repair shall include cost of removal of diamond coat, smoothing plaster and scratch coat, lath and other substrates to provide a sound surface for application of new plaster. Price shall include cost of all prep work, application and finishing of plaster to blend to existing surfaces to remain.

END OF SECTION

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SECTION 013000

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preconstruction meeting.

B. Submittals for review, information, and project closeout.

C. Submittal procedures.

D. Administrative and supervisory personnel

E. Requests for information (RFI).

1.2 RELATED REQUIREMENTS

A. Section 01 3216 - Construction Progress Schedule: Form, content, and administration of schedules.

1.3 REFERENCE STANDARDS

A. AIA G810 - Transmittal Letter; 2001.

1.4 DEFINITIONS

A. RFI: Request from Contractor seeking interpretation, information, or clarification of the Contract Documents.

B. Action Submittals: Written and graphic information that does require Architect's responsive action.

C. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.5 PROJECT COORDINATION

A. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.

2. Preparation of the Schedule of Values.

3. Installation and removal of temporary facilities and controls.

4. Delivery and processing of submittals.

5. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, email addresses, and telephone numbers, including home, mobile, and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.7 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

B. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.

C. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.

D. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

1.8 REQUESTS FOR INFORMATION (RFI)

A. Procedure: Immediately on discovery of the need for information or interpretation of the Contract Documents, prepare and submit a Request for Information (RFI) in the form specified, with a necessary question regarding ambiguities or conflicts in the documents or field conditions, concealed conditions at the site, clarification of a contract requirement, dimensions, or other information for which clarification is required.

1. RFI's shall originate with Contractor, Architect, or Owner. RFIs submitted by entities other than Contractor, Architect, or Owner will be returned with no response.

2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

3. The Contractor is required to review all RFI's submitted by subcontractor's and suppliers for completeness, accuracy, validity, and justification prior to submission to the Architect. The Contractor can commonly answer subcontractor /supplier RFI's without delegation to the Architect.

4. Promptly submit any RFI's that could result in a delay of the activities on the critical path if the resolution is not obtained promptly. Provide a date on each RFI that the response is required by, in order to not have an impact on the critical path of construction activities.

5. In the case of a condition that requires a change in the work to resolve a conflict or other condition, the Contractor shall include a recommendation for resolution of the condition and submit a separate Change Order Request (COR).

6. The Architect's response to an RFI is not an authorization to proceed with work involving additional cost, time or both. If the response involves additional work the Contractor shall provide the Architect with a complete description of work added and work deleted by the response within seven (7) days of the issued date of the RFI response. If the response involves additional work for which the Contractor will seek an adjustment to the contract sum, time or both, the Contractor shall submit a cost proposal in the form of a Change Order Request (COR) to the Architect. The Contractor shall not proceed with incorporating the response into the work until a Change Order or, Construction Change Directive has been fully executed.

7. Unless notified otherwise by the Contractor, the Architect's RFI response shall have the same effect as the Architect's order for minor changes in the Work. The Contractor will proceed with the Work, and the response will be incorporated into the contract that same as the Architect's written order for minor changes in the Work. Notify the Architect in writing if noted modifications cannot be made due to conflicting circumstances in the field, in other contract documents, or for other reasons.

8. The Contractor shall not incorporate any language into RFI's or Change Proposals that imply future additional costs or delays beyond those fully explained within the document. The Contractor may stipulate conditions or constraints under which the pricing or time may change; however, such conditions or constraints shall not infringe on the Architect's or Owner's right to adequate time for review of the issue.

9. The Contractor shall not submit Confirming RFI's, i.e., RFI's requesting confirmation of information already in the contract documents or previously provided, or requesting confirmation to questions previously answered or clarification previously given. Similarly the Contractor shall not submit Repetitive RFI's, i.e., RFI's, wherein the same information is requested more than once, even if phrased in another format or asked in a different manner. Confirming& Repetitive RFI's are considered frivolous.

10. The Contractor shall not retain or suppress RFI's for group submissions. Each individual RFI is to be submitted expeditiously upon occurrence. Numerous RFI's submitted in a short time period will not be considered reasonable, and will result in review times being extended accordingly.

11. The Contractor shall not install any components in locations other than as indicated on the contract documents unless 1) all other affected work has been reviewed and coordinated with the relocation; and 2) the relocation is the resolution for an RFI, including a statement by the Contractor that the relocation has been coordinated with other affected work.

12. The Contractor shall not use an RFI as a means of proposing a deviation, an alternative product, arrangement, or installation for the Contractor's convenience; these proposals shall be submitted as Substitution Requests, and the RFI voided. A contractor-proposed alternative arrangement or installation submitted as an RFI will not become the subsequent basis for a claim by the contractor.

13. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for evaluating and responding to:

    a. Incomplete, illegitimate, or frivolous Contractor's requests for information and requests for information that are not prepared in accordance with the Contract Documents.

b. Contractor requests for information where the requested information is available to the Contractor from a careful study and comparison of the contract documents, field conditions, contractor-prepared coordination drawings, other Owner/Architect-provided information or prior project correspondence or documentation.

c. Contractor-proposed alternative arrangements or installations for the convenience of the contractor which, upon acceptance, requires the Architect to revise the contract documents.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.

2. Date.

3. Name of Contractor.

4. Name of Architect.

5. RFI number, numbered sequentially.

6. Specification Section number and title and related paragraphs, as appropriate.

7. Drawing number and detail references, as appropriate.

8. Field dimensions and conditions, as appropriate.

9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

10. Contractor's signature or review stamp.

11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing information or interpretation. Each RFI shall include sufficient detail for evaluation.

a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

C. Software-Generated RFI's: Software-generated form with substantially the same content as indicated above.

D. Architect Action: Architect will review each RFI, determine action required, and return it. Allow an average of ten working days for Architect's response for each RFI. RFI's received after 1:00 p.m. will be considered as received the following working day. Some issues may take longer for review, the recipient of the RFI shall notify the sender of the RFI if additional time is required.

1. The following RFI's will be returned without action:

a. Requests for approval of submittals.

b. Requests for approval of substitutions or deviations.

c. Requests for coordination information already indicated in the Contract Documents.

d. Requests for adjustments in the Contract Time or the Contract Sum.

e. Requests for interpretation of Architect's actions on submittals.

f. Incomplete, inaccurate, invalid, and unjustified RFI's or RFI's with numerous errors.

g. Confirming or Repetitive RFI's.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.

3. Architect's action on RFI's that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit a Change Proposal according to Division 01 Section "Contract Modification Procedures."

a. If the Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within seven days of receipt of the RFI response.

E. RFI Log: RFI Log will be maintained on the Newforma Info Exchange Site provided by the Architect. The software/site will be used to generate, transmit, log, and receive RFIs and RFI responses on the project. The RFI Log can be exported from the site and used to communicate with other project team members. Software log with not less than the following:

1. Project name.

2. Name and address of Contractor.

3. Name and address of Architect.

4. RFI number including RFIs that were dropped and not submitted.

5. RFI description.

6. Date the RFI was submitted.

7. Date Architect response was received.

8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 NEWFORMA INFO EXCHANGE SERVER

A. Newforma Info Exchange server: The Architect will provide the Contractor access to this server to download and upload files via any internet-capable computer running Internet Explorer.

B. Benefits and features of Newforma Info Exchange for the Contractor include:

1. A collaborative submittal log is maintained within Newforma Info Exchange by the Architect and Contractor.

2. Submittal data files transmitted through Newforma Info Exchange bypass the file size limits of email systems.

3. Submittal data files transferred through Newforma Info Exchange are encrypted.

4. Notifications and reminders can be optionally scheduled and expiration dates for documents can be automatically set.

5. CD/DVD disc: The contractor is required to keep backup copies of any data submitted to the Architect in CD/DVD format. The Contractors transmittal letter identifying the project and contents of the disc must accompany the CD/DVD.

C. Exceptions: The following submittals are not to be done electronically.

1. Samples, color charts, original warranties, and notarized affidavits.

3.2 PRECONSTRUCTION MEETING

A. Schedule meeting after Notice of Award.

B. Attendance Required Authorized Representatives of:

1. Owner.

2. Architect/Engineer and their subconsultants.

3. Contractor and its superintendent; major subcontractors; suppliers, and other concerned parties.

C. Agenda: Discuss items of significance that could affect progress, including the following:

1. Execution of Owner-Contractor Agreement.

2. Submission of executed bonds and insurance certificates.

3. Distribution of Contract Documents.

4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.

5. Designation of personnel representing the parties to Contract, the Owner and Architect/Engineer, and their duties.

6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.

7. Scheduling (tentative construction schedule and phasing).

8. Procedures for RFIs.

a. Incomplete, illegitimate, or frivolous Contractor's requests for information and requests for information that are not prepared in accordance with the Contract Documents.

b. Contractor requests for information where the requested information is available to the Contractor from a careful study and comparison of the contract documents, field conditions, contractor-prepared coordination drawings, other owner/architect-provided information or prior project correspondence or documentation.

D. Architect will record minutes and distribute copies within two days after meeting to participants, with two copies to Architect/Engineer, Owner, Contractor participants, and those affected by decisions made.

3.3 PROJECT CLOSEOUT CONFERENCE

A. Schedule the conference to review requirements and responsibilities related to project closeout. Set a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of substantial completion.

1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and their superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

    a. Preparation and submission of Contractor's punch list.

    b. Procedures required prior to Substantial Completion Inspection and Final Completion Inspection.

    c. Procedures for processing Applications for Payment at Substantial Completion and Final Completion.

    d. Requirements for completing Close-Out Documentation.

    e. Preparation and submission of Record Documents

3. Record minutes and distribute copies within two days after meeting to participants, and those affected by decisions made.

3.4 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01 3216

3.5 SUBMITTALS FOR REVIEW

A. When the following are specified in individual sections, submit them for review:

1. Product data.

2. Shop drawings.

3. Samples for selection.

4. Samples for verification.

B. Submit to Architect/Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selection.

D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.6 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual sections, submit them for information:

1. Design data.

2. Certificates.

3. Test reports.

4. Inspection reports.

5. Manufacturer's instructions.

6. Manufacturer's field reports.

7. Other types indicated.

B. Submit for Architect/Engineer's knowledge as contract administrator or for Owner. No action will be taken.

3.7 SUBMITTALS FOR PROJECT CLOSEOUT

A. Submit Correction Punch List according to the 00 7300 - Supplementary Conditions.

B. Submit Final Correction Punch List according to the 00 7300 - Supplementary Conditions.

3.8 NUMBER OF COPIES OF SUBMITTALS

A. Electronic Documents: Submit one electronic copy in Adobe Portable Document Format PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected. Submit separate PDF files for each specification section. Multiple sections combined into one PDF file will be returned to the Contractor.

1. Name Files according to the following format: <Section Number> <Item Description>. For example: 08 1113 Hollow Metal Doors Shop Drawings.

2. For shop drawings, the size of the electronic image must be equal with the standard paper size of the sheet, for example:

3. A 30” x 42” drawing should not be placed on an 11” x 17” sheet size.

4. An 11” x 17” drawing should not be placed on a 30” x 42” sheet size.

5. For electronic shop drawings larger than 11” x 17”, one hard copy of the drawing(s) is required to be submitted with the electronic copy. The hard copy will NOT be returned to the Contractor.

6. If the Architect deems the electronic submittal illegible, corrupted, and unusable, or if the file size is unreasonably large, then a new electronic copy or hard copy will be required.

B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect/Engineer.

1. After review, produce duplicates of the Architect's review information.

2. Retained samples will not be returned to Contractor unless specifically so stated.

3.9 SUBMITTAL PROCEDURES

A. Shop Drawing Procedures:

1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.

2. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.

B. Submittal System: The contractor will provide electronic submittals using Newforma Info Exchange Server provided by the Architect.

C. Submittal Schedule:

1. In preparing the schedule, the Contractor should consider time required for review, ordering, manufacturing, fabrication, and delivery plus include additional time required for making corrections or revision to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

a. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.

b. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.

c. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

d. Format: Arrange the following information in a tabular format:

1) Schedule date for first submittal.

2) Specification Section number and title.

3) Submittal category: Action or Informational.

4) Name of subcontractor.

5) Description of the Work covered.

6) Scheduled date for Architect's final release or approval.

7) Scheduled date of fabrication.

8) Scheduled dates for purchasing.

9) Scheduled dates for installation.

10) Activity or event number.

D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received. This includes the right to withhold action on a submittal requiring color selection until all related color samples or submittals are received.

2. The Contractor is responsible for assuring that each submittal is in full compliance with the submittal requirements prior to forwarding to the Architect for review. Submittals which are incomplete will be considered as not submitted until all submittal requirements are fulfilled. The architect has sole discretion to return incomplete submittals without review, to hold submittals until all requirements are fulfilled, to review partial submittals, or to waive partial requirements. In exercising this discretion, the Architect will incur no obligation to apply the same action to any other submittal.

3. The Contractor is responsible for timely submission of submittals to allow for review and any subsequent corrections necessary prior to undertaking any work covered by the submittal.

E. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals or consultants is required. Architect will advise Contractor when a submittal being processed requires extended review time for coordination.

2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.

3. Resubmittal Review: Allow 15 days for review of each resubmittal.

4. Sequential Review: Where the Contract Documents indicate that submittals shall be reviewed sequentially by Architect's consultants, Owner, or other parties, allow 21 days for initial review of each submittal

5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

6. Except for required concurrent reviews, the Contractor shall not retain or suppress submittals for group submissions. Each individual submittal is to be transmitted expeditiously upon preparation. Numerous submittals transmitted in a short time period will not be considered reasonable, and will result in review times being extended accordingly. In such cases, the Contractor may request priority consideration of certain submittals.

7. Should the Contractor request an expedited review in order to maintain schedule, the requests will be approved at the sole discretion of Architect. Rejection will not be cause for any claims for delay or additional cost by the Contractor. The Contractor shall be solely responsible should such rejection result in the completion of construction to occur after the contract deadlines.

F. Transmittal Form: Use Newforma Info Exchange Transmittal as approved by the Architect. When using the Architect’s electronic submittal procedure, the transmittal form is part of the submittal file.

G. Transmit each submittal with a copy of approved submittal form.

H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will reject and return received from sources other than Contractor.

1. Transmittal Form Content: Provide locations on form for the following information:

a. Project name.

b. Date.

c. Destination (To:).

d. Source (From:).

e. Names of subcontractor, manufacturer, and supplier.

f. Category and type of submittal.

g. Submittal purpose and description.

h. Specification Section number and title.

i. Transmittal number (numbered consecutively).

j. Remarks.

k. Signature of transmitter.

I. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.

J. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

K. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.

L. 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 the requirements of the Work and Contract Documents. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.

M. Include the following information on label for processing and recording action taken:

1. Project name.

2. Date.

3. Name and address of Architect.

4. Name and address of Contractor.

5. Name and address of subcontractor.

6. Name and address of supplier.

7. Submittal number or other unique identifier, including revision identifier.

a. Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06-1000.01). Re-submittals shall include an alphabetic suffix after another decimal point (e.g., 06-1000.01.A).

N. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

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

P. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

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

3.10 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. Submit Product Data before or concurrent with Samples.

3.11 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

B. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

C. Material Safety Data Sheets (MSDS): Submit information directly to Owner; do not submit to Architect except as required in "Action Submittals" Article.

3.12 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Review each submittal for accuracy and completeness of dimensions and quantities, and for performance of equipment or systems. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect. Submittals deemed by the Architect to not have been reviewed by the Contractor prior to submission may be returned and considered as "Not Submitted".

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents and coordinated with other Work of the contract.

3.13 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. Furnish as Submitted: Denotes that the submittal meets the criteria of the drawings and specifications and no revisions are required. The Contractor may proceed with fabrication or procurement of the item reviewed and may proceed with the work shown on the drawings and specifications for this item.

2. Furnish as Corrected: Denotes that there are deficiencies, but the Contractor may proceed with fabrication or procurement of the item reviewed and may proceed with the work shown on the drawings and specifications for the item if the deficiencies are first corrected.

3. Revise and Resubmit: Denotes that the submittal does apply to the drawings and specifications, but insufficient detail has been shown or the submittal contains too many errors or omissions. The Contractor may NOT proceed with fabrication or procurement of the item reviewed and may NOT proceed with the work shown on the drawings and specifications for the item. The Contractor must revise the submittal and resubmit for review.

4. Incomplete - Resubmit: Denotes that some portion of the submittal is incomplete and the Architect cannot, therefore, review the submittal. The Architect will describe the incompleteness by comment on the submittal. The Contractor may NOT proceed with fabrication or procurement of the item reviewed and may NOT proceed with the work shown on the drawings and specifications for the item. The Contractor must revise the submittal and resubmit for review.

5. Rejected: Denotes that the submittal does not apply to the item specified or was not specified. The Contractor may NOT proceed with fabrication or procurement of the item reviewed and may NOT proceed with the work shown on the drawings and specifications for the item, and the Contractor must prepare a new submittal. The Architect will describe the reason for rejection by comment on the submittal.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

F. Architects review is only for limited purpose of checking for general conformance with the information given and design concept expressed in the Contract Documents.

G. Unless notified otherwise by the Contractor, the Architect’s notations, comments, and mark-ups on approved submittals shall have the same effect as the Architect's order for minor changes in the Work not involving adjustment in the contract sum or extension in the contract time. The Contractor will proceed with the work, and the response will be incorporated into the contract the same as the Architect's written order for minor changes in the Work. Notify Architect in writing if noted modifications cannot be made due to conflicting circumstances in the field, in other contract documents, or for other reasons.

H. If the Contractor believes that the Architect’s notations, comments, or mark-ups constitute a change that results in added cost or time, the Contractor is to notify the Architect in writing within seven (7) days of receipt of the reviewed submittal. Do not proceed with changes that result in added cost or time until the matter is resolved in accordance with other provisions of the contract.

END OF SECTION 01 3000

SECTION 01 3216
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preliminary schedule.

B. Construction progress schedule, bar chart type.

1.2 REFERENCE STANDARDS

A. AGC (CPSM) - Construction Planning and Scheduling Manual; 2004.

B. M-H (CPM) - CPM in Construction Management - Project Management with CPM; O'Brien; 2006.

1.3 SUBMITTALS

A. Within 10 days after date of Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.

D. Within 10 days after joint review, submit complete schedule.

E. Submit updated schedule with each Application for Payment.

1.4 QUALITY ASSURANCE

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

1.5 SCHEDULE FORMAT

A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

B. Diagram Sheet Size: Maximum 11 x 17 inches or width required.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.2 BAR CHARTS

A. Include a separate bar for each major portion of Work or operation.

B. Identify the first work day of each week.

3.3 UPDATING SCHEDULE

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.

C. Annotate diagrams to graphically depict current status of Work.

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

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

F. Submit reports required to support recommended changes.

3.4 DISTRIBUTION OF SCHEDULE

A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect/Engineer, Owner, and other concerned parties.

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

END OF SECTION 01 3216

SECTION 013323
SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.

B. Required submittals

1.2 PROCEDURES

A. Samples, shop drawings and/or product data shall be submitted to and approved by the Design Professional prior to fabrication. No work shall commence in connection with each of the various items for which submittals are required until all related submittals have been approved by the Design Professional.

B. Transmit each submittal with transmittal letter indicating: date, project title, project number, contractor's name and address and pertinent Specification Section number. Two (2) copies of all transmittal letters shall to be sent to the Owners Representative (OR) attention at the time of each submission.

C. Sequentially number the transmittal forms. Identify re-submittals with original number and an alphabetic suffix.

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

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

F. Provide space for Contractor and Design Professionals review stamps.

G. Revise and resubmit submittals as required, identify all changes made since previous submittal.

H. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.3 SHOP DRAWINGS

A. The Contractor shall submit for approval to the Design Professional, equipment lists and Shop Drawings, as expediently as possible.

B. The material and equipment lists shall be submitted and approved before any material or equipment is purchased and shall be corrected to as-built conditions before the completion of the project.

C. The Contractor shall submit to the Design Professional three (3) copies of all required Shop Drawings, material and equipment lists for the Design Professional’s and the Owner’s sole use. The Contractor shall submit additional copies required for his own use. Additional copies will be reviewed by the Design Professional and returned to the Contractor marked accordingly.

1) The Contractor shall identify each submittal item with the following:

(a) Project Title and Location
(b) Project Number
(c) Supplier’s Name
(d) Manufacturer’s Name
(e) Specification Section and Article Number
(f) Drawing Number

2)

3) Reference the accompanying Shop Drawing and Submittal Log at the end of this section for required submittal information.

D. In no instance shall the Contract Drawings be reproduced for shop drawing submittals.

1.4 SAMPLES

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

B. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for the Design Professional's selection.

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

1.5 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for product data.

B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.6 MANUFACTURER'S CERTIFICATES

A. When specified in individual specification Sections, submit manufacturers' certificate to the Design Professional for review, in quantities specified for product data.

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

C. Certificates may be recent or previous test results on material or product, but must be acceptable to the Design Professional.

1.7 SUBMITTAL SCHEDULE

A. Reference the accompanying Shop Drawing and Submittal Log at the end of this section for required submittal information.

END OF SECTION

SHOP DRAWING AND SUBMITTAL LOG

Project: Pathology Core Lab Expansion – 6RCP – Phase 1 Roche Install – Site Prep and Implementation
Project Number: UIHC #215-003, BUILDUI #0584401
Contractor:

Section	Description	Contractor	Date Received	#	Date Sent to Cons.	Date Returned	Remarks	Date Returned	Contractor	Copies to Owner	File
01 35 33	**Interim Infection Control Measures (IICM)**										
1.3A	Project information										
09 65 16	**Resilient Flooring**										
1.3A	Flooring layout diagrams for each phase										
09 91 23	**Interior Painting**										
1.3A	Paper “drop” samples										
21 13 13	**Wet-Pipe Automatic Sprinkler Systems**										
1.4A	Product data										
1.4B	Shop drawings and calculations										
1.4C	Certificate of Installation										
22 67 00	**Process Water Systems for Laboratory and Healthcare Facilities**										
1.5A	Product data										
1.5B	Welding certificates										
1.5C	Quality-control test reports										
23 05 93	**Testing, Adjusting, and Balancing for HVAC**										
1.3A	Field reports										
1.3B	Test reports										

Section	Description	Contractor	Date Received	#	Date Sent to Cons.	Date Returned	Remarks	Date Returned	Contractor	Copies to Owner	File
1.3C	Draft copies of reports										
23 09 00	**Instrumentation and Control for HVAC**										
1.5A	Qualification of guaranteed unit pricing										
1.5B	Shop drawings and manufacturer's data										
1.5E	As detailed in subparagraphs 1 - 3										
1.5F	Record documents										
1.5G	Training manuals										
23 36 00	**Air Terminal Units**										
1.2A	Product data										
23 37 13	**Diffusers, Registers, and Grilles**										
1.2A	Product data										
1.2B	Shop drawings										
26 05 19	**Conductors and Cables**										
1.4A	Shop drawings										
26 05 33	**Conduit and Raceway**										
1.4A	Data sheets										
26 22 00	**Transformers**										
1.4A	As detailed in subparagraphs 1 – 9										
1.4B	O&M manuals										

Section	Description	Contractor	Date Received	#	Date Sent to Cons.	Date Returned	Remarks	Date Returned	Contractor	Copies to Owner	File
26 24 16	**Panelboards**										
1.4A	Shop drawings										
1.4B	Panel schedule										
26 27 26	**Outlet Boxes and Wiring Devices**										
1.4A	Shop drawings										
26 28 13	**Fuses**										
1.4A	Shop drawings										
26 28 16	**Enclosed Switches**										
1.4A	Shop drawings										
26 51 00	**Interior Lighting**										
1.4A1	Catalog cut sheets										
1.4A2	List of fixture features										
1.4A3	Manufacturer's certificate										
1.4A4	Ballast warranty										
27 10 05	**Telecommunications Cabling Infrastructure**										
1.5B	Material cut-sheets										
1.5C	Manufacturer's certification										
28 31 00	**Addressable Voice Fire Alarm and Detection System**										
1.4A	Equipment or system variations										
1.4B	As detailed in subparagraphs 1 - 6										

Section	Description	Contractor	Date Received	#	Date Sent to Cons.	Date Returned	Remarks	Date Returned	Contractor	Copies to Owner	File
1.4C	O&M manuals										
1.4D	Certification										
1.4E	State Fire Marshal's written approval										

SECTION 014000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Quality assurance.

B. Testing and inspection agencies and services.

C. Control of installation.

D. Mock-ups.

E. Tolerances.

F. Manufacturers' field services.

G. Defect Assessment.

1.02 QUALITY ASSURANCE

A. Testing Agency Qualifications:

1.03 TESTING AND INSPECTION AGENCIES AND SERVICES

A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.

B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

C. Contractor Employed Agency:

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 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. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect 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. Have work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

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

3.02 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. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

3.03 TESTING AND INSPECTION

A. Testing Agency Duties:

1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.

2. Perform specified sampling and testing of products in accordance with specified standards.
3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
5. Perform additional tests and inspections required by Architect.
6. Submit reports of all tests/inspections specified.

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

C. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
3. Provide incidental labor and facilities:
   a. To provide access to Work to be tested/inspected.
   b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
   c. To facilitate tests/inspections.
   d. To provide storage and curing of test samples.
4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.

E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.04 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 equipment as applicable, and to initiate instructions when necessary. Services to be scheduled a minimum of one (01) week in advance with the contractor.

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

3.05 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 014100
REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

A. Regulatory requirements applicable to this project are the following:

B. 29 CFR 1910 - Occupational Safety and Health Standards; Current Edition.

C. State of Michigan amendments to some or all of the following.

D. City of St Johns amendments to some or all of the following.

E. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

F. ICC (IFC) - International Fire Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

G. NFPA 1 - Fire Code; 2024, with Errata.

H. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

I. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

J. ICC (IPC) - International Plumbing Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. ICC (IMC) - International Mechanical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

L. ICC (IFGC) - International Fuel Gas Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

M. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

N. ICC (IECC) - International Energy Conservation Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 015000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary Controls: Barriers, enclosures, and fencing.

B. Security requirements.

C. Vehicular access and parking.

D. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

A. The CONSTRUCTOR shall contact Iowa One Call for both on campus and off campus utility location services a minimum of forty-eight (48) hours prior to starting the Project (excluding weekends and holidays), in accordance with Institution Requirements. The CONSTRUCTOR shall comply with all standard Iowa One Call procedures for remarking and maintenance.

B. Any utility damaged by the CONSTRUCTOR shall be repaired immediately at no cost to the OWNER. Repairs shall be continuous until service is restored.

C. The CONSTRUCTOR shall document the location and elevation of all utilities uncovered during the course of the work and include their locations on the record documents.

D. No utility shall be shut down by the CONSTRUCTOR. Shutdowns require a minimum two (2) week advance notice, minimum. Certain utilities will require long term notification based on service. The OWNER will perform all utility shutdowns and restarts.

E. The CONSTRUCTOR shall not assume that all utilities are shown on the Drawings.

F. The CONSTRUCTOR shall keep record of the location of all utilities uncovered whether active or abandoned and notify the CPM each time a utility is uncovered. All utilities shall be recorded on record documents.

G. A separate set of utility record documents shall be provided to the OWNER on completion of all utility work or one (1) month prior to substantial completion, whichever comes first.

1.03 TEMPORARY ELECTRICITY

A. Cost: By OWNER; CONSTRUCTOR to connect to OWNER'S existing power service where directed by OWNER. Do not disrupt OWNER'S use of service. OWNER will only pay cost of energy used. Exercise measures to conserve energy.

B. Provide temporary electric feeder from existing building electrical service at location as directed. Do not disrupt OWNER'S use of service.

C. Complement existing power service capacity and characteristics as required.

D. Provide power outlets for construction operations with branch wiring and distribution boxes located as required. Provide flexible power cords as required.

E. Provide main service disconnect and over-current protection at convenient location.

F. Permanent convenience receptacles may be utilized during construction. If systems are damaged, CONSTRUCTOR shall replace at no cost to OWNER

1.04 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq.ft. Provide additional lighting for review of drywall and paint operations

B. Provide and maintain 1 watt/sq.ft. H.I.D. lighting to exterior staging and storage space areas after dark for security purposes.

C. Provide and maintain 0.25 watt/sq.ft. H.I.D. lighting to interior work areas after dark for security purposes.

D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

E. Maintain lighting and provide routine repairs.

F. Permanent building lighting may be utilized during construction, if authorized by the CPM.

1.05 TEMPORARY HEATING/COOLING

A. Provide and pay for heating/cooling and other devices as needed to heat or air condition and humidify or dehumidify the space as needed to maintain specified conditions for construction operations.

B. B. Existing or new permanent equipment may only be used after all dirt and dust creating operations are complete. The CPM must approve in writing use of permanent building equipment. Regardless of date of start-up, a warranty for one (1) year must be provided from the date of Substantial Completion. The CONSTRUCTOR is responsible for purchasing extended warranties as required to cover the additional time that may be required for proper finishing of the space and building flush out.

C. Prior to operation of permanent equipment for temporary heating/cooling purposes, verify that installation is approved for operation, equipment is lubricated, and filters are in place. Provide and pay for operation and maintenance of worn or consumed parts. Prevent return air from entering the system. Replace all filters monthly or more frequently once it is in use until final acceptance. Service all equipment used and replace all filters as part of punchlist (See Section 01 50 00). The CONSTRUCTOR is responsible for any damage to the equipment.

1.06 TEMPORARY VENTILATION

A. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases. If required, provide dehumidification as needed to maintain proper conditions.

B. Provide separate ventilation equipment, do not use building systems. Extend and supplement equipment with temporary fan units as required to maintain clean air for construction operations. See Section 01 50 00 for maintenance requirements.

C. Hazardous or noxious gases shall be exhausted to the exterior of the building. Do not exhaust any ventilation equipment near pedestrian access or walkways

1.07 WIRELESS

A. If access to the OWNER'S wireless system is available, the CONSTRUCTOR may use it and coordinate payment with IT Services. If boosters or additional work is required for the connection, the CONSTRUCTOR is responsible for the cost.

B. Provide, maintain, and pay for internet connection and email service to field office. UNI will not provide network connections for internet use, however, if available, an additional phone line could be provided.

1.08 TEMPORARY WATER SERVICE

A. Connect to existing UNI water source for construction operations at time of project mobilization. OWNER will pay cost of water used. Exercise measures to conserve water. OWNER will indicate area of connection.

B. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing as needed.

C. OWNER has a limited supply of metered water assemblies available for attaching directly to hydrants. Coordinate with CPM and CFU. Constructor shall not operate fire hydrants.

D. Allow 72 hour notice for backflow and meter installation

1.09 TEMPORARY SANITARY FACILITIES

A. Existing designated facilities may be used during construction operations. Maintain daily in clean and sanitary condition.

B. At end of construction, return facilities to same or better condition as originally found. Document preconstruction conditions as part of Section 01 30 00 video or photos.

1.10 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction area, to allow for OWNER'S use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barriers and warning devices at the edges of all construction operations until conditions are fully restored.

C. Protect vehicular traffic, stored materials, site, and structures from damage.

1.11 PROTECTION OF INSTALLED AND EXISTING WORK

A. Protect installed and existing 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, plywood, or other measures as required. This includes concrete that will serve as the finished surface or concrete that will be stained. Stained or damaged concrete that serves as a finish surface will be removed and replaced.

1.12 SECURITY

A. Provide security and facilities to protect work, existing facilities, and OWNER'S operations from unauthorized entry, vandalism, or theft.

B. Coordinate with OWNER'S security program.

C. Provide keys for all CONSTRUCTOR supplied locks to CPM or provide padlocks that will accept OWNER'S construction cores. If available, the CPM can provide padlocks with construction cores.

1.13 EXISTING FACILITIES

A. Prior to the start of construction, the CONSTRUCTOR'S superintendent shall inspect the construction area and paths of travel to and from the area. If damage exists, the CONSTRUCTOR shall notify the CPM and they will photograph or otherwise document conditions and existing damages, if any. If no damage is reported the existing facilities will be considered to be in good undamaged condition. The CONSTRUCTOR will be responsible for repair of all damage to existing facilities prior to project closeout. Provide the CPM with one (1) copy of the damage documentation.

B. The CONSTRUCTOR is responsible for maintenance, protection, and restoration of the site and structures within the construction area and areas crossed over in transit to or from the construction area. All facilities shall be restored to original or better condition at completion of the work.

C. Protect underground utilities, tunnels, and other structures from heavy equipment traffic and storage of heavy materials. Damage to any existing utility or structure shall be repaired by the CONSTRUCTOR at no expense to the OWNER. If existing utilities or structures are found that are not shown on the Drawings, stop work immediately and contact the CPM.

D. The CONSTRUCTOR shall not operate any valve, switch, or contact on any existing utility without prior approval of the OWNER. Generally, UNI employees will open and close all utilities.

E. Any tree, shrubbery, or planting damaged during construction shall be replaced by the CONSTRUCTOR at no cost to the OWNER.

F. Trash shall be disposed of regularly and not allowed to accumulate on site. The site shall be cleaned at least weekly of all trash, debris, and construction material.

1.14 FIRE PROTECTION

A. CONSTRUCTOR shall familiarize himself with OWNER'S existing fire protection facilities including alarms, sprinkler systems, and extinguishers.

B. Existing fire alarm systems shall be maintained in operation throughout the project unless agreed to in writing by the OWNER. Temporarily cover and protect all smoke detectors in demolition areas to prevent accidental activation and false alarms. Covers shall be removed at the end of the work days and replaced the next day if needed. CONSTRUCTOR shall notify Local Police and the prior to covering any detectors.

C. Provide fire extinguishers to meet OSHA and International Fire Code requirements or a minimum of two (2) U.L. listed multipurpose dry chemical fire extinguishers per floor or work area, in addition to OWNER'S facilities. The CONSTRUCTOR shall replace the OWNER'S extinguishers for the duration of the construction project. The OWNER'S extinguishers shall be set aside for removal by OWNER. Each extinguisher shall be rated 2A20BC. Additional extinguishers may be provided to meet CONSTRUCTOR'S safety requirements.

D. Observe all normal fire safety practices.

E. Provide shields for all welding, cutting, burning, grinding, or other spark producing activity.

F. Provide fireproof blankets or tarps as needed to protect existing and new facilities.

G. Provide fire watch personnel as needed to watch for falling sparks.

H. Observe all necessary safety precautions for flammable/volatile fluids. Do not store them in the construction area.

I. Review use and protection of existing sprinkler and alarm systems.

J. CONSTRUCTOR to coordinate efforts with the approved fire safety and rescue plan (Section 01 10 00).

K. CONSTRUCTOR must follow the City of St John Office of Risk Management and Environmental Health and Safety's Hot Works Program.

1.15 SAFETY

A. The CONSTRUCTOR shall observe all safety laws and regulations as noted in the General Conditions.

B. The OWNER has a lock-out tag-out (LOTO) and confined space (CS) procedures that the CONSTRUCTOR must be familiar with. Any operations that require LOTO or CS shall be coordinated with OWNER. Contact the CPM to coordinate review of these procedures.

C. When working in existing facilities, the CONSTRUCTOR can review SDS sheets for any hazardous material in the building by contacting the City Safety office.

1.16 PARKING

A. No parking on grass or sidewalks.

B. All vehicles must be permitted through UNI Public Safety and park in an assigned lot. No parking will be allowed at the site unless approved by Public Safety and the CPM. Vehicles parked at the site still require a permit. Permits are available yearly, weekly, or daily at varying costs as established by Public Safety.

C. Parking tickets will be issued to illegally parked vehicles

1.17 PROGRESS CLEANING AND WASTE REMOVAL

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition. Cleaning shall be done daily and shall include sweeping to remove all dust and dirt.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom, vacuum, and wipe clean all interior areas prior to start of surface finishing and continue cleaning to maintain area being finished free of dust.

D. Collect and remove waste materials, debris, and rubbish from site weekly and dispose off-site.

E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate covered containers.

F. If the Project or project site is not maintained in a clean condition, the OWNER reserves the right to have cleaning done. Costs will be deducted from the contract in accordance with General Conditions. All debris and discarded items shall be cleaned from the site weekly.

G. If the CONSTRUCTOR fails to maintain the area adjacent to the site in a clean condition, the OWNER reserves the right to clean the area and charge the CONSTRUCTOR according to the fee schedule established in this section.

1.18 FIELD OFFICES AND SHEDS

A. Use and location of temporary offices, sheds, and trailers must be approved by the OWNER.

B. The CONSTRUCTOR shall maintain a set of as-built documents in his field office that reflects all changes made to the documents. These documents shall be available to the CPM during construction and shall be turned over to the OWNER with the request for Substantial Completion.

1.19 REMOVAL OF UTILITIES, FACILITIES, AND CONTROL

A. Remove temporary utilities, equipment, facilities, and materials prior to Substantial Completion inspection.

B. Clean and repair damage caused by installation, use, or removal of temporary work.

C. Review entire construction area and access with CPM to determine extent of damage and repairs required.

D. Restore existing and permanent facilities used during construction to original or better condition. Restore new permanent facilities used during construction to specified condition.

E. If allowed by Design & Construction, permanent building equipment may be used during construction. If allowed, it must be cleaned and all filters and disposable parts replaced. Each item used during construction shall be maintained, lubricated, adjusted, and inspected by the CONSTRUCTOR and manufacturer's representative prior to turning the building over. A statement from the manufacturer indicating the condition of the equipment and noting the parts that were replaced and service provided shall be submitted to the City of St Johns. The CONSTRUCTOR shall maintain a list of equipment used during construction and note the day it was placed in service and each time it was serviced and filters replaced and provide to The City of St Johns. In addition, one (1) year shall be added to the warranty period starting on acceptance of the building as substantially complete.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

TABLE OF CONTRACTOR/SUBCONTRACTORS

PROJECT NAME: 101 Cass St. Renovation - City Condo

On the following chart indicate the name of each Contractor or Subcontractor who will implement erosion/sediment control measures and which measure they will implement.

Name of Contractor/Subcontractor	Erosion/Sediment Control Measure

KEEP A COPY OF THIS TABLE WITH 101 CASS ST RENOVATION – CITY CONDO PLAN ON THE JOB SITE. SUBMIT A COPY TO THE OWNER'S REPRESENTATIVE.

SECTION 016000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

A. Section 011000 - Summary: Lists of products to be removed from existing building.

B. Document 00 4325 - Substitution Request Form.

C. Document 00 6325 - Substitution Request Form.

D. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.

1.02 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
   1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
   2. New Products: Items that have not previously been incorporated into another project or facility. Products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
   3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.03 SUBMITTALS

A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

D. Comparable Product Requests: Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Conditions: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
      a. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will

produce the indicated results, and that it is compatible with other portions of the Work.

b. b. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

c. c. Evidence that proposed product provides specified warranty.

d. d. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.

e. e. Samples, if requested.

2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request.

a. Form of Approval: Comply with requirements specified in Division 01 "Administrative Requirements."

1.04 COMPATIBILITY OF OPTIONS

A. Comply with requirements in Division 01 Quality Requirements.

B. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors
2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.05 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
   a. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
   b. Refer to Divisions 02 through 48 for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 01 "Execution and Closeout Requirements" and " Closeout Submittals."

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.

B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.

C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

D. Specific Products to be Reused: The reuse of certain materials and equipment already existing on the project site is required.
   1. See Section 011000 for list of items required to be salvaged for reuse and relocation.

2.02 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by Contract Documents.

B. Use of products having any of the following characteristics is not permitted:
   1. Made using or containing CFC's or HCFC's.
   2. Made of wood from newly cut old growth timber.
   3. Containing lead, cadmium, or asbestos.

C. Where other criteria are met, Contractor shall give preference to products that:
   1. If used on interior, have lower emissions, as defined in Section 016116.
   2. If wet-applied, have lower VOC content, as defined in Section 016116.
   3. Have a published GreenScreen Chemical Hazard Analysis.

2.03 PRODUCT OPTIONS

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

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

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

A. See Section 012500 - Substitution Procedures.

B. Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period and the documents required. Comply with requirements specified in Section 00 2113 - Instructions to Bidders, unless time is modified by 00 2115 - Supplemental Instructions to Bidders.

C. Architect/Engineer will consider requests for substitutions only within 15 days after date of Agreement. Requests received after that time may be considered or rejected at discretion of Architect.

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

E. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

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

G. 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 the Contract Documents.

H. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
   1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
      a. Requested substitution does not require extensive revisions to the Contract Documents.
      b. Requested substitution is consistent with the Contract Documents and will produce indicated results.
      c. Substitution request is fully documented and properly submitted.
      d. Requested substitution will not adversely affect Contractor's Construction Schedule.
      e. Requested substitution has received necessary approvals of authorities having jurisdiction.
      f. Requested substitution is compatible with other portions of the Work.
      g. Requested substitution has been coordinated with other portions of the Work.
      h. Requested substitution provides specified warranty.
      i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

3.02 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft.

C. Deliver products to project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

D. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

E. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

F. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

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

H. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

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

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

K. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.

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

C. Store with seals and labels intact and legible.

D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.

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

F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

G. Comply with manufacturer's warranty conditions, if any.

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

I. Prevent contact with material that may cause corrosion, discoloration, or staining.

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

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

END OF SECTION

SECTION 02 40 00
CUTTING AND PATCHING

PART 1 **GENERAL**

1.1 SUMMARY

A. This Section includes procedural requirements for cutting and patching, including all subsurface cutting and patching.

B. It shall be the General Contractor's responsibility to field verify and coordinate all locations where cutting and patching shall be required due to either new work installed or existing in-place work removed or modified. The General Contractor shall review the contract drawings to determine locations where the removal, cutting, modification or installation of work impacts existing work in-place, including adjacent work in-place. The General Contractor shall patch or repair these surfaces or assemblies in order to restore them to their original conditions. All finishes disturbed by any cutting and patching operations, shall be patched or repaired to their original conditions.

C. The General Contractor shall thoroughly review the mechanical and electrical contract drawings to determine and coordinate all cutting and patching locations which impact architectural or structural surfaces and/or assemblies and proceed as outlined in paragraph 1.1.B.

1.2 DEFINITIONS

A. Cutting: Removal of in-place construction, including all mechanical and electrical elements, necessary to permit the installation or performance of other Work.

B. Patching: Fitting and repair work required to restore surfaces or assemblies to their original conditions after installation, modification or removal of other Work.

1.3 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements may include but shall not be limited to the following:
1. Primary operational systems and equipment.
2. Air or smoke barriers.
3. Fire-suppression systems.
4. Mechanical systems.
5. Control systems.
6. Communication systems.
7. Conveying systems.
8. Electrical systems.
9. Fire Alarm systems.
10. Security or monitoring systems.
11. Rated assemblies.
12. UL Listed assemblies.

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements may include but shall not be limited to the following:
1. Water, moisture, or vapor barriers.
2. Membranes and flashings.
3. Exterior curtain-wall construction.

4. Equipment supports.
5. Piping, ductwork, vessels, and equipment.
6. Noise- and vibration-control elements and systems.

D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Design Professional's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.4 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut, removed, modified or damaged during cutting and patching operations, including all demolition operations, by methods and with materials so as not to void existing warranties.

PART 2 PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible. Use materials that maintain UL Listing and Fire Ratings where applicable.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials. The General Contractor shall obtain pre-approval from the Design Professional for use of such materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction, including adjacent surfaces or assemblies, during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

E. Utilize Design Professional approved dust control methods during all cutting operations.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
   1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
   1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   3. Concrete & Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
   4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
   5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
   6. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
   1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
   2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
      a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
      b. Restore damaged pipe covering to its original condition.

   3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
      a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

   4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
   5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

D. Cleaning: Clean areas and spaces where cutting and patching are performed, including impacted adjacent areas. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION

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SECTION 024100
DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Building demolition excluding removal of hazardous materials and toxic substances.

B. Selective demolition of built site elements.

C. Selective demolition of building elements for alteration purposes.

D. Abandonment and removal of existing utilities and utility structures.

1.02 RELATED REQUIREMENTS

A. Section 003100 - Available Project Information: Existing building survey conducted by Owner; information about known hazardous materials.

B. Section 011000 - Summary: Limitations on Contractor's use of site and premises.

C. Section 011000 - Summary: Sequencing and staging requirements.

D. Section 011000 - Summary: Description of items to be removed by Owner.

E. Section 011000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.

F. Section 015000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.

G. Section 015713 - Temporary Erosion and Sediment Control.

H. Section 016000 - Product Requirements: Handling and storage of items removed for salvage and relocation.

I. Section 017000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

J. Section 017419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

K. Section 070150.19 - Preparation for Re-Roofing: Removal of existing roofing, roof insulation, flashing, trim, and accessories.

1.03 REFERENCE STANDARDS

A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.

B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Site Plan: Indicate:
   1. Areas for temporary construction and field offices.

C. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.
   1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
   2. Identify demolition firm and submit qualifications.
   3. Summary of safety procedures.
   4. Demolition firm qualifications.

D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

E. The Contractor shall submit utility service termination certificates, copies of demolition notices, and permits to the Architect prior to removal.

F. The Contractor shall submit demolition procedures and operational sequence for review and acceptance by the Architect if a portion of the existing facility is to remain in operation during construction and phasing is not specified in the plans or specifications.

G. Schedule indicating proposed sequence of operations for selective demolition work to Architect for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.

1.05 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Company specializing in the type of work required.
   1. Minimum of 10 years of documented experience.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 DEMOLITION

A. Remove portions of existing buildings in the following sequence:

B. Remove creosote-treated wood utility poles.

C. Remove other items indicated, for salvage, relocation, and recycling.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with requirements in Section 017000.

B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Comply with applicable requirements of NFPA 241.
   3. Use of explosives is not permitted.
   4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   5. Provide, erect, and maintain temporary barriers and security devices.
   6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   7. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
   8. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
   9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.

C. Do not begin removal until receipt of notification to proceed from Owner.

D. Protect existing structures and other elements to remain in place and not removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

E. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

F. Hazardous Materials:
   1. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCBs, and mercury.

G. Perform demolition in a manner that maximizes salvage and recycling of materials.
   1. Dismantle existing construction and separate materials.
   2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

H. Accurately record locations of capped utilities and subsurface obstructions on the Contractor's record drawing set.

I. All sewers, drainage pipe, and floor drains which have been or are to be abandoned shall be permanently sealed at the ends with bulkheads constructed of concrete, having a minimum thickness of 8 inch. No direct payment will be made for blocking abandoned sewers, drainage pipes, or floor drains.

3.03 EXISTING UTILITIES

A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.

I. Contractor is responsible for the adjustment of all gas vents, manholes, castings, and water valves to match the new surface. Adjustments shall be coordinated with the utility companies and the cost for all adjustments shall be incidental to construction. Any damage to said structures and appurtenances, that occurs during construction, shall be repaired by the Contractor at no additional cost to the Owner.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Existing construction and utilities indicated on drawings are based on casual field observation only.
   1. Verify construction and utility arrangements are as indicated.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Remove existing work as indicated and required to accomplish new work.
   1. Remove items indicated on drawings.

C. Services including, but not limited to, HVAC, Plumbing, Electrical, and Telecommunications : Remove existing systems and equipment as indicated.
   1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
   2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
   3. Verify that abandoned services serve only abandoned facilities before removal.

4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.

D. Protect existing work to remain.
   1. Prevent movement of structure. Provide shoring and bracing as required.
   2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.
   4. Patch to match new work.

3.05 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 030516
UNDERSLAB VAPOR BARRIER

PART 1 GENERAL

1.01 REFERENCE STANDARDS

A. ASTM E1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2018a.

B. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017 (Reapproved 2023).

PART 2 PRODUCTS

2.01 MATERIALS

A. Underslab Vapor Barrier:
   1. Water Vapor Permeance: Not more than 0.010 perms, maximum.
   2. Thickness: 15 mils.
   3. Product:
      a. Stego Industries LLC; Stego Wrap Vapor Barrier (15-mil): www.stegoindustries.com/#sle.

B. Accessory Products: Vapor barrier manufacturer's recommended tape, adhesive, mastic, etc., for sealing seams and penetrations in vapor barrier.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E1643.

B. Install vapor barrier under interior slabs on grade; lap sheet over footings and seal to foundation walls.

C. Lap joints minimum 6 inches.

D. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions.

E. No penetration of vapor barrier is allowed except for reinforcing steel and permanent utilities.

F. Repair damaged vapor retarder before covering with other materials.

END OF SECTION

SECTION 042000
UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete block.

B. Concrete building brick.

C. Mortar and grout.

D. Reinforcement and anchorage.

E. Lintels.

F. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 032000 - Concrete Reinforcing: Reinforcing steel for grouted masonry.

B. Section 040100 - Maintenance of Masonry.

C. Section 042300 - Glass Unit Masonry.

D. Section 072700 - Air Barriers: Air barriers applied to exterior face of backing sheathing or unit masonry substrate.

E. Section 078400 - Firestopping: Firestopping at penetrations of fire-rated masonry and at top of fire-rated walls.

F. Section 079200 - Joint Sealants: Sealing control and expansion joints.

1.03 REFERENCE STANDARDS

A. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2019.

B. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement; 2022.

C. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2022.

D. ASTM C55 - Standard Specification for Concrete Building Brick; 2023.

E. ASTM C91/C91M - Standard Specification for Masonry Cement; 2023.

F. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2018.

G. ASTM C150/C150M - Standard Specification for Portland Cement; 2022.

H. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.

I. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019a, with Editorial Revision.

J. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2024.

K. ASTM C476 - Standard Specification for Grout for Masonry; 2023.

L. ASTM C1714/C1714M - Standard Specification for Preblended Dry Mortar Mix for Unit Masonry; 2019a.

M. BIA Technical Notes No. 46 - Maintenance of Brick Masonry; 2017.

N. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data for masonry units and masonry accessories.

1.05 QUALITY ASSURANCE

A. Fire Rated Assemblies: Comply with applicable code for UL Assembly No. U905.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

A. Concrete Brick:
   1. Size: As indicated on drawings.
   2. Concrete Building Brick: ASTM C55; lightweight, solid, for interior or concealed use.

2.02 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M, Type N.

B. Portland Cement: ASTM C150/C150M, Type I.

C. Hydrated Lime: ASTM C207, Type S.

D. Mortar Aggregate: ASTM C144.

E. Grout Aggregate: ASTM C404.

F. Water: Clean and potable.

G. Packaged Dry Material for Mortar for Unit Masonry: Premixed masonry cement and mason sand; complying with ASTM C1714/C1714M and capable of producing mortar of specified strength in accordance with ASTM C270 with addition of water only.
   1. Type: Type N.
   2. Color: Standard gray.

H. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.
   1. Type: Coarse.
   2. Products:
      a. Substitutions: See Section 016000 - Product Requirements.

2.03 REINFORCEMENT AND ANCHORAGE

A. Manufacturers:
   1. Blok-Lok Limited: www.blok-lok.com/#sle.
   2. Hohmann & Barnard, Inc; X-Seal Anchor: www.h-b.com/#sle.
   3. WIRE-BOND: www.wirebond.com/#sle.
   4. Substitutions: See Section 016000 - Product Requirements.

B. Reinforcing Steel: Type specified in Section 032000; size as indicated on drawings; galvanized finish.

C. Single Wythe Joint Reinforcement: ASTM A951/A951M.
   1. Type: Truss.
   2. Material: ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M Class 3.
   3. Size: 0.1483 inch side rods with 0.1483 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.

2.04 ACCESSORIES

A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
   1. Manufacturers:
      a. Blok-Lok Limited: www.blok-lok.com/#sle.
      b. Hohmann & Barnard, Inc: www.h-b.com/#sle.
      c. WIRE-BOND: www.wirebond.com/#sle.
      d. Substitutions: See Section 016000 - Product Requirements.

B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.
   1. Manufacturers:
      a. Hohmann & Barnard, Inc: www.h-b.com/#sle.
      b. WIRE-BOND: www.wirebond.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

C. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.05 MORTAR AND GROUT MIXING

A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
   1. Interior, non-loadbearing masonry: Type O.

B. New Mortar for Old Brick: Proportion by volume only; no more than 20 percent of the total volume of Portland cement and lime combined to be Portland cement.
   1. Repointing Mortar: Use proportions from 1 part lime to 2 parts sand with no Portland cement, up to 2 parts Portland cement to 3 parts lime to 6 parts sand.
   2. Use mortar within 30 minutes after final mixing; do not add more water after the initial mix is prepared.

C. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.

D. Mixing: Use mechanical batch mixer and comply with referenced standards.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive masonry.

B. Verify that related items provided under other sections are properly sized and located.

C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

A. Direct and coordinate placement of metal anchors supplied for installation under other sections.

B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COURSING

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

C. Concrete Masonry Units:
   1. Bond: Running.
   2. Coursing: One unit and one mortar joint to equal 8 inches.
   3. Mortar Joints: Concave.

3.04 PLACING AND BONDING

A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

B. Lay hollow masonry units with face shell bedding on head and bed joints.

C. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.

D. Remove excess mortar and mortar smears as work progresses.

E. Interlock intersections and external corners, except for units laid in stack bond.

F. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.

G. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

H. Isolate masonry partitions from vertical structural framing members with a control joint as indicated.

I. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

3.05 REINFORCEMENT AND ANCHORAGE - GENERAL

A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches on center.

B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.

C. Place continuous joint reinforcement in first and second joint below top of walls.

D. Lap joint reinforcement ends minimum 6 inches.

3.06 LINTELS

A. Install loose steel lintels over openings.
   1. See Structural notes on Sheet S-101.

B. Maintain minimum 8 inch bearing on each side of opening.

3.07 GROUTED COMPONENTS

A. Lap splices minimum 24 bar diameters.

B. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.

C. Place and consolidate grout fill without displacing reinforcing.

D. At bearing locations, fill masonry cores with grout for a minimum 12 inches either side of opening.

3.08 CONTROL AND EXPANSION JOINTS

A. Do not continue horizontal joint reinforcement through control or expansion joints.

B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.

C. Size control joints as indicated on drawings; if not indicated, 3/4 inch wide and deep.

3.09 BUILT-IN WORK

A. As work progresses, install built-in metal door frames and glazed frames and other items to be built into the work and furnished under other sections.

B. Install built-in items plumb, level, and true to line.

C. Bed anchors of metal door and glazed frames in adjacent mortar joints. Fill frame voids solid with grout.
   1. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.

3.10 TOLERANCES

A. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.

B. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

3.11 CUTTING AND FITTING

A. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.12 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - Quality Requirements.

3.13 CLEANING AND REPAIRS

A. Remove excess mortar and mortar droppings.

B. Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged. Provide new units to match adjoining units and install in fresh mortar and grout pointed and with same mortar color to eliminate evidence of replacement.

C. Clean soiled surfaces with cleaning solution. Protect adjacent or dissimilar materials from damogge from cleaning activities.

D. Use non-metallic tools in cleaning operations.

E. Contractor shall be responsible for protection of masonry cavity from construction debris and trash. Inspect cavity prior to continuation of wall construction to verify debris has not been dropped or blown-in during breaks or stoppage in work.

3.14 PROTECTION

A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

B. Provide sand or pea gravel mulch at base of wall or plastic sheeting up face of finished masonry at base of wall to protect lower masonry from mud, mortar droppings and staining from uncompleted construction operations.

C. During construction of walls, cover tops of walls and any open sills or headers with waterproof sheeting at the end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches down face of both sides of wall and hold cover securely in place.

END OF SECTION

SECTION 053100
STEEL DECKING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Composite floor deck.

1.02 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

B. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2023.

C. ICC-ES AC70 - Acceptance Criteria for Power-Actuated Fasteners Driven into Concrete, Steel and Masonry Elements; 2019, with Editorial Revision (2021).

D. SDI (DM) - Publication No.30, Design Manual for Composite Decks, Form Decks, and Roof Decks; 2007.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittals procedures.

B. Product Data: Provide For each type of deck, accessory, and product indicated..

1.04 DELIVERY, STORAGE, AND HANDLING

A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.

B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Steel Deck:
   1. Nucor-Vulcraft Group: www.vulcraft.com/#sle.
   2. Substitutions: See Section 016000 - Product Requirements.

2.02 STEEL DECK

A. Composite Floor Deck: Fluted steel sheet embossed to interlock with concrete:
   1. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.
   2. Structural Properties:
   3. Span Design: Multiple.
   4. Minimum Base Metal Thickness: 22 gauge, 0.0299 inch.
   5. Nominal Height: 1-1/2 inches.
   6. Profile: Fluted; SDI NR.
   7. Formed Sheet Width: 36 inch.
   8. Side Joints: Lapped, mechanically fastened.

2.03 ACCESSORY MATERIALS

A. Fasteners: Galvanized hardened steel, self tapping.

B. Powder Actuated Mechanical Fasteners: Steel; with knurled shank and forged ballistic point. Comply with applicable requirements of ICC-ES AC70.
   1. Material: Steel; ASTM A510/A510M.
      a. Corrosion Resistance:
         1) Steel Bar Joist Framing Applications: ASTM B633, SC1, Type III zinc electroplate..

C. Mechanical Fasteners: Steel; hex washer head, self-drilling, self-tapping.
   1. Design Requirements for Sidelap Connections: Provide number and type of fasteners that comply with the applicable requirements of SDI (DM) design method for roof deck and floor deck applications.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions prior to beginning work.

B. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 31, manufacturer's written instructions, and requirements in this Section.

B. Install temporary shoring before placing deck panels if required to meet deflection limitations.

C. Locate deck bundles to prevent overloading of supporting members.

D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.

E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.

F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.

G. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work.

H. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

I. Mechanical fasteners may be used in lieu of welding to fasten deck. Locate mechanical fasteners and install according to deck manufacturer's written instructions.

J. Drive mechanical sidelap connectors completely through adjacent lapped sheets; positively engage adjacent sheets with minimum three-thread penetration.

3.03 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Testing agency will report inspection results promptly and in writing to Contractor and Architect/Engineer.

C. Remove and replace work that does not comply with specified requirements.

D. Additional inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

3.04 PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 061000
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nonstructural dimension lumber framing.

B. Sheathing.

C. Subflooring.

D. Underlayment.

E. Preservative treated wood materials.

F. Fire retardant treated wood materials.

G. Miscellaneous framing and sheathing.

H. Communications and electrical room mounting boards.

I. Concealed wood blocking, nailers, and supports.

J. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCE STANDARDS

A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.

B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

C. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.

D. ASTM D2898 - Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing; 2010 (Reapproved 2017).

E. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.

F. ASTM E2357 - Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies; 2024.

G. ASTM E2556/E2556M - Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment; 2010 (Reapproved 2016).

H. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

I. AWPA U1 - Use Category System: User Specification for Treated Wood; 2024.

J. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. ICC (IECC) - International Energy Conservation Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

L. PS 2 - Performance Standard for Wood Structural Panels; 2018.

M. PS 20 - American Softwood Lumber Standard; 2025.

N. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

1.04 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, and installation.

1.05 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
   2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Sizes: Nominal sizes as indicated on drawings, S4S.

B. Moisture Content: S-dry or MC19.

C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
   1. Lumber: S4S, No. 2 or Standard Grade.
   2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

A. Roof Sheathing: PS 2 type, rated Structural I Sheathing.
   1. Bond Classification: Exposure 1.
   2. Span Rating: 60.
   3. Performance Category: 3/4 PERF CAT.

B. Wall Sheathing: Oriented strand board structural wood panel with factory laminated water-resistive barrier layer.
   1. Sheathing Panel: PS 2, Exposure 1.
      a. Size: 4 feet wide by 8 feet long.
      b. Grade: Sheathing.
      c. Performance Category: 7/16 PERF CAT.
      d. Span Rating: 24/16.
      e. Edge Profile: Square edge.

2.04 ACCESSORIES

A. Fasteners and Anchors:
   1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

2.05 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
   1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
   2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

B. Fire Retardant Treatment:

1. Interior Type A: AWPA U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
    a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
    b. Treat rough carpentry items as indicated .
    c. Do not use treated wood in applications exposed to weather or where the wood may become wet.

C. Preservative Treatment:
1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
    a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.

PART 3 EXECUTION

3.01 PREPARATION

A. Coordinate installation of rough carpentry members specified in other sections.

3.02 INSTALLATION - GENERAL

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 BLOCKING, NAILERS, AND SUPPORTS

A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

B. Provide the following specific nonstructural framing and blocking:
1. Cabinets and shelf supports.
2. Wall brackets.
3. Handrails.
4. Grab bars.
5. Towel and bath accessories.
6. Wall-mounted door stops.
7. Wall paneling and trim.
8. Joints of rigid wall coverings that occur between studs.

3.04 INSTALLATION OF CONSTRUCTION PANELS

A. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

B. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
3. Install adjacent boards without gaps.

3.05 TOLERANCES

A. Framing Members: 1/4 inch from true position, maximum.

B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.06 CLEANING

A. Waste Disposal: See Section 017419 - Construction Waste Management and Disposal.
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.
   3. Do not burn scraps that have been pressure treated.
   4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.

B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

SECTION 064100
ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops.

B. Hardware.

C. Factory finishing.

1.02 RELATED REQUIREMENTS

A. Section 061000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

B. Section 123600 - Countertops.

1.03 REFERENCE STANDARDS

A. AWI (QCP) - Quality Certification Program; Current Edition.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

D. BHMA A156.9 - Cabinet Hardware; 2020.

E. ISO 4586-2 - High-Pressure Decorative Laminates (HPL, HPDL) – Sheets Based on Thermosetting Resins (Usually Called Laminates) – Part 2: Determination of Properties; 2018.

F. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
   1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
   2. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).

C. Product Data: Provide data for hardware accessories.

D. Samples: Submit actual samples of architectural cabinet construction, minimum 8 inches square, illustrating proposed cabinet substrate and finish.

1.05 QUALITY ASSURANCE

A. Quality Certification:
   1. Comply with AWI (QCP) woodwork association quality certification service/program in accordance with requirements for work specified in this section: www.awiqcp.org/#sle.
   2. Provide labels or certificates indicating that the installed work complies with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade or grades specified.
   3. Provide designated labels on shop drawings as required by certification program.
   4. Provide designated labels on installed products as required by certification program.
   5. Submit certifications upon completion of installation that verifies this work is in compliance with specified requirements.
   6. Replace, repair, or rework all work for which certification is refused.

1.06 MOCK-UPS

A. Provide mock-up of typical base cabinet, wall cabinet, and countertop, including hardware, finishes, and plumbing accessories.

B. See Section 014000 - Quality Requirements for additional requirements.

C. Locate where directed.

D. Mock-up may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect units from moisture damage.

PART 2 PRODUCTS

2.01 CABINETS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

B. Plastic Laminate Faced Cabinets: Custom grade.

C. Cabinets:
   1. Casework Construction Type: Type A - Frameless.
   2. Cabinet Design Series: As indicated on drawings.
   3. Cabinet Doors and Drawer Fronts: Flush style.

2.02 COUNTERTOPS

A. Countertops: See Section 123600.

2.03 HARDWARE

A. Cabinet Hardware: Comply with BHMA A156.9 for hardware types and grades indicated below:
   1. Hardware Types: As indicated on drawings.
   2. Product Grade: Grade 2.

B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple holes for pin supports and coordinated self rests, polished chrome finish, for nominal 1 inch spacing adjustments.

C. Countertop Support Brackets: Fixed, L-shaped, face-of-wall mounting.

D. Drawer and Door Pulls: "U" shaped wire pull, steel with satin finish, 4 inch centers.

E. Drawer Slides:
   1. Type: Full extension.
   2. Static Load Capacity: Heavy Duty grade
   3. Mounting: Side mounted.
   4. Features: Provide self-closing type.

2.04 FABRICATION

A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.

B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

3.02 ADJUSTING

A. Adjust installed work.

B. Adjust moving or operating parts to function smoothly and correctly.

3.03 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

SECTION 076200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fabricated sheet metal items, including flashings and counterflashings.

B. Sealants for joints within sheet metal fabrications.

1.02 RELATED REQUIREMENTS

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

1.03 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

B. ASTM A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products; 2018.

C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

D. CDA A4050 - Copper in Architecture - Handbook; current edition.

E. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with ____ years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Sheet Metal Flashing and Trim:
   1. Hickman Edge Systems: www.hickmanedgesystems.com/#sle.
   2. Substitutions: See Section 016000 - Product Requirements.

2.02 SHEET MATERIALS

A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch thick base metal.

2.03 FLASHING

A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.

2.04 ACCESSORIES

A. Fasteners: Galvanized steel, with soft neoprene washers.

B. Primer Type: Zinc chromate.

C. Concealed Sealants: Non-curing butyl sealant.

D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.

PART 3 EXECUTION

3.01 INSTALLATION

A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.

B. Apply plastic cement compound between metal flashings and felt flashings.

C. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.

END OF SECTION

SECTION 078400
FIRESTOPPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Firestopping of joints and penetrations in fire-resistance-rated and smoke-resistant assemblies, whether indicated on drawings or not.

1.02 RELATED REQUIREMENTS

A. Section 017000 - Execution and Closeout Requirements: Cutting and patching.

B. Section 070553 - Fire and Smoke Assembly Identification.

C. Section 078100 - Applied Fire Protection.

D. Section 092116 - Gypsum Board Assemblies: Gypsum wallboard fireproofing.

1.03 REFERENCE STANDARDS

A. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).

B. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.

C. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.

D. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems; 2015 (Reapproved 2019).

E. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestop Systems; 2020a.

F. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers; 2020a.

G. ASTM E2837 - Standard Test Method for Determining the Fire Resistance of Continuity Head-of-Wall Joint Systems Installed between Rated Wall Assemblies and Nonrated Horizontal Assemblies; 2023a.

H. FM 4991 - Approval Standard of Firestop Contractors; 2013.

I. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.

J. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.

K. UL (DIR) - Online Certifications Directory; Current Edition.

L. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on product characteristics, performance ratings, and limitations.

C. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.

D. Installer's qualification statement.

1.05 QUALITY ASSURANCE

A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.

B. Installer Qualifications: Company specializing in performing the work of this section and:
   1. Recognized as a Qualified Contractor in compliance with requirements of UL (DIR) Solutions Qualified Firestop Contractor Program.
   2. Verification of at least five satisfactorily completed projects of comparable size and type.

3. Licensed by local authorities having jurisdiction (AHJ).

1.06 FIELD CONDITIONS

A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Firestopping Manufacturers:
   1. 3M Fire Protection Products: www.3m.com/firestop/#sle.
   2. Hilti, Inc: www.hilti.com/#sle.
   3. Substitutions: See Section 016000 - Product Requirements.

2.02 MATERIALS

A. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.

B. Fire Ratings: Refer to drawings for required systems and ratings.

2.03 FIRESTOPPING ASSEMBLY REQUIREMENTS

A. Head-of-Wall (HW) Joint System Firestopping at Joints Between Fire-Rated Wall Assemblies and Non-Rated Horizontal Assemblies: Use system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of wall assembly.

B. Floor-to-Floor (FF), Floor-to-Wall (FW), Head-of-Wall (HW), and Wall-to-Wall (WW) Joints, Except Perimeter, Where Both Are Fire-Rated: Use system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.

C. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.

2.04 FIRESTOPPING FOR FLOOR-TO-FLOOR, FLOOR-TO-WALL, HEAD-OF-WALL, AND WALL-TO-WALL JOINTS

A. Concrete and Concrete Masonry Walls and Floors:
   1. Head-of-Wall Joints at Concrete/Concrete Masonry Wall to Concrete Over Metal Deck Floor:
      a. 2 Hour Construction: UL System HW-D-0181; Hilti CFS-SP WB Firestop Joint Spray and CP 672.
   2. Head-of-Wall Joints at Concrete/Concrete Masonry Wall to Concrete Floor:
      a. 2 Hour Construction: UL System HW-D-0268; Hilti CP 606 Flexible Firestop Sealant.

B. Gypsum Board Walls:
   1. Head-of-Wall Joints at Underside of Flat Concrete:
      a. 1 Hour Construction: UL System HW-D-0757; Hilti CFS-TTS Top Track Seal.
   2. Head-of-Wall Joints at Concrete Over Metal Deck, Wall Parallel to Ribs:
      a. 1 Hour Construction: UL System HW-D-0184; Hilti CP 606 Flexible Firestop Sealant.
   3. Head-of-Wall Joints at Concrete Over Metal Deck, Wall Perpendicular to Ribs, Not Cut to Fit:
      a. 1 Hour Construction: UL System HW-D-0045; Hilti CP 606 Flexible Firestop Sealant.

2.05 FIRESTOPPING PENETRATIONS THROUGH CONCRETE AND CONCRETE MASONRY CONSTRUCTION

A. Blank Openings:
   1. In Floors or Walls:
      a. 2 Hour Construction: UL System C-AJ-0090; Hilti FS-ONE MAX Intumescent Firestop Sealant.

B. Penetrations Through Floors or Walls By:
   1. Multiple Penetrations in Large Openings:
      a. 2 Hour Construction: UL System C-AJ-8143; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   2. Uninsulated Metallic Pipe, Conduit, and Tubing:
      a. 2 Hour Construction: UL System C-AJ-1226; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   3. Cable Trays with Electrical Cables:
      a. 2 Hour Construction: UL System C-AJ-4094; Hilti CFS-BL Firestop Block.
   4. Electrical Busways:
      a. 3 Hour Construction: UL System C-AJ-6017; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   5. Insulated Pipes:
      a. 2 Hour Construction: UL System C-AJ-5091; Hilti FS-ONE IMAX Intumescent Firestop Sealant.
   6. HVAC Ducts, Uninsulated:
      a. 2 Hour Construction: UL System C-AJ-7111; Hilti FS-ONE MAX Intumescent Firestop Sealant.

C. Penetrations Through Floors By:
   1. Uninsulated Metallic Pipe, Conduit, and Tubing:
      a. 2 Hour Construction: UL System F-A-1110; Specified Technologies Inc. CID Cast-In Device.
   2. Insulated Pipes:
      a. 2 Hour Construction: UL System F-A-5041; Specified Technologies Inc. CID Cast-In Device.

D. Penetrations Through Walls By:
   1. Uninsulated Metallic Pipe, Conduit, and Tubing:
      a. 1 Hour Construction: UL System W-J-1067; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   2. Insulated Pipes:
      a. 1 Hour Construction: UL System C-AJ-5090; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   3. HVAC Ducts, Uninsulated:
      a. 2 Hour Construction: UL System W-J-7109; Hilti FS-ONE MAX Intumescent Firestop Sealant, or CP 606 Flexible Firestop Sealant.
   4. HVAC Ducts, Insulated:
      a. 2 Hour Construction: UL System W-J-7112; Hilti FS-ONE MAX Intumescent Firestop Sealant.

2.06 FIRESTOPPING PENETRATIONS THROUGH GYPSUM BOARD WALLS

A. Penetrations By:
   1. Multiple Penetrations in Large Openings:
      a. 1 Hour Construction: UL System W-L-1408; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   2. Uninsulated Metallic Pipe, Conduit, and Tubing:
      a. 1 Hour Construction: UL System W-L-1054; Hilti FS-ONE MAX Intumescent Firestop Sealant.
   3. Cable Trays with Electrical Cables:
      a. 1 Hour Construction: UL System W-L-4011; Hilti CFS-BL Firestop Block.
   4. Insulated Pipes:
      a. 1 Hour Construction: UL System W-L-5029; Hilti FS-ONE Intumescent Firestop Sealant.
   5. HVAC Ducts, Insulated:

a. 1 Hour Construction: UL System W-L-7156; Hilti FS-ONE MAX Intumescent Firestop Sealant.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify openings are ready to receive the work of this section.

3.02 PREPARATION

A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.

B. Remove incompatible materials that could adversely affect bond.

C. Install backing materials to prevent liquid material from leakage.

3.03 INSTALLATION

A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.

B. Do not cover installed firestopping until inspected by authorities having jurisdiction.

C. Install labeling required by code.

3.04 FIELD QUALITY CONTROL

A. Independent Testing Agency: Inspection agency employed and paid by Owner, will examine penetration firestopping in accordance with ASTM E2174 and ASTM E2393.

B. Repair or replace penetration firestopping and joints at locations where inspection results indicate firestopping or joints do not meet specified requirements.

3.05 CLEANING

A. Clean adjacent surfaces of firestopping materials.

3.06 PROTECTION

A. Protect adjacent surfaces from damage by material installation.

END OF SECTION

SECTION 079200
JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nonsag gunnable joint sealants.

B. Self-leveling pourable joint sealants.

C. Joint backings and accessories.

D. Owner-provided field quality control.

1.02 RELATED REQUIREMENTS

A. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.

B. Section 079100 - Preformed Joint Seals: Precompressed foam, gaskets, and strip seals.

C. Section 092116 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.

D. Section 093000 - Tiling: Sealant between tile and plumbing fixtures and at junctions with other materials and changes in plane.

1.03 REFERENCE STANDARDS

A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).

B. ASTM C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants; 2018 (Reapproved 2022).

C. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).

D. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications; 2022.

E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

F. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2023.

G. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).

H. ASTM C1311 - Standard Specification for Solvent Release Sealants; 2022.

I. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints; 2019 (Reapproved 2020).

J. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015 (Reapproved 2021).

K. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
   1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
   2. List of backing materials approved for use with the specific product.
   3. Backing material recommended by sealant manufacturer.
   4. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
   5. Substrates the product should not be used on.

C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

D. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.

E. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.

F. Field Quality Control Plan: Submit at least two weeks prior to start of installation.

G. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include bagged test samples and photographic records.

H. Field Quality Control Log: Submit filled-out log for each length or instance of sealant installed, within 10 days after completion of inspections/tests; include bagged test samples and photographic records, if any.

I. Executed warranty.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.

B. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
   1. Adhesion Testing: In accordance with ASTM C794.
   2. Compatibility Testing: In accordance with ASTM C1087.
   3. Allow sufficient time for testing to avoid delaying the work.
   4. Deliver sufficient samples to manufacturer for testing.
   5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
   6. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.

C. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample.
   1. Identification of testing agency.
   2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out.
      a. Test date.
      b. Copy of test method documents.
      c. Age of sealant upon date of testing.
      d. Test results, modeled after the sample form in the test method document.
      e. Indicate use of photographic record of test.

D. Owner will employ an independent testing agency to perform the field quality control inspection and testing as referenced in PART 3 of this section and as follows, to prepare and submit the field quality control plan and log, and to provide recommendations of remedies in the case of failure.
   1. Contractor shall cooperate with testing agency and repair failures discovered and destructive test location damage.

E. Field Quality Control Plan:
   1. Visual inspection of entire length of sealant joints.
   2. Nondestructive field adhesion testing of sealant joints, except interior acrylic latex sealants.
      a. For each different sealant and substrate combination, allow for one test every 12 inches in the first 10 linear feet of joint and one test every 24 inches thereafter.

b. If any failures occur in the first 10 linear feet, continue testing at 12 inches intervals at no extra cost to Owner.

3. Destructive field adhesion testing of sealant joints, except interior acrylic latex sealant.
   a. For each different sealant and substrate combination, allow for one test every 100 feet in the first 1,000 linear feet, and one test per 1,000 linear feet thereafter, or once per floor on each elevation.
   b. If any failures occur in the first 1,000 linear feet, continue testing at frequency of one test per 500 linear feet at no extra cost to Owner.
4. Field Quality Control Log Form: Show same data fields as on Preinstallation Field Adhesion Test Log, with known information filled out and lines for multiple tests per sealant/substrate combinations; include visual inspection and specified field testing; allow for possibility that more tests than minimum specified may be necessary.

F. Field Adhesion Test Procedures:
1. Allow sealants to fully cure as recommended by manufacturer before testing.
2. Have a copy of the test method document available during tests.
3. Take photographs or make video records of each test, with joint identification provided in the photos/videos; for example, provide small erasable whiteboard positioned next to joint.
4. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log.
5. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies.
6. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner.
7. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Architect.

G. Nondestructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Nondestructive Spot Method.
1. Record results on Field Quality Control Log.
2. Repair failed portions of joints.

H. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Tail Procedure.
1. Sample: At least 18 inches long.
2. Minimum Elongation Without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two; then multiply 1 inch by that percentage; if adhesion failure occurs before the 1-inch mark is that distance from the substrate, the test has failed.
3. If either adhesive or cohesive failure occurs before minimum elongation, take necessary measures to correct conditions and retest; record each modification to products or installation procedures.
4. Record results on Field Quality Control Log.
5. Repair failed portions of joints.

1.06 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and register with manufacturer.

C. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Nonsag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.

1. Adhesives Technology Corporation: www.atcepoxy.com/#sle.
2. Bostik Inc: www.bostik-us.com/#sle.
3. Dow: www.dow.com/#sle.
4. Substitutions: See Section 016000 - Product Requirements.

B. Self-Leveling Sealants:
1. Dow: www.dow.com/#sle.
2. Sika Corporation: usa.sika.com/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

2.02 JOINT SEALANT APPLICATIONS

A. Scope:
1. Exterior Joints: Seal open joints, whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
   a. Seal open joints except open joints indicated on drawings as not sealed.
   b. Seal the following joints:
      1) Wall expansion and control joints.
      2) Joints between doors, windows, and other frames or adjacent construction.
      3) Joints between different exposed materials.
      4) Openings below ledge angles in masonry.
      5) Joints around wall penetrations of utilities.
      6) Other joints indicated below.
2. Interior Joints:
   a. Do not seal interior joints indicated on drawings as not sealed.
   b. Do not seal gaps and openings in gypsum board and suspended ceilings
   c. Seal the following joints:
      1) Joints between door frames and window frames and adjacent construction.
      2) In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, and piping penetrations.
      3) In sound-rated wall and ceiling assemblies, seal joints between wall assemblies and ceiling assemblies; between wall assemblies and other construction; between ceiling assemblies and other construction.
         (a) Exception: Through-penetrations in sound-rated assemblies that are also fire-rated assemblies.
3. Do Not Seal:
   a. Intentional weep holes in masonry.
   b. Joints indicated to be covered with manufactured expansion joint cover assemblies or other sealing devices.
   c. Joints where sealant is specified to be furnished and installed by manufacturer of product to be sealed.
   d. Joints where sealant installation is specified in other sections.
   e. Joints between suspended ceilings and walls.

B. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Nonwet Areas: Acrylic emulsion latex sealant.
2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion.
3. Floor Joints in Wet Areas: Nonsag polyurethane non-traffic-grade sealant suitable for continuous liquid immersion.
4. Joints between Tile in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
5. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
6. Narrow Control Joints in Interior Concrete Slabs: Self-leveling epoxy sealant.
7. Other Floor Joints: Self-leveling polyurethane traffic-grade sealant.

C. Interior Wet Areas: restrooms, kitchens, food service areas, and food processing areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.

D. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated, sound-rated, or acoustical.

2.03 JOINT SEALANTS - GENERAL

A. Sealants and Primers: Provide products with acceptable levels of volatile organic compound (VOC) content; see Section 016116.

B. Colors: As indicated on drawings.

2.04 NONSAG JOINT SEALANTS

A. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
   1. Color: White.
   2. Products:
      a. Sika Corporation; Sikasil N Plus US: usa.sika.com/#sle.
      b. Sika Corporation; Sikasil GP: usa.sika.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
   1. Movement Capability: Plus and minus 50 percent, minimum.
   2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
   3. Color: Match adjacent finished surfaces. contractor to provide architect with colors identified for each joint location. Colors will be approved with on-site confirmation with adjacent materials affected.
   4. Products:
      a. Pecora Corporation; DynaTrol II: www.pecora.com/#sle.
      b. Sika Corporation; Sikaflex-15 LM: usa.sika.com/#sle.
      c. Sika Corporation; Sikaflex-2c NS EZ Mix+: usa.sika.com/#sle.
      d. Substitutions: See Section 016000 - Product Requirements.

C. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.
   1. Movement Capability: Plus and minus 35 percent, minimum.
   2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
   3. Color: To be selected by Architect from manufacturer's standard range.
   4. Products:
      a. Sika Corporation; Sikaflex-1A: usa.sika.com/#sle.
      b. Sika Corporation; Sikaflex-2c NS EZ Mix+: usa.sika.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

D. Nonsag Traffic-Grade Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.
   1. Movement Capability: Plus and minus 25 percent, minimum.
   2. Hardness Range: 40 to 50, Shore A, when tested in accordance with ASTM C661.
   3. Color: To be selected by Architect from manufacturer's standard range.
   4. Products:
      a. Sika Corporation; Sikaflex-1A: usa.sika.com/#sle.
      b. Sika Corporation; Sikaflex-2c NS EZ Mix+: usa.sika.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

E. Polysulfide Sealant for Continuous Water Immersion: Polysulfide; ASTM C920, Grade NS, Uses M and A; multicomponent; explicitly approved by manufacturer for continuous water immersion; not expected to withstand traffic.
   1. Movement Capability: Plus and minus 25 percent, minimum.
   2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
   3. Color: Match adjacent finished surfaces.
   4. Products:
      a. Pecora Corporation; Synthacalk GC2+: www.pecora.com/#sle.
      b. W. R. Meadows, Inc; Deck-O-Seal Gun Grade: www.wrmeadows.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

F. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonstaining, nonbleeding, nonsagging; not intended for exterior use.
   1. Color: To be selected by Architect from manufacturer's standard range.
   2. Grade: ASTM C834; Grade 0 Degrees F (Minus 18 Degrees C).
   3. Products:
      a. Hilti, Inc; CP 506 Smoke and Acoustical Sealant: www.us.hilti.com/#sle.
      b. Pecora Corporation; AC-20 +Silicone: www.pecora.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

G. Noncuring Butyl Sealant: Solvent-based, single component, nonsag, nonskinning, nonhardening, nonbleeding; nonvapor permeable; intended for fully concealed applications.
   1. Products:
      a. Substitutions: See Section 016000 - Product Requirements.

2.05 SELF-LEVELING JOINT SEALANTS

A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
   1. Movement Capability: Plus and minus 25 percent, minimum.
   2. Color: To be selected by Architect from manufacturer's standard range.
   3. Products:
      a. Pecora Corporation: NR-200 Self-Leveling Traffic-Grade Polyurethane Sealant: www.pecora.com/#sle.
      b. Sika Corporation; Sikaflex-1c SL: usa.sika.com/#sle.
      c. Sika Corporation; Sikaflex-2c SL: usa.sika.com/#sle.
      d. Substitutions: See Section 016000 - Product Requirements.

B. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single component; explicitly approved by manufacturer for traffic exposure and continuous water immersion.
   1. Movement Capability: Plus and minus 25 percent, minimum.
   2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
   3. Color: Gray.
   4. Service Temperature Range: Minus 40 to 180 degrees F.
   5. Products:
      a. Sika Corporation; Sikaflex-1c SL: usa.sika.com/#sle.
      b. Sika Corporation; Sikaflex-2c SL: usa.sika.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.

C. Rigid Self-Leveling Polyurethane Joint Filler: Two part, low viscosity, fast setting; intended for cracks and control joints not subject to significant movement.
   1. Hardness Range: Greater than 100, Shore A, and 50 to 80, Shore D, when tested in accordance with ASTM C661.
   2. Products:
      a. Substitutions: See Section 016000 - Product Requirements.

D. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
   1. Composition: Multicomponent, 100 percent solids by weight.
   2. Durometer Hardness: Minimum of 85 for Type A or 35 for Type D, after seven days when tested in accordance with ASTM D2240.
   3. Joint Width, Minimum: 1/8 inch.
   4. Joint Width, Maximum: 1/4 inch.
   5. Joint Depth: Provide product suitable for joints from 1/8 inch to 2 inches in depth including space for backer rod.
   6. Products:
      a. Dayton Superior Corporation; _____: www.daytonsuperior.com/#sle.
      b. Substitutions: See Section 016000 - Product Requirements.

2.06 ACCESSORIES

A. Sealant Backing Materials, General: Materials placed in joint before applying sealants; assists sealant performance and service life by developing optimum sealant profile and preventing three-sided adhesion; type and size recommended by sealant manufacturer for compatibility with sealant, substrate, and application.

B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that joints are ready to receive work.

B. Verify that backing materials are compatible with sealants.

C. Verify that backer rods are of the correct size.

D. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan.
   1. Test each sample as specified in PART 1 under QUALITY ASSURANCE article.
   2. Notify Architect of date and time that tests will be performed, at least seven days in advance.
   3. Record each test on Preinstallation Adhesion Test Log as indicated.
   4. If any sample fails, review products and installation procedures, consult manufacturer, or take other measures that are necessary to ensure adhesion; retest in a different location; if unable to obtain satisfactory adhesion, report to Architect.
   5. After completion of tests, remove remaining sample material and prepare joints for new sealant installation.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in an inconspicuous area to verify that it does not stain or discolor slab.

3.03 INSTALLATION

A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Provide joint sealant installations complying with ASTM C1193.

C. Install acoustical sealant application work in accordance with ASTM C919.

D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

E. Install bond breaker backing tape where backer rod cannot be used.

F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

G. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

H. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

I. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

3.04 FIELD QUALITY CONTROL

A. Owner will employ an independent testing agency to perform field quality control inspection and testing as specified in PART 1 under QUALITY ASSURANCE article.

B. Non-Destructive Adhesion Testing: If there are any failures in first 100 linear feet, notify Architect immediately.

C. Destructive Adhesion Testing: If there are any failures in first 1,000 linear feet, notify Architect immediately.

D. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.

E. Repair destructive test location damage immediately after evaluation and recording of results.

3.05 POST-OCCUPANCY

A. Post-Occupancy Inspection: Perform visual inspection of entire length of project sealant joints at a time that joints have opened to their greatest width, i.e., at low temperature in thermal cycle. Report failures immediately and repair them.

END OF SECTION

SECTION 081113
HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal doors and frames.

B. Hollow metal frames for wood doors.

C. Fire-rated hollow metal doors and frames.

1.02 RELATED REQUIREMENTS

A. Section 087100 - Door Hardware.

B. Section 088000 - Glazing: Glass for doors and borrowed lites.

C. Section 099123 - Interior Painting: Field painting.

1.03 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. ANSI/SDI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames; 2019.

C. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2024.

D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023.

E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2020.

F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2023, with Editorial Revision.

H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2023.

I. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

J. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.

K. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

L. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.

M. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2024.

N. NAAMM HMMA 840 - Guide Specifications for Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2024.

O. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.

P. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

Q. UL (DIR) - Online Certifications Directory; Current Edition.

R. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

1.05 QUALITY ASSURANCE

A. Maintain at project site copies of reference standards relating to installation of products specified.

B. Source Limitations: Obtain hollow metal work from single source from single manufacturer.

C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to NFPA 252.
   1. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.

D. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 Label each individual glazed lite.

E. Smoke-Control Door Assemblies: Comply with NFPA 105.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

C. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
   1. Provide additional protection to prevent damage to finish of factory-finished units.

D. Store hollow metalwork under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch- high wood blocking. Do not store in a manner that traps excess humidity.
   1. Provide a minimum of 1/4-inch space between each stacked door to permit air circulation.

1.07 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.08 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hollow Metal Doors and Frames:
   1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
   2. Steelcraft, an Allegion brand: www.allegion.com/#sle.
   3. Substitutions: See Section 016000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Requirements for Hollow Metal Doors and Frames:

1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
2. Accessibility: Comply with ICC A117.1 and ADA Standards.
3. Door Edge Profile: Manufacturers standard for application indicated.
4. Typical Door Face Sheets: Flush.
5. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.
6. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Hollow Metal Panels: Same construction, performance, and finish as doors.

C. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

A. Door Finish: Factory primed and field finished.

B. Interior Doors, Non-Fire-Rated:
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
   a. Level 2 - Heavy-duty.
   b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
   c. Model As indicated on drawings.
   d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
2. Door Thickness: 1-3/4 inches, nominal.
3. Door Face Sheets: Flush.
4. Door Finish: Factory primed and field finished.

C. Fire-Rated Doors:
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
   a. Level 2 - Heavy-duty.
   b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
   c. Model As indicated on drawings.
   d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
3. Provide units listed and labeled by UL (DIR).
   a. Attach fire rating label to each fire rated unit.
4. Door Core Material: Manufacturers standard core material/construction in compliance with requirements.
5. Door Thickness: 1-3/4 inches, nominal.
6. Door Face Sheets: Flush.
7. Door Finish: Factory primed and field finished.

2.04 HOLLOW METAL FRAMES

A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B. Frame Finish: Factory primed and field finished.

C. Interior Door Frames, Non-Fire Rated: Knock-down type.
1. Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch, maximum, above floor at 45 degree angle.

2. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
3. Frame Finish: Factory primed and field finished.

D. Door Frames, Fire-Rated: Face welded type.
1. Fire Rating: Same as door, labeled.
2. Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch, maximum, above floor at 45 degree angle.
3. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
4. Frame Finish: Factory primed and field finished.

E. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.

2.05 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Factory Finish: Complying with ANSI/SDI A250.3, manufacturer's standard coating.
1. Color: As selected by Architect from manufacturer's standard range.

2.06 ACCESSORIES

A. Door Window Frames: Door window frames with glazing securely fastened within door opening.
1. Size: As indicated on drawings.
2. Frame Material: 18 gauge, 0.0478 inch, galvanized steel.

B. Glazing: As specified in Section 088000, factory installed.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B. Install fire rated units in accordance with NFPA 80.

C. Coordinate frame anchor placement with wall construction.

D. Install door hardware as specified in Section 087100.

E. Touch up damaged factory finishes.

3.02 ADJUSTING

A. Adjust for smooth and balanced door movement.

3.03 SCHEDULE

A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 081416
FLUSH WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Flush wood doors; flush and flush glazed configuration; fire-rated and non-rated.

B. Transom panels.

1.02 RELATED REQUIREMENTS

A. Section 081113 - Hollow Metal Doors and Frames.

B. Section 087100 - Door Hardware.

C. Section 088000 - Glazing.

D. Section 099123 - Interior Painting: Field finishing of doors.

E. Section 099300 - Staining and Transparent Finishing: Field finishing of doors.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

C. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

D. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

E. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

F. ITS (DIR) - Directory of Listed Products; Current Edition.

G. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.

H. UL (DIR) - Online Certifications Directory; Current Edition.

I. UL 10B - Standard for Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

J. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

K. WDMA I.S. 1A - Interior Architectural Wood Flush Doors; 2021, with Errata (2022).

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
   1. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).

D. Warranty, executed in Owner's name.

1.05 QUALITY ASSURANCE

A. Source Limitations: Obtain flush wood doors and wood paneling from single manufacturer.

B. Quality Standard: In addition to requirements specified, comply with AWI's "Architectural Woodwork Quality Standards Illustrated." or WDMA I.S.1-A, "Architectural Wood Flush Doors.".
   1. Provide AWI Quality Certification Labels or an AWI letter of licensing for Project indicating that doors comply with requirements of grades specified.

C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252
   1. Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging, and inspect for damage.

C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

1.07 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.08 WARRANTY

PART 2 PRODUCTS

2.01 MANUFACTURERS

2.02 DOORS AND PANELS

A. Doors: See drawings for locations and additional requirements.
   1. Quality Standard: Custom Grade, Extra Heavy Duty performance, in accordance with WDMA I.S. 1A.

B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
   1. Provide solid core doors at each location.
   2. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with UL 10C - Positive Pressure; Underwriters Laboratories Inc (UL) labeled without any visible seals when door is open.

2.03 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.

B. Fire-Rated Doors: Mineral core type, with fire resistant composite core (FD), plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.

2.04 DOOR FACINGS

A. Veneer Facing for Transparent Finish: Red oak, HPVA Grade A, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
   1. "Running Match" each pair of doors and doors in close proximity to each other.
   2. "Pair Match" each pair of doors; "Set Match" pairs of doors within 10 feet of each other when doors are closed.
   3. Transoms: Continuous match to doors.

2.05 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:

C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

E. Provide edge clearances in accordance with the quality standard specified.

2.06 FINISHES - WOOD VENEER DOORS

A. Finish work in accordance with WDMA I.S. 1A for grade specified and as follows:
   1. Transparent:
      a. As indicated on drawings.
      b. Sheen: Semigloss.
   2. Opaque:
      a. As Indicated on drawings.
      b. Sheen: Semigloss.

2.07 ACCESSORIES

A. Glazed Openings:
   1. Fire-Protection-Rated Glass: Safety Certification, 16 CFR 1201, Category II.
   2. Glazing: Sealed insulating units, 1 inch thick, made of 1/4 inch glass.
   3. Glazing: Single vision units, 1/4 inch thick glass.

B. Glazing Stops: Wood, of same species as door facing, mitered corners; prepared for countersink style screws.

C. Door Hardware: See Section 087100.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

D. Examine doors and installed door frames before hanging doors.
   1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
   2. Reject doors with defects.

3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.
   1. Install fire-rated doors in accordance with NFPA 80 requirements.

B. Hardware: For installation, see Division 08 Section "Door Hardware."

C. Examine doors and installed door frames before hanging doors.

D. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

E. Use machine tools to cut or drill for hardware.

F. Coordinate installation of doors with installation of frames and hardware.

G. Coordinate installation of glazing.

3.03 TOLERANCES

A. Comply with specified quality standard for fit and clearance tolerances.

B. Comply with specified quality standard for telegraphing, warp, and squareness.

3.04 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

END OF SECTION

SECTION 083323
OVERHEAD COILING DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Interior non-fire-rated coiling doors.

1.02 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.

B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide general construction, electrical equipment, and component connections and details.

C. Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware locations, and installation details.

D. Maintenance Data: Indicate lubrication requirements and frequency and periodic adjustments required.

1.04 QUALITY ASSURANCE

1.05 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Overhead Coiling Metal Doors:
   1. Overhead Door Corporation Model 651: www.overheaddoor.com/#sle.
   2. Substitutions: See Section 016000 - Product Requirements.

2.02 COILING DOORS

A. Interior Non-Fire-Rated Coiling Doors: Stainless steel slat curtain.
   1. Single Thickness Slats: Manufacturer's standard.
   2. Nominal Slat Size: 3 inches wide by required length.
   3. Finish: Stainless Steel Finish.
   4. Guides, Angles: Aluminum.
   5. Hood Enclosure: Manufacturer's standard; aluminum.
   6. Manual push up operation.
   7. Mounting: Within framed opening.
   8. Locking Devices: Slide bolt on inside.
   9. Slat Profile Type: F-158
   10. Door Size: As indicated on drawings

2.03 MATERIALS

A. Metal Curtain Construction: Interlocking slats.
   1. Curtain Bottom for Slat Curtains: Fitted with angles to provide reinforcement and positive contact in closed position.
   2. Stainless Steel Slats: Minimum thickness, 22 gauge, 3 inch, complying with ASTM A 666, Type 304, rollable temper.

B. Guide Construction: Continuous, of profile to retain door in place with snap-on trim, mounting brackets of same metal.

C. Guides - Angle: ASTM A36/A36M metal angles, size as required by manufacturer.

D. Hood Enclosure and Trim: Internally reinforced to maintain rigidity and shape.

E. Lock Hardware:
   1. Slide Bolt: Provide on single-jamb side, extending into slot in guides, with padlock on one side.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that adjacent construction is suitable for door installation.

B. Verify that door opening is plumb, header is level, and dimensions are correct.

C. Notify Architect of any unacceptable conditions or varying dimensions.

D. Commencement of installation indicates acceptance of substrate and door opening conditions.

3.02 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.

D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

3.03 TOLERANCES

A. Maintain dimensional tolerances and alignment with adjacent work.

B. Maximum Variation From Plumb: 1/16 inch.

C. Maximum Variation From Level: 1/16 inch.

D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 feet straight edge.

3.04 ADJUSTING

A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

A. Clean installed components.

B. Remove labels and visible markings.

END OF SECTION

SECTION 087100
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Hardware for wood, aluminum, hollow metal, and existing doors.
   1. This is a general specfication with general requirements for products that will need to be provided on the existing doors and frames. In addition to the new doors and frames.
   2. See Existing Hardware Schedule on Sheet A-601 of Construction Documents.
   3. Contractor will be required to go to site to determine final requirements for all existing and new doors.

B. Hardware for fire-rated doors.

C. Electrically operated and controlled hardware.

D. Thresholds.

E. Weatherstripping and gasketing.

1.02 RELATED REQUIREMENTS

A. Section 062000 - Finish Carpentry: Wood door frames.

B. Section 064100 - Architectural Wood Casework: Cabinet hardware.

C. Section 081113 - Hollow Metal Doors and Frames.

D. Section 081116 - Aluminum Doors and Frames.

E. Section 083323 - Overhead Coiling Doors: Door hardware, except cylinders.

F. Section 084313 - Aluminum-Framed Storefronts: Door hardware, except as noted in section.

G. Section 281000 - Access Control: Electronic access control devices.

1.03 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. BHMA A156.1 - Standard for Butts and Hinges; 2021.

C. BHMA A156.3 - Exit Devices; 2025.

D. BHMA A156.4 - Door Closers and Pivots; 2024.

E. BHMA A156.5 - Cylinders and Input Devices for Locks; 2020.

F. BHMA A156.6 - Standard for Architectural Door Trim; 2021.

G. BHMA A156.7 - Template Hinge Dimensions; 2022.

H. BHMA A156.8 - Door Controls - Overhead Stops and Holders; 2021.

I. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022.

J. BHMA A156.16 - Standard for Auxiliary Hardware; 2023.

K. BHMA A156.17 - Self Closing Hinges & Pivots; 2025.

L. BHMA A156.18 - Standard for Materials and Finishes; 2020.

M. BHMA A156.21 - Thresholds; 2025.

N. BHMA A156.22 - Standard for Gasketing; 2021.

O. BHMA A156.31 - Electric Strikes and Frame Mounted Actuators; 2024.

P. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.

Q. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames; 2006.

R. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; 2004.

S. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; 1993; also in WDHS-1/WDHS-5 Series, 1996.

T. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

U. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

V. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.

W. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

X. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

Y. UL (DIR) - Online Certifications Directory; Current Edition.

Z. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.

B. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.

C. Keying Requirements Meeting:
   1. Architect will schedule meeting at project site prior to Contractor occupancy.
   2. Attendance Required:
      a. Contractor.
      b. Owner. (representative)
      c. Architect. (representative)
   3. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
      a. Access control requirements.
      b. Key control system requirements.
   4. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
   5. Deliver established keying requirements to manufacturers.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.

C. Shop Drawings - Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.
   1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
   2. Provide complete description for each door listed.

D. Shop Drawings - Electrified Door Hardware: Submit diagrams for power, signal, and control wiring for electrified door hardware that include details of interface with building safety and security systems. Provide elevations and diagrams for each electrified door opening as follows:
   1. Prepared by or under supervision of Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC).
   2. Elevations: Submit front and back elevations of each door opening showing electrified devices with connections installed and an operations narrative describing how opening operates from either side at any given time.

3. Diagrams: Submit point-to-point wiring diagram that shows each device in door opening system with related colored wire connections to each device.

E. Manufacturer's Installation Instructions: Indicate perimeter conditions requiring special attention.

F. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

G. Keying Schedule:
1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.

1.06 QUALITY ASSURANCE

A. Standards for Fire-Rated Doors: Maintain one copy of each referenced standard on site, for use by Architect and Contractor.

1.07 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Manufacturer's Warranty: Provide warranty against defects in material and workmanship for period indicated. Complete forms in Owner's name and register with manufacturer.
1. Locksets and Cylinders: Three years, minimum.
2. Other Hardware: Two years, minimum.

PART 2 PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.

B. Provide individual items of single type, of same model, and by same manufacturer.

C. Provide door hardware products that comply with the following requirements:
1. Applicable provisions of federal, state, and local codes.
2. Accessibility: ADA Standards and ICC A117.1.
3. Fire-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.
4. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.

D. Electrically Operated and/or Controlled Hardware: Provide necessary power supplies, power transfer hinges, relays, and interfaces as required for proper operation; provide wiring between hardware and control components and to building power connection in compliance with NFPA 70.
1. See Section 281000 for additional access control system requirements.

E. Fasteners:
1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
a. Aluminum fasteners are not permitted.
b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
2. Fire-Rated Applications: Comply with NFPA 80.
a. Provide wood or machine screws for hinges mortised to doors or frames, strike plates to frames, and closers to doors and frames.
b. Provide steel through bolts for attachment of surface mounted closers, hinges, or exit devices to door panels unless proper door blocking is provided.

2.02 HINGES

A. Manufacturers:

1. McKinney; an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. Hager Companies: www.hagerco.com/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

B. Hinges: Comply with BHMA A156.1, Grade 1.
1. Self Closing Hinges: Comply with BHMA A156.17.
2. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.
a. Provide hinge width required to clear surrounding trim.
3. Provide hinges on every swinging door.
4. Provide ball-bearing hinges at each door with closer.
5. Provide following quantity of butt hinges for each door:

2.03 PIVOTS

A. Manufacturers:
1. McKinney or Rixson; an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. BEST, dormakaba Group: www.bestaccess.com/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

2.04 EXIT DEVICES

A. Manufacturers:
1. Hager Companies: www.hagerco.com/#sle.
2. Von Duprin, an Allegion brand: www.allegion.com/us/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

B. Exit Devices: Comply with BHMA A156.3, Grade 1.
1. Lever design to match lockset trim.
2. Provide cylinder with cylinder dogging or locking trim.
3. Provide exit devices properly sized for door width and height.
4. Provide strike as recommended by manufacturer for application indicated.
5. Provide UL (DIR) listed exit device assemblies for fire-rated doors and panic device assemblies for non-fire-rated doors.

2.05 ELECTRIC STRIKES

A. Electric Strikes: Comply with BHMA A156.31, Grade 1.
1. Provide UL (DIR) listed burglary-resistant electric strike; style to suit locks.
2. Provide non-handed 24 VDC electric strike suitable for door frame material and scheduled lock configuration.

2.06 LOCK CYLINDERS

A. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
1. Provide cylinders from same manufacturer as locking device.
2. Provide cams and/or tailpieces as required for locking devices.

2.07 MORTISE LOCKS

A. Manufacturers:

B. Mortise Locks: Comply with BHMA A156.13, Grade 1, Security, 1000 Series.
1. Latchbolt Throw: 3/4 inch, minimum.
2. Deadbolt Throw: 1 inch, minimum.
3. Backset: 2-3/4 inch unless otherwise indicated.
4. Strikes: Provide manufacturer's standard strike for each latchset or lockset with strike box and curved lip extending to protect frame in compliance with indicated requirements.
a. Finish: To match lock and latch.

2.08 CLOSERS

A. Manufacturers; Surface Mounted:
1. Hager Companies: www.hagerco.com/#sle.

2. LCN, an Allegion brand: www.allegion.com/us/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

B. Closers: Comply with BHMA A156.4, Grade 1.
1. Type: Surface mounted to door.
2. Provide door closer on each exterior door.

2.09 PROTECTION PLATES

A. Edges: Beveled, on four sides unless otherwise indicated.

B. Fasteners: Countersunk screw fasteners.

2.10 KICK PLATES

A. Manufacturers:
1. Ives, an Allegion brand: www.allegion.com/us/#sle.
2. Standard Metal Hardware Manufacturing Ltd: www.smhardware.com/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

B. Kick Plates: Provide along bottom edge of push side of every door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.
1. Size: 8 inch high by 2 inch less door width (LDW) on push side of door.

2.11 DOOR HOLDERS

A. Manufacturers:
1. McKinney or Rockwood; an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. Hager Companies: www.hagerco.com/#sle.

B. Door Holders: Comply with BHMA A156.16, Grade 1.
1. Type: Lever, or kick down stop, with rubber bumper at bottom end.
2. Material: Aluminum.

2.12 WALL STOPS

A. Manufacturers:
1. Rockwood; an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. Hager Companies: www.hagerco.com/#sle.
3. Standard Metal Hardware Manufacturing Ltd; Wall Stops: www.smhardware.com/#sle.
4. Substitutions: See Section 016000 - Product Requirements.

B. Wall Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
1. Type: Bumper, concave, wall stop.
2. Material: Aluminum housing with rubber insert.

2.13 THRESHOLDS

A. Manufacturers:
1. Pemko; an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. Reese Enterprises, Inc: www.reeseusa.com/#sle.
3. Substitutions: See Section 016000 - Product Requirements.

B. Thresholds: Comply with BHMA A156.21.
1. Provide threshold at each exterior door, unless otherwise indicated.
2. Type: Flat surface.
3. Material: Aluminum.
4. Threshold Surface: Fluted horizontal grooves across full width.
5. Field cut threshold to profile of frame and width of door sill for tight fit.
6. Provide non-corroding fasteners at exterior locations.

2.14 WEATHERSTRIPPING AND GASKETING

A. Weatherstripping and Gasketing: Comply with BHMA A156.22.

1. Head and Jamb Type: Adjustable.
2. Door Sweep Type: Encased in retainer.
3. Material: Aluminum, with brush weatherstripping.

2.15 FINISHES

A. Finishes: Provide door hardware of same finish, unless otherwise indicated.
   1. Primary Finish: Oiled Rubbed Bronze or equivalent; BHMA A156.18.

PART 3 EXECUTION

3.01 INSTALLATION

A. Use templates provided by hardware item manufacturer.

B. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list, unless noted otherwise on drawings.
   1. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.
   2. For Aluminum-Framed Storefront Doors and Frames: See Section 084313.
   3. For Wood Doors: Install in compliance with DHI WDHS.3 recommendations.
   4. Mounting heights in compliance with ADA Standards:
      a. Locksets: 40-5/16 inch.
      b. Push Plates/Pull Bars: 42 inch.
      c. Deadlocks (Deadbolts): 48 inch.
      d. Exit Devices: 40-5/16 inch.
      e. Door Viewer: 43 inch; standard height 60 inch.

C. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.

3.02 ADJUSTING

A. Adjust work under provisions of Section 017000 - Execution and Closeout Requirements.

B. Adjust hardware for smooth operation.

C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.03 CLEANING

END OF SECTION

SECTION 088000
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating glass units.

B. Glazing units.

C. Fire Rated Glazing

1.02 RELATED DOCUMENTS

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

B. Section 081113 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.

C. Section 084126 - All-Glass Entrances and Storefronts: Glazing provided as part of entrance assembly.

D. Section 088813 - Fire-Rated Glazing.

1.03 DEFINITIONS

A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit.

1.04 REFERENCE STANDARDS

A. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).

B. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.

C. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.

D. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.

E. GANA (GM) - GANA Glazing Manual; 2022.

F. GANA (SM) - GANA Sealant Manual; 2008.

G. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (Reaffirmed 2016).

H. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.

I. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

J. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

K. NGA (LGRM) - Laminated Glazing Reference Manual; 2019.

L. UL (DIR) - Online Certifications Directory; Current Edition.

1.05 PERFORMANCE REQUIREMENTS

A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Delegated Design: Design glass, including comprehensive engineering analysis according to ASTM E 1300, ICC's 2021 International Building Code by a qualified professional engineer, using the following design criteria:
   1. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical, design glass to resist design wind pressure based on glass type factors for short-duration load.
   2. Glass Type Factors for Wired, Patterned, and Sandblasted Glass:

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
   1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
   2. Glass Type Factors for Wired, Patterned, and Sandblasted Glass:
      a. Short-Duration Glass Type Factor for Wired Glass: 0.5.
      b. Long-Duration Glass Type Factor for Wired Glass: 0.3.
      c. Short-Duration Glass Type Factor for Patterned Glass: 1.0.
      d. Long-Duration Glass Type Factor for Patterned Glass: 0.6.
      e. Short-Duration Glass Type Factor for Sandblasted Glass: 0.5.
   3. Thickness of Patterned Glass: Base design of patterned glass on thickness at thinnest part of the glass.
   4. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.

1.06 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data on Insulating Glass Unit, Glazing Unit, Plastic Sheet Glazing Unit, Plastic Film, and _____ Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.

C. Glass Samples: For each type of glass product other than clear monolithic vision glassthe following products; 12 inches square.
   1. Wired glass.
   2. Fire-resistive glazing products.
   3. Insulating glass.

D. Glazing Accessory Samples: For gaskets, sealants and colored spacers, in 12-inch lengths. Install sealant Samples between two strips of material representative in color of the adjoining framing system.

E. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings

F. Delegated-Design Submittal: For glass indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation

G. Certificate: Certify that products of this section meet or exceed specified requirements.

H. Manufacturer's qualification statement.

I. Installer's qualification statement.

J. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.07 QUALITY ASSURANCE

A. Perform work in accordance with GANA (GM), GANA (SM), IGMA TM-3000, and NGA (LGRM) for glazing installation methods. Maintain one copy on site.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

D. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

1.08 FIELD CONDITIONS

A. Do not install glazing when ambient temperature is less than 40 degrees F.

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.09 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with the requirements indicated.

B. Glass Fabricators:
   1. Guardian Glass.
   2. National Guard Products
   3. TPG Fire-rated Glass (Pilkington Pyrostop)
   4. Substitutions: See Section 016000 - Product Requirements.

C. Wired Glass Manufacturers:
   1. TGP Fire rated .
   2. National Guard Products.
   3. Substitutions: See Section 016000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

A. Provide type and thickness of interior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
   1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
   2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
   3. Glass thicknesses listed are minimum.

B. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
   1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
   2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
   3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

2.04 INSULATING GLASS UNITS

A. Manufacturers:
   1. Guardian Glass, LLC: www.guardianglass.com/#sle.
   2. Pilkington North America Inc: www.pilkington.com
   3. TGP Fire-rated.

4. Substitutions: See Section 016000 - Product Requirements.

B. Insulating Glass Units:
   1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
   2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
   3. Spacer Color: Black.
   4. Edge Seal:
      a. Color: Black.

C. G1 Insulating Glass Units: Vision glass, double glazed.
   1. Applications: As indicated on drawings.
   2. Space between lites filled with argon.
   3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
      a. Tint: Clear.
   4. Inboard Lite: Annealed float glass, 1/4 inch thick, minimum.
      a. Tint: Clear.
   5. Total Thickness: 1 inch.

D. G2 Insulating Glass Units: Vision glass, double glazed.
   1. Applications: As indicated on drawings.
   2. Space between lites filled with argon.
   3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
      a. Tint: Clear.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

C. Verify that sealing between joints of glass framing members has been completed effectively.

D. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

E. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

3.03 FIELD QUALITY CONTROL

A. See Section 014000 - Quality Requirements for additional requirements.

B. Glass and Glazing product manufacturers to provide field surveillance of the installation of their products.

C. Monitor and report installation procedures and unacceptable conditions.

3.04 CLEANING

A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

B. Remove nonpermanent labels immediately after glazing installation is complete.

C. Clean glass and adjacent surfaces after sealants are fully cured.

D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.05 PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION

SECTION 090561
COMMON WORK RESULTS FOR FLOORING PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
   1. Resilient tile and sheet.
   2. Carpet tile.
   3. Thin-set ceramic tile and stone tile.

B. Removal of existing floor coverings.

C. Preparation of new and existing concrete floor slabs for installation of floor coverings.

D. Testing of concrete floor slabs for moisture and alkalinity (pH).

E. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
   1. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued.

F. Patching compound.

G. Remedial floor coatings.

1.02 RELATED REQUIREMENTS

A. Section 033000 - Cast-in-Place Concrete: Concrete admixture for slabs to receive adhered flooring, to prevent moisture content-related flooring failures.

1.03 REFERENCE STANDARDS

A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2023.

B. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.

C. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.05 QUALITY ASSURANCE

A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor.

B. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
   1. Submit evidence of experience consisting of at least 3 test reports of the type required, with project Owner's project contact information.

C. Contractor's Responsibility Relating to Independent Agency Testing:
   1. Provide access for and cooperate with testing agency.
   2. Confirm date of start of testing at least 10 days prior to actual start.
   3. Allow at least 4 business days on site for testing agency activities.
   4. Achieve and maintain specified ambient conditions.
   5. Notify Owner when specified ambient conditions have been achieved and when testing will start.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.

B. Deliver materials in manufacturer's packaging; include installation instructions.

C. Keep materials from freezing.

1.07 FIELD CONDITIONS

A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F.

B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS

2.01 MATERIALS

A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:

1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.

B. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.

C. Remedial Floor Coating, Two-Component: Single-layer or multi-layer coating / overlay combination intended by its manufacturer to resist water vapor transmission meeting flooring manufacturer's emission limits, resistant to alkalinity (pH) level found, and suitable for flooring adhesion without further treatment.

1. Thickness: 1/8 inch, maximum.
2. Use product recommended by testing agency.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

A. Follow recommendations of testing agency.

B. Remediations:

1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating or remedial sheet membrane over entire suspect floor area.
3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

3.02 REMOVAL OF EXISTING FLOOR COVERINGS

A. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering being removed.

B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.03 PRELIMINARY CLEANING

A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.

B. Do not use solvents or other chemicals for cleaning.

3.04 PREPARATION

A. See individual floor covering section(s) for additional requirements.

B. Comply with requirements and recommendations of floor covering manufacturer.

C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.

D. Do not fill expansion joints, isolation joints, or other moving joints.

3.05 ADHESIVE BOND AND COMPATIBILITY TESTING

A. Comply with requirements and recommendations of floor covering manufacturer.

3.06 APPLICATION OF REMEDIAL FLOOR COATING

A. Comply with requirements and recommendations of coating manufacturer.

3.07 PROTECTION

A. Cover prepared floors with building paper or other durable covering.

END OF SECTION

SECTION 092116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Performance criteria for gypsum board assemblies.

B. Metal stud wall framing.

C. Metal channel ceiling framing.

D. Acoustic insulation.

E. Cementitious backing board.

F. Gypsum wallboard.

G. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

A. Section 061000 - Rough Carpentry: Building framing and sheathing.

B. Section 061000 - Rough Carpentry: Wood blocking product and execution requirements.

C. Section 072100 - Thermal Insulation: Acoustic insulation.

D. Section 072500 - Weather Barriers: Water-resistive barrier over sheathing.

E. Section 078400 - Firestopping: Top-of-wall assemblies at fire-resistance-rated walls.

F. Section 079200 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

G. Section 092216 - Non-Structural Metal Framing.

H. Section 093000 - Tiling: Tile backing board.

I. Section 102613 Wall and corner guards: Corner Guards

1.03 REFERENCE STANDARDS

A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2020).

B. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.

C. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).

D. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2023.

E. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2023.

F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

G. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.

H. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020.

I. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).

J. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).

K. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.

L. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.

M. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.

N. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.

O. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2018.

P. ASTM C1325 - Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units; 2022, with Editorial Revision (2023).

Q. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.

R. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.

S. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

T. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.

U. ASTM E413 - Classification for Rating Sound Insulation; 2022.

V. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems; 2015 (Reapproved 2019).

W. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.

X. GA-600 - Fire Resistance and Sound Control Design Manual; 2024.

Y. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

Z. UL (DIR) - Online Certifications Directory; Current Edition.

AA. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data:
   1. Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

C. Shop Drawings: Indicate special details associated with fireproofing and acoustic seals.

1.05 QUALITY ASSURANCE

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

C. Standards
   1. Comply with recommendations of Gypsum Construction Handbook, as published by U.S. Gypsum Company, unless noted otherwise by this section.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store gypsum products and accessories indoors and keep above freezing. Elevate boards above floor, on nonwicking supports, in accordance with manufacturer's recommendations.

1.07 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Shaft Walls at HVAC Shafts: Provide completed assemblies with the following characteristics:
   1. Air Pressure Within Shaft: Sustained loads of 5 lbf/sq ft with maximum mid-span deflection of L/240.
   2. Acoustic Attenuation: STC of 35-39 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

C. Fire-Resistance-Rated Assemblies: Provide completed assemblies with the following characteristics:
   1. Fire-Resistance-Rated Partitions: UL listed assembly No. U419; 30-minute rating.
   2. Fire-Resistance-Rated Shaft Walls: UL listed assembly No. U415; 01 hour rating.
   3. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL (FRD).

2.02 METAL FRAMING MATERIALS

A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.

B. Manufacturers - Metal Framing, Connectors, and Accessories:
   1. ClarkDietrich: www.clarkdietrich.com/#sle.
   2. Substitutions: See Section 016000 - Product Requirements.

C. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.
   1. Studs: C-shaped with knurled or embossed faces.
   2. Runners: U shaped, sized to match studs.
   3. Ceiling Channels: C-shaped.
   4. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch.

D. Shaft Wall Studs and Accessories: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 and specified performance requirements.
   1. Products:
      a. Same manufacturer as other framing materials.

E. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection and prevent rotation of studs while maintaining structural performance of partition.

1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
3. Provide components UL-listed for use in UL-listed fire-resistance-rated head of partition joint systems of fire rating and movement required.
4. Provide mechanical anchorage devices as described above that accommodate deflection while maintaining the fire-resistance rating of the wall assembly.
    a. Products:
        1) ClarkDietrich; BlazeFrame RipTrak: www.clarkdietrich.com/#sle.
        2) FireTrak Corporation; Posi Klip: www.fire-trak.com/#sle.
        3) Metal-Lite, Inc; The System: www.metal-lite.net/#sle.
        4) Substitutions: See Section 016000 - Product Requirements.
5. Provide top track preassembled with connection devices spaced to fit stud spacing indicated on drawings; minimum track length of 12 feet.

2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:
1. American Gypsum Company: www.americangypsum.com/#sle.
2. CertainTeed Corporation: www.certainteed.com/#sle.
3. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.
4. USG Corporation: www.usg.com/#sle.
5. Substitutions: See Section 016000 - Product Requirements.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
    a. Mold resistant board is required areas that will have a high amount of mositure.
3. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
4. Thickness:
    a. Vertical Surfaces: 5/8 inch.
    b. Ceilings: 5/8 inch.
    c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
5. Mold-Resistant, Paper-Faced Products:
6. Glass Mat Faced Products:

C. Impact Resistant Wallboard:
1. Application: High-traffic areas indicated.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. Type: Fire-resistance-rated Type X, UL or WH listed.
4. Thickness: 5/8 inch.
5. Edges: Tapered.

D. Backing Board For Wet Areas: One of the following products:
1. Application: Surfaces behind tile in wet areas, including plumbing walls in restrooms.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
    a. Thickness: 1/2 inch.
    b. Products:
        1) Custom Building Products: www.custombuildingproducts.com/#sle.

2) PermaBASE Building Products, LLC provided by National Gypsum Company; PermaBase Cement Board: www.goldbondbuilding.com/#sle.
3) USG Corporation; Fiberock Brand Aqua-Tough AR Interior Panels Regular 1/2 in. (12.7 mm): www.usg.com/#sle.
4) Substitutions: See Section 016000 - Product Requirements.

4. Glass Mat Faced Board: Coated glass mat water-resistant gypsum backing panel as defined in ASTM C1178/C1178M.
   a. Regular Type: Thickness 1/2 inch.
   b. Fire-Resistance-Rated Type: Type X core, thickness 5/8 inch.
   c. Products:
      1) Georgia-Pacific Gypsum; DensShield Tile Backer: www.gpgypsum.com/#sle.
      2) Gold Bond Building Products, LLC provided by National Gypsum Company; Gold Bond eXP Fire-Shield Tile Backer: www.goldbondbuilding.com/#sle.
      3) Substitutions: See Section 016000 - Product Requirements.

E. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
   1. Application: Vertical surfaces behind thinset tile, except in wet areas.
   2. Type X Thickness: 5/8 inch.
   3. Edges: Tapered.

F. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Ceilings, unless otherwise indicated.
   2. Thickness: 5/8 inch.
   3. Edges: Tapered.

G. Shaftwall and Coreboard: Type X; 1 inch thick by 24 inches wide, beveled long edges, ends square cut.
   1. Paper-Faced Type: Gypsum shaftliner board or gypsum coreboard as defined ASTM C1396/C1396M; water-resistant faces.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   3. Paper-Faced Products:
      a. CertainTeed Corporation; M2Tech Type X Shaftliner: www.certainteed.com/#sle.
      b. Georgia-Pacific Gypsum; ToughRock Shaftliner: www.gpgypsum.com/#sle.
      c. Substitutions: See Section 016000 - Product Requirements.
   4. Framing: Gypsum Liner Panels attach to metal framing; CH studs. Refer to product data sheet for additional information.

2.04 GYPSUM BOARD ACCESSORIES

A. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.

B. Water-Resistive Barrier: See Section 072500.

C. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
   1. Corner Beads: Low profile, for 90 degree outside corners.
      a. Products:
         1) ClarkDietrich; Strait-Flex OS-300: www.clarkdietrich.com/#sle.
         2) Substitutions: See Section 016000 - Product Requirements.
   2. Expansion Joints:
      a. Type: V-shaped PVC with tear away fins.

D. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

E. Adhesive for Attachment to Wood, ASTM C557 and Metal:

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 SHAFT WALL INSTALLATION

A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.
   1. Install studs at spacing required to meet performance requirements.

B. Shaft Wall Liner: Cut panels to accurate dimensions and install sequentially between special friction studs.

3.03 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C1007AISI S220 and manufacturer's instructions.

B. Studs: Space studs at 24 inches on center.
   1. Extend partition framing to structure where indicated and to ceiling in other locations.
   2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
   3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.

C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

D. Standard Wall Furring: Install at concrete walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.

E. Blocking: Install wood blocking for support of:
   1. Framed openings.
   2. Wall-mounted cabinets.
   3. Plumbing fixtures.
   4. Toilet partitions.
   5. Toilet accessories.
   6. Wall-mounted door hardware.
   7. As indicated otherwise in specification and on drawings.

3.04 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
   1. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.05 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

D. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

E. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of nonrated double-layer assemblies, which may be installed by means of adhesive lamination.

3.06 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.

B. Corner Beads: Install at external corners, using longest practical lengths.

3.07 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   2. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.

3.08 CLEANING

A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

END OF SECTION

SECTION 093000
TILING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Tile for floor applications.

B. Tile for wall applications.

C. Tile for counters.

D. Ceramic accessories.

E. Ceramic trim.

F. Non-ceramic trim.

1.02 RELATED REQUIREMENTS

A. Section 079200 - Joint Sealants: Sealing joints between tile work and adjacent construction and fixtures.

B. Section 079513 - Expansion Joint Cover Assemblies: Expansion joint components.

C. Section 092116 - Gypsum Board Assemblies: Tile backer board.

D. Section 224000 - Plumbing Fixtures: Shower receptor.

1.03 REFERENCE STANDARDS

A. ANSI A108/A118/A136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2024.

B. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2023.

C. ANSI A118.6 - American National Standard Specifications for Standard Cement Grouts for Tile Installation; 2019.

D. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2019.

E. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2023.

F. ANSI A118.10 - American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2023.

G. ANSI A118.12 - American National Standard Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2014 (Reaffirmed 2024).

H. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 2022.

I. ANSI A326.3 - American National Standard Test Method for Measuring Dynamic Coefficient of Friction of Hard Surface Flooring Materials; 2021.

J. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018 (Reapproved 2023).

K. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

L. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

M. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

N. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2025.

O. TCNA (HB-GP) - Handbook for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs Installation; 2023.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

D. Samples: Mount tile and apply grout on two plywood panels, minimum 18 by 18 inches in size illustrating pattern, color variations, and grout joint size variations.

E. Certificate: Certify products of this section meet or exceed specified requirements.

F. Master Grade Certificate: Submit for each type of tile, signed by the tile manufacturer and tile installer.

G. Installer's qualification statement.
   1. Submit documentation of National Tile Contractors Association (NTCA) or Tile Contractors' Association of America (TCAA) accreditation; www.tile-assn.com/#sle

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum five years of documented experience.

B. Installer Qualifications:
   1. Installer Certification:

1.06 DELIVERY, STORAGE, AND HANDLING

A. See Section 017419 - Construction Waste Management and Disposal for packaging waste requirements.

B. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not install solvent-based products in an unventilated environment.

B. Maintain ambient and substrate temperature above 50 degrees F and below 100 degrees F during installation and curing of setting materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Tile:
   1. Dal-Tile Corporation: www.daltile.com/#sle.
   2. Platform Surfaces.
   3. Substitutions: See Section 016000 - Product Requirements.

B. Grout:
   1. Per Manufacturers Recommendation.
   2. Substitutions: See Section 016000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Floor Tile: Provide tile for flooring applications with minimum wet Dynamic Coefficient of Friction (DCOF) of 0.42 when tested in accordance with ANSI A326.3.

2.03 TILE

A. Ceramic Tile-1:
   1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
   2. Size: 4 by 12 inch, nominal.

3. Shape: Rectangle.
4. Edges: Square.
5. Color: As indicated on drawings.
6. Pattern: As indicated on drawings.
7. Products:
    a. Dal-Tile Corporation; As indicated on drawings: www.daltile.com/#sle.

B. Porcllain Tile-3 & Tile 4:
1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
2. Size: 18 by 36 inch, nominal.
3. Color: As indicated on drawings.
4. Pattern: As indicated on drawings.
5. Products:
    a. Dal-Tile Corporation; As indicated on drawings: www.daltile.com/#sle.

C. Porcelain Tile-2-:
1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
2. Size: 12 by 24 inch, nominal.
3. Thickness: 3/8 inch.
4. Color: As indicated on drawings.
5. Pattern: As indicated on drawings.
6. Products:
    a. As indicated on drawings.

2.04 TRIM AND ACCESSORIES

A. Ceramic Accessories: Glazed finish, same color and finish as adjacent field tile; same manufacturer as tile.

B. Ceramic Trim: Matching cove base ceramic shapes in sizes coordinated with field tile.
1. Manufacturers: Same as for tile.

2.05 GROUTS

A. Provide setting and grout materials from same manufacturer.

B. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
1. Applications: Use where indicated on drawings over existing terrazzo flooring.
2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
3. Color: As indicated on drawings.
4. Products:
    a. Mapei Corporation; As indicated on drawings: www.mapei.com/#sle.

C. Standard Grout: ANSI A118.6 standard cement grout.
1. Applications: Use where indicated on drawings over concrete flooring.
2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
3. Color: As indicated on drawings.
4. Products:
    a. Mapei Corporation; As indicated on drawings: www.mapei.com/#sle.

2.06 MAINTENANCE MATERIALS

A. Tile Sealant: See Section 079200.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive tile.

B. Verify wall surfaces are smooth and flat within tolerances specified for that type of work, are dust-free, and are ready to receive tile.

C. Verify that subfloor surfaces are dust free and free of substances that could impair bonding of setting materials to subfloor surfaces.

D. Cementitious Subfloor Surfaces: Verify that substrates are ready for tiling installation by testing for moisture and alkalinity (pH).
   1. Test in accordance with Section 090561.
   2. Test as Follows:
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   3. Obtain instructions if test results are not within limits recommended by tiling material manufacturer and setting material manufacturer.

3.02 PREPARATION

A. Vacuum clean surfaces and damp clean.

B. Seal substrate surface cracks with filler.

3.03 INSTALLATION - GENERAL

A. Install tile and grout in accordance with applicable requirements of ANSI A108/A118/A136, manufacturer's instructions, and TCNA (HB) or TCNA (HB-GP) recommendations, as applicable.

B. Lay tile to pattern indicated on drawings. Do not interrupt tile pattern through openings.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

E. Form internal angles square and external angles bullnosed.

F. Install ceramic accessories rigidly in prepared openings.

G. Keep control and expansion joints free of mortar, grout, and adhesive.

H. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

I. Grout tile joints unless otherwise indicated on drawings. Use standard grout unless otherwise indicated on drawings.

J. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

3.04 INSTALLATION - WALL TILE

A. Over cementitious backer units on studs, install in accordance with TCNA (HB) Method W244C, using membrane at toilet rooms, kitchens, locker rooms, and _____.

3.05 CLEANING

A. Clean tile and grout surfaces.

3.06 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION

SECTION 095100
ACOUSTICAL CEILINGS - TECTUM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Acoustical units.

1.02 REFERENCE STANDARDS

A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

B. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2023.

C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

E. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.

F. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.

G. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

H. UL (FRD) - Fire Resistance Directory; Current Edition.

I. ICC International Building Code

J. ASHRAE Standard 62.1-2024, "Ventilation for Acceptance Indoor Air Quality"

K. NFPA 70 National Electrical Code

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning.

C. Product Data: Provide data on suspension system components and acoustical units.

D. Samples: Submit two samples 24 by 24 inch in size illustrating material and finish of acoustical units.

E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.

1.04 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.

B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate UL markings.
   1. Surface Burning Characteristics: Tested per ASTM E 84 (face material and furring) and complying with ASTM E 1264 Classification.

C. Tectum Finale™ PB panels, as with other architectural features located at the ceiling, may obstruct, or skew the planned fire sprinkler water distribution pattern through possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems

D. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.05 DELIVEREKY, STORAGE AND HANDLING

A. . Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

D. Provide labels indicating brand name, style, size, and thickness

1.06 FIELD CONDITIONS

A. Enviromental Requirements
   1. Do not install ceiling panels until building is closed in and HVAC system is operational.
   2. Locate materials onsite at least 72 hours before beginning installation to allow materials to reach temperature and moisture content equilibrium.

B. Maintain uniform temperature of minimum 32-120 degrees F, and maximum humidity of 25 percent prior to, during, and after acoustical unit installation.

1.07 WARRENTY

A. Tectum Finale™ PB Ceiling and Wall Panels: Submit a written warranty executed by the manufacturer agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:
   1. Defects in materials or factory workmanship

B. Tectum Finale™ PB Ceiling and Wall Panels Warranty: Thirty (30) years from date of substantial completion

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acoustic Tiles/Panels:
   1. Armstrong World Industries, Inc: www.armstrongceilings.com/#sle.
      a. As indicated on drawings

B. Suspension Systems:
   1. Armstrong World Industries, Inc: www.armstrongceilings.com/#sle.

2.02 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Rating: Determined in accordance with test procedures in ASTM E119 and complying with the following:

2.03 ACOUSTICAL UNITS

A. Acoustical Units - General: ASTM E1264, Class A.

B. Acoustical Panels: Painted mineral fiber, with the following characteristics:

C. Acoustical Panels: Aspen wood fibers bonded with inorganic hydraulic cement
   1. Application(s): As indicated on drawings.
   2. Classification: ASTM E1264 Type III.
   3. Size: 24 by 48 inches.
   4. Thickness: 2 inch.

5. FInish: Surface appearance shall be consistent from panel to panel. Factory-applied latex paint with Sodium Silicate surface coating for abuse resistance. Natural (TNA) finish is unpainted
6. Panel Edge: Square.
7. Suspension System: Exposed grid.
8. Products:
    a. Armstrong World Industries, Inc: www.armstrongceilings.com/
        1) #8 x 3” Painted Head – Sharp Point Screw (Item 8187L30 TNA)

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

C. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations.

3.02 PREPARATION

A. Install after major above-ceiling work is complete.

B. Coordinate the location of hangers with other work.
1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

C. Measure each ceiling and/or wall area and establish layout of acoustical units. Coordinate panel layout with mechanical and electrical fixtures.

3.03 INSTALLATION - SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.

B. For high humidity installations, use 3/4" pressure treated wood furring strips to maintain an air gap between structure and back of Tectum Finale PB panels.

C. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

H. Do not eccentrically load system or induce rotation of runners.

3.04 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

E. Cutting Acoustical Units:

1. Make field cut edges of same profile as factory edges.

3.05 CLEANING

A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

B. Clean exposed surfaces of acoustical ceilings including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove any Tectum

C. Cleaning and Disinfecting Guidelines
   1. Tectum Finale™ PB Panels are part of the Armstrong World Industries CleanAssure™ Family of Products. The CleanAssure family of products includes panels, suspension systems, and trim that can be disinfected using CDC recommended and EPA-approved disinfectants. Due to the potential impact on the finish, please follow the specific guidance below:
      a. It is recommended that only clear cleaners be used, as dyed liquids can permanently discolor the finish of the ceiling tiles.
      b. Cleaning is only recommended for the finished face of the board.
      c. The panels should never be soaked in water or other liquids, as this can have an adverse effect on board integrity. Use the safety recommendations for gloves and eye protection that are given by the manufacturer of the cleaner and cleaning equipment.

D. Tectum Finale™ PB panels have been tested using the "Fog" disinfectant method; using Diversey™ – Morning Mist™ Neutral Disinfectant Cleaner - Diluted 2oz per gallon

E. Disinfectant Method – FOG
   1. Use the equipment manufacturer's instructions regarding distance from the surface, protective gear, and ventilation.
   2. If another cleaner has been used in the fogging equipment, be sure to thoroughly clean the equipment before use to avoid potential contamination of the board surface with a non-compatible or staining cleaner.
   3. Remove any obvious dirt before evenly applying cleaner.
   4. Wipe dry with a clean, white microfiber cloth. Alternatively, the board may be air dried.

F. Disclaimer: Cleaning conditions and aesthetics may be impacted by additional site conditions. These instructions pertain only to the maintenance of the aesthetics and integrity of Armstrong Ceiling Solutions products. Please consult the manufacturer's instructions and guidance regarding any cleaning product or disinfectant product for use and efficacy.

G. Replace damaged or abraded components.

END OF SECTION

SECTION 095113
ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Suspended metal grid ceiling systems.

B. Acoustical units.

1.02 REFERENCE STANDARDS

A. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2019.

B. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.

C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

E. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.

F. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

G. UL (FRD) - Fire Resistance Directory; Current Edition.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate work of this section with installation of mechanical and electrical components and with other construction activities affected by work of this section.

B. Sequencing: Schedule work of affected trades to minimize or eliminate installation conflicts and rework.

1. Ensure that acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved. Do not install acoustical units until after interior wet work is dry.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning.

C. Samples: Two samples 12 by 12 inches in size indicating material and finish of acoustical units.

1.05 QUALITY ASSURANCE

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

B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent before, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 CEILING ASSEMBLIES

A. Acoustical Ceiling Assembly Type LAT-1:

1. Acoustical Units: .
   a. Panel Size: 24 inches by 24 inches (2 by 2) panel.
   b. Panel Edge: As indicated on drawings edge.

c. Color: As indicated on drawings.
2. Suspension Grid: 'T' Shaped 15/16" wide face.

B. Acoustical Ceiling Assembly Type LAT-2:
1. Acoustical Units: , Item No. _____.
a. Panel Size: 24 inches by 24 inches (2 by 2) panel.
b. Panel Edge: As indicated on drawings edge.
c. Color: As indicated on drawings.
2. Suspension Grid: 'T' Shaped 15/16" wide face.

C. Acoustical Ceiling Assembly Type LAT-3:
1. Acoustical Units: Clean Room (Unperforated) 5/8" Class 100.
a. Panel Size: 24 inches by 48 inches (2 by 4) panel.
b. Panel Edge: SQ edge.
c. Color: As indicated on drawings.
2. Suspension Grid: 'T' Shaped 15/16" wide face.
a. Color: As indicated on drawings.

2.02 CEILING PERFORMANCE REQUIREMENTS

A. Design for maximum deflection of 1/360 of span.

2.03 CEILING COMPONENT PRODUCTS

A. Acoustical Units:
1. Acoustical Units - General: ASTM E1264, Fire Class A.
a. Noise Reduction Coefficient (NRC) rating, Ceiling Attenuation Class (CAC) rating, and Light Reflectance Coefficient (LR) performance for each type of unit specified below, as determined in accordance with ASTM E1264.
b. Fire Class / Surface Burning Characteristics: Determined in accordance with test method ASTM E84.
2. Acoustical Panels: Mineral fiber with membrane-faced overlay, with the following characteristics:
a. Application(s): Kitchen.
b. Classification: ASTM E1264 Type IV.
c. Thickness: As applicable to each product specified.
d. Products:
1) Armstrong World Industries.

B. Suspension Systems:
1. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with wall angles and moldings as required.

C. Moldings and Trim:
1. Edge Molding, Expansion Joints, and Splices - General: Same material, thickness, and finish as metal pan panels, unless otherwise indicated.
2. Perimeter Wall Moldings: Same metal and finish as grid.
a. Size: As required for installation conditions.
b. Acoustical Sealant For Perimeter Moldings: Nonhardening, nonskinning, for use in conjunction with suspended ceiling system.
3. Trim Accessories: Manufacturer's standard clips, cleats splice plates, extension plates, closure plates, corner pieces, and similar accessories required for a complete installation.

2.04 ACCESSORIES

A. Support Channels, Carriers, and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.

B. Suspension Wire: Size and type as required for application, seismic requirements, and ceiling system flatness requirement specified.
1. Concealed Suspension:

a. Suspension Wire: Steel, annealed, galvanized finish, 12 gauge, 0.0808 diameter, complying with ASTM A641/A641M.

C. Touch-Up Paint for Exposed Surfaces: Type and color to match acoustical units and suspension system grid and trim elements.

D. Touch-Up Paint For Concealed Items: Zinc rich type, as recommended by ceiling system manufacturer.

2.05 FABRICATION

A. Shop fabricate ceiling components to the greatest extent possible.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

C. Verify that field measurements are as indicated on shop drawings.

D. Start of installation constitutes acceptance of project conditions.

3.02 PREPARATION

A. Coordinate the location of hangers with other work.

B. Install ceiling system after major above-ceiling work is complete.

3.03 INSTALLATION - SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C636/C636M and manufacturer's instructions and as supplemented in this section.

B. Install hangers and inserts coordinated with overhead work. Provide additional hangers and supports as required.

C. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

D. Locate system on room axis according to reflected ceiling plan.

E. Suspension System, Nonseismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

F. Where ducts, facility services, or equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

I. Do not eccentrically load system or induce rotation of runners.

J. Form expansion joints as detailed. Form to accommodate plus or minus 1 inch movement. Maintain visual closure.

K. Edge Moldings: Install at intersection of ceiling and vertical surfaces and penetrations, using components of maximum length; set level. Provide edge moldings at junction with other ceiling finishes. Miter corners. Provide preformed edge closures to match bullnosed cornered partitions.

1. Use longest practical lengths.

3.04 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit edge trim neatly against abutting surfaces.

D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

E. Cutting Acoustical Units:
   1. Make field cut edges of same profile as factory edges.

F. Install hold-down clips on each acoustical unit to retain it tight to grid system; comply with fire rating requirements.

3.05 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: Two degrees.

3.06 CLEANING

A. Clean and touch up minor finish damage. Remove and replace components that cannot be successfully cleaned and repaired.

END OF SECTION

SECTION 095400
SPECIALTY CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Specialty ceiling panels and systems.

B. Suspended channel accents.

C. Metal suspension system.

1.02 RELATED REQUIREMENTS

A. Section 072100 - Thermal Insulation.

B. Section 092116 - Gypsum Board Assemblies: Gypsum board and metal framing products.

C. Section 095100 - Acoustical Ceilings - USG: Metal suspension systems.

1.03 REFERENCE STANDARDS

A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

B. ASTM A580/A580M - Standard Specification for Stainless Steel Wire; 2023.

C. ASTM A492 - Standard Specification for Stainless Steel Rope Wire; 1995 (Reapproved 2019).

D. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2019.

E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.

F. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.

G. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2023.

H. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

I. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.

J. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

1.04 SYSTEM DESCRIPTION

A. Continuous/Wall-to-Wall or Cloud installation

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning, attachment of specialty ceiling panels to grid, accessory attachments, junctions with other ceiling finishes, and mechanical and electrical items installed in the ceiling.

C. Product Data: Provide data on specialty ceiling components and suspension system components.

D. Samples: Two 6 by 6 inch samples illustrating material and finish of specialty ceiling components.

E. Test Reports: Certified test data from an independent test agency verifying that panels meet specified requirements for fire, acoustical, and seismic performance.

F. Manufacturer's qualification statement.

G. Installer's qualification statement.

1.06 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.

B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.

C. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 Classification.

D. Acoustical Panels: As with other architectural features located at the ceiling that may obstruct or skew the planned fire sprinkler pattern through possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems are present.

E. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers. AcoustiBuilt Panels are 7/8” thick.

F. AcoustiBuilt is finished to a level 4 drywall finish equivalent. Installing AcoustiBuilt requires special attention to finishing details. Light coves and low angle lighting will exaggerate imperfections. Mock-ups and hands-on training are strongly recommended.

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

H. Installer Qualifications: Company specializing in performing the work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages/crates and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes..

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content. Store all material within temperature limits required by manufacturer.

C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.08 FIELD CONDITIONS

A. Space Enclosure:

1. Building areas to receive ceilings shall be free of construction dust and debris. AcoustiBuilt panels should be installed in areas where the building is enclosed and the HVAC is continuously functioning. This product is not recommended for exterior applications, where standing water is present, or where moisture will come into direct contact with the ceiling.
    a. HVAC should be designed, installed, and operated in accordance with ASHRAE Standard 62.1. It is also necessary for the area to be enclosed, for the HVAC systems to be functioning, and in continuous operations for the life of the product. Product is not intended for use where natural ventilation is part of the ventilation strategy and not recommended in areas where a differential plenum pressure exists.

1.09 WARRANTY

A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:

1. Acoustical Panels: Manufacturer’s defects in material
2. Grid System: Rusting and manufacturer's defects
3. CastWorks Access Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period

B. Warranty Period:
   1. Acoustical panels: Ten (10) years from date of substantial completion
   2. Suspension: Ten (10) years from date of substantial completion
   3. CastWorks Architectural Forms: One (1) year from date of substantial completion

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

PART 2 PRODUCTS

2.01 MANUFACTURES

A. Basis of Design AcoustiBuilt Seamless Acoustical Ceiling System:
   1. Armstrong World Industries, Inc.

B. Finish:
   1. Joint Compound Finish by Others
   2. Spray Applied Finish by Armstrong World Industries, Inc.

C. Suspension Systems
   1. Armstrong World Industries, Inc.
   2.
   3. Armstrong World Industries, Inc.

D. Soffit Construction
   1. Armstrong World Industries, Inc. Drywall Grid SimpleSoffit™

2.02 SPECIALTY CEILING ASSEMBLIES

A. Refer to Room Finish Schedule and Reflected Ceiling Plans on drawings for additional ceiling assemblies information.

2.03 PERFORMANCE REQUIREMENTS:

A. Design for maximum deflection of 1/360 of span.

B. Design to support imposed loads of indicated elements without eccentric loading of supports. Where supported elements may induce rotation of ceiling system components, provide stabilizing reinforcement.

2.04 COMPONENT PRODUCTS

A. Panels:
   1. Surface Texture: Fine
   2. Composition: Mineral Fiber
   3. Color: White (Fine Texture Finish for AcoustiBuilt panels)
   4. Size:24 in x 48 in x 7/8 in
   5. Edge Profile: Tapered edges four sides
   6. Noise Reduction Coefficient (NRC): ASTM C 423; Panel 0.80 (UL)
   7. Ceiling Attenuation Class (CAC): ASTM C 1414; Panel 46 (UL), System up to 48
   8. Sabin: Cloud Applications: 0.80 Sabins/SF & 1.33 Sabins/SF with infill item 8200T10
   9. Flame Spread: ASTM E 1264; Class A
   10. Light Reflectance (LR) White Panel: ASTM E 1477; 0.87
   11. Dimensional Stability: HumiGuard Plus
   12. Recycle Content: Post-Consumer and Pre-Consumer – up to 75%
   13. Material Ingredient Transparency: Health Product Declaration (HPD); Declare Label
   14. Life Cycle Assessment: Third Party Certified Environment Product Declaration (EPD)
   15. Acceptable Product: AcoustiBuilt panels #2604 No added formaldehyde as manufactured by Armstrong World Industries
   16. Contact your local Armstrong Representative for required installation training at least 4-6 weeks before ordering materials and scheduling installation.

B.

1.
    a. Setting Compound: Lightweight setting-type drywall joint compound, Ultra lightweight drying-type drywall joint compound
    b. Joint Tape: Self-Adhesive mesh drywall joint tape (Panel to Panel)
        1) Use Setting Type Compound for initial coats and use Drying Type Compound for final coats per the installation instructions. DO NOT use any other type of drywall compound such as All-Purpose Compound.
        2) Paper tape at the wall intersection
    c. Spray Applied Finish – Required Product: #2605WH or 2605BL Fine Texture Finish for AcoustiBuilt panels – White as manufactured by Armstrong World Industries.

C. Suspension Systems:
1. Armstrong Drywall Suspension Systems all main beams and cross tees shall be commercial quality hot-dipped galvanized steel
    a. Main beam: manufactured main beam- 1-1/2" knurled face with ScrewStop™ reverse hem by 1-11/16 inches high. Drywall Main Beams are factory punched with cross tee routs, hanger wire holes, and SuperLock™ main beam clip for a strong secure connection and fast accurate alignment. Drywall Main Beams are Heavy-duty performance per ASTM C635
    b. HD8906 - 12ft HD Drywall Main Beam 1-1/2 in
2. Cross Tees: manufactured cross tee- 1-1/2" knurled face with ScrewStop™ reverse hem by 1-1/2 inches high with factory punched cross tee routs and hanger wire holes and XL stake on clip for a strong secure connection.
    a. XL8945P - 4ft Drywall Cross Tee
3. Wall Molding:
    a. KAM12 - 12ft Knurled Angle Molding 1-1/4" Face
4. Hanger wire: a Class 1 zinc coating, soft temper, pre-stretched, with a yield stress load of at least time three times the design load, but not less than 12-gauge.
5. Fasteners (for Panel attachment)
    a. #6 x 1-5/8” Fine thread drywall screws
    b. Recommended Adhesives: Loctite PL Premium Polyurethane Construction Adhesive, OSI F38 Drywall Panel Adhesive.
6. Perimeter Systems
    a. Commercial quality extruded aluminum alloy 6063 trim channel, factory finished in baked polyester paint. Commercial quality galvanized steel unfinished T-bar connection clips; galvanized steel splice plates.
        1) Color: White
        2) Size: 120 in X 4 in (also available in 6”)
        3) Recycle Content: Post-Consumer - 50% Pre-Consumer - 0%
        4) Acceptable Product: AXIOM One Piece for Drywall, 4in Straight – AX1PC4STR or Curved AX1PC4CUR as manufactured by Armstrong World Industries
    b. Axiom Trim Channel:
        1) AX4STR 4in Axiom Classic Straight.
        2) AX1PC4STR 4IN One –Piece Drywall Trim
    c. Axiom Bottom Trim with taping flange
        1) AXBTASTR – Bottom Trim for AcoustiBuilt
    d. Axiom Accessories:
        1) AXSPLICE - Splice Plate
7. CastWorks Access Panels for AcoustiBuilt
    a. Surface Texture: Standard unfinished, paint grade. Can be coated to achieve any desired color.
    b. Composition: Glass Fiber Reinforced Gypsum (GFRG/GRG)
    c. Colors: Paint Grade (CPG)
    d. Door Type: Lay-in

e. Door Shape: Squared Corners
f. Door Size: 9 in x 9 in, 12 in x 12 in, 16 in x 16 in, 18 in x 18 in, 24 in x 24 in, 22 in x 30 in (gasketed), 30 in x 30 in, 30 in x 30 in (gasketed)
g. Frame Thickness: 7/8 in
h. Design:
1) Squared Corners Lay-in 7/8" frame thickness:AS0300S02T7G0CPG, AS0300S04T7G0CPG, AS0300S05T7G0CPG

8. Material Ingredient Transparency: Health Product Declaration (HPD); Declare Label
9. Life Cycle Assessment: Third Party Certified Environmental Product Declaration (EPD)

2.05 ACCESSORIES

A. Perimeter Trim, Support Channels, Carriers, and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.

B. Suspension Wire: Size and type as required for application, seismic requirements, and ceiling system flatness requirement specified.
1. Concealed Suspension:
a. Suspension Wire: Steel, annealed, galvanized finish, 12 gage, 0.0808 diameter.

2.06 FABRICATION

A. Shop fabricate ceiling components to the greatest extent possible.

PART 3 EXECUTION

3.01 EXAMINATION

A. Prior to installation, contact your Armstrong Installation Systems Specialist (ISS). Before installation, inspect previous work of all other trades. Verify that all work is complete and accurate to the point where this installation may properly proceed in strict accordance with framing shop drawings.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. The system installation is similar to a conventional drywall installation. However, there are key differences in both material substrate and methods of finishing and installation that make this system unique. Installers should review and follow all written directions of the installation instructions and view the installation video.

D. Installation: In accordance with all approved plans, details, and manufacturer's installation guidelines located in the Armstrong AcoustiBuilt Assembly and Installation Instructions (BPLA-299099) Click to follow to AcoustiBuilt Installation Instructions, and Drywall Grid Systems Hanging and Framing Flat Ceilings Installation Guides (BPCS3539) Click to follow to Hanging and Framing Flat Drywall Instructions.

E. Install seismic components if required by the building code. Seismic components to be specified on the architectural plans by the project engineer or design team.

F. Suspend main beam from overhead construction with hanger wires spaced 4-0 ft. on center along the length of the main runner. Install hanger wires plumb and straight.

G. 48” Cross tees shall be installed 16” on center. Extra cross tees are required at 72” every 12’. All 4 panel edges must be supported by a grid main or tee.

H. Install wall moldings/perimeter trim at intersection of suspended ceiling and vertical surfaces

I. Main runners and cross tees shall be attached at perimeter conditions

J. When determining the grid layout, consider the long edges of the boards must run parallel with the mains.

K. This system relies on a square grid system to ensure panel edges align at centers of cross tees. If the installation does not meet these squareness requirements, the panel edges may run off the grid system.

L. The system must be square to within 1/8" over a 48" x 48" module.

M. The suspension system must be leveled to within 1/4" in 10'.

N. Floating perimeters must be trimmed with either Axiom® One-Piece Drywall Trim or Axiom® Classic with Bottom Trim for AcoustiBuilt™. Refer to the installation instructions for integration with AcoustiBuilt installations.

O. Install access doors where plenum access is required. Refer to the RCP for the location)

3.02 PREPARATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations.

B. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.

C. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.03 INSTALLATION - SUSPENSION SYSTEM

A. Follow manufacturer installation instructions. Armstrong AcoustiBuilt Assembly and Installation Instructions (BPLA-299099)

1. Control joints are required following the standards used for gypsum board listed in ASTM C840, Section 20
    a. Ceilings with perimeter relief cannot exceed 50 LF and 2500 SF between control joints
    b. Ceilings without perimeter relief cannot exceed 30 LF and 900 SF between control joints
2. Panel joints and fasteners are finished with tape and compound to create a flat surface. While the materials used to finish AcoustiBuilt panels are also used to finish drywall, the procedure has unique requirements.
3. Joint compound coverage shall be limited to preserve the acoustical performance of the panels. Compound at panel joints shall not exceed 8 inch widths. Compound applied to field fasteners shall not exceed 2 inch by 2-inch areas. All compound shall be smooth and free of tool marks and ridges. Panels are to be finished with taping knives. Production tools, including boxes, are detailed on the installation instructions.
4. Sanding and inspection: Throughout the sanding process, inspect the surface frequently for flatness. Direct a light across the ceiling to highlight unevenness that requires attention.
5. Fine Texture Finish shall be applied in 4-5 coat process (additional coat may be used to achieve the desired finish) as called out in the installation instructions. Fine Texture Finish for AcoustiBuilt is applied in multiple coats, layered to achieve a uniform appearance and acoustical performance. It is strongly encouraged to practice spraying to ensure proper calibration and technique are achieved. Refer to the installation video.
    a. AcoustiBuilt fine texture finish MUST be sprayed with a Graco Mark V texture system. This equipment properly atomizes the finish for acoustics and aesthetics. Fine texture finish is not intended for use with any other airless paint systems not recommended by Armstrong or to be applied by brush or rolling.
    b. See Manufactures installation instructions for correct spray tip, pressure settings for spray system, finish preparation, spray calibration and spray procedure and technique.

3.04 ADJUSTING AND CLEANING

A. To remove soot, dirt, and dust use a vacuum operating at low power with a soft brush or use a dry soot cleaning sponge.

B. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage.

END OF SECTION

SECTION 096500
RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resilient base.

B. Installation accessories.

1.02 RELATED REQUIREMENTS

A. Section 090561 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

1.03 REFERENCE STANDARDS

A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

B. ASTM F1861 - Standard Specification for Resilient Wall Base; 2021.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Shop Drawings: Indicate seaming plans and floor patterns.

D. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

E. Verification Samples: Submit two samples, 12 by 12 inch in size illustrating color and pattern for each resilient flooring product specified.

F. Installer's Qualification Statement.

G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.

B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.

C. Testing Agency Qualifications: Independent firm specializing in performing concrete slab moisture testing and inspections of the type specified in this section.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.

B. Store all materials off of the floor in an acclimatized, weather-tight space.

C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

1.07 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F,

B. Install resilient products after other finishing operations, including painting, have been completed.

1.08 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed.

PART 2 PRODUCTS

2.01 RESILIENT BASE

A. Resilient Base: ASTM F1861, Type TP, rubber, thermoplastic; style as scheduled.
   1. Manufacturers:
      a. Roppe Corporation; Contours Profiled Wall Base System: www.roppe.com/#sle.
   2. Height: 4 inches.
   3. Height: 6 inches
   4. Thickness: 0.125 inch.
   5. Length: Roll.
   6. Color: As indicated on drawings.

2.02 ACCESSORIES

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

B. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Prepare floor substrates for installation of flooring in accordance with Section 090561.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

3.04 INSTALLATION - RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.

B. Install base on solid backing. Bond tightly to wall and floor surfaces.

3.05 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

3.06 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

SECTION 096519
RESILIENT TILE FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resilient tile flooring.

B. Installation accessories.

1.02 RELATED REQUIREMENTS

A. Section 090561 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

B. Section 090561 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

1.03 REFERENCE STANDARDS

A. ASTM D6329 - Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers; 1998 (Reapproved 2023).

B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

C. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile; 2020.

D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

E. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

F. UL 2824 - GREENGUARD Certification Program Method for Measuring Microbial Resistance from Various Sources Using Static Environmental Chambers; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns, and colors available; and installation instructions.

C. Shop Drawings: Indicate floor patterns.

D. Verification Samples: Submit two samples, 12 by 12 inch in size illustrating color and pattern for each resilient flooring product specified. Using same designations on indicated on drawings.

E. Manufacturer's qualification statement.

F. Installer's qualification statement.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.

B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

1.07 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F, until substantial completion.

B. Install resilient products after other finishing operations, including painting, have been completed.

1.08 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed.

PART 2 PRODUCTS

2.01 RESILIENT TILE FLOORING

A. Vinyl Tile: Printed film type, with transparent or translucent wear layer; acoustic interlayer or backing.
   1. Manufacturers:
      a. Manufacturer: Patcraft
         1) Contact: Ryan Mortonr
         2) Email: ryan,morton@patcraft.com
         3) Phone: 616-260-6829
   2. Minimum Requirements: Comply with ASTM F1700, Class III.
   3. Mold and Microbial Resistance: Highly resistant when tested in accordance with ASTM D6329; certified in accordance with UL 2824.
   4. Plank Tile Size: 7.25 by 48 inches.
   5. Wear Layer Thickness: 020 mil
   6. Total Thickness: 020 mil.
   7. Pattern: Timber Grove II 20 Mil.
   8. Color: As indicated on drawings.

2.02 INSTALLATION ACCESSORIES

A. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
   1. Test as Follows:
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   2. Conduct tests by independent testing agency acceptable to Owner.
   3. Obtain instructions if test results are not within limits recommended by resilient flooring and adhesive material manufacturers.
   4. Follow moisture and alkalinity remediation procedures; see Section 090561.

C. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Prepare floor substrates for installation of flooring in accordance with Section 090561.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Adhesive-Applied Installation:
   1. Spread only enough adhesive to permit installation of materials before initial set.
   2. Fit joints and butt seams tightly.
   3. Set flooring in place; press with heavy roller to attain full adhesion.

D. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

E. Install flooring in recessed floor access covers, maintaining floor pattern.

F. At movable partitions, install flooring under partitions without interrupting floor pattern.

3.04 INSTALLATION - TILE

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Lay tile with joints parallel to building lines to produce symmetrical pattern.

C. Install square tile to ashlar pattern. Allow minimum 1/2 full-size tile width at room or area perimeter.

D. Install loose-laid tile; fit interlocking edges tightly.

E. Install plank tile with random offset of at least 6 inches from adjacent rows.

3.05 CLEANING

A. Remove excess adhesive from floor and wall surfaces without damage.

B. Clean, seal, and wax in accordance with manufacturer's written instructions.

END OF SECTION

SECTION 096813
TILE CARPETING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Carpet tile, fully adhered.

1.02 RELATED REQUIREMENTS

A. Section 090561 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

1.03 REFERENCE STANDARDS

A. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2016 (Reapproved 2021).

B. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

C. CRI 104 - Standard for Installation of Commercial Carpet; 2015.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.

C. Manufacturer's Qualification Statement.

D. Installer's Qualification Statement.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified carpet tile with minimum three years documented experience.

B. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.

1.06 FIELD CONDITIONS

A. Store materials in area of installation for minimum period of 24 hours prior to installation.

1.07 WARRANTY

A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
   1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
   2. Failures include, but are not limited to, more than 10 percent edge raveling, snags, runs, dimensional stability, excess static discharge, loss of tuft bind strength, loss of face fiber, and delamination.
   3. Warranty Period: 10 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Tile Carpeting:
   1. Mannington Commercial; As indicated on drawings: www.manningtoncommercial.com

2.02 MATERIALS

A. Tile Carpeting: Textured Patterned Loop, manufactured in one color dye lot.
   1. Product: CPT-1 manufactured by Mannington.
   2. Tile Size: 24 by 24 inch, nominal.
   3. Thickness: ____ inch.
   4. Color: As indicated on drawings.
   5. Surface Flammability Ignition: Pass ASTM D2859 (the "pill test").

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).
   1. Conduct tests by an independent testing agency acceptable to Owner.
      a. See Section 090561.
   2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

3.03 INSTALLATION

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install carpet tile in accordance with manufacturer's instructions.

C. Blend carpet from different cartons to ensure minimal variation in color match.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.

F. Trim carpet tile neatly at walls and around interruptions.

G. Complete installation of edge strips, concealing exposed edges.

3.04 CLEANING

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

END OF SECTION

SECTION 099123
INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

D. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
   5. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, and lead items.
   6. Marble, granite, slate, and other natural stones.
   7. Floors, unless specifically indicated.
   8. Ceramic and other tiles.
   9. Brick, architectural concrete, cast stone, integrally colored plaster, and stucco.
   10. Glass.
   11. Glazed block
   12. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

A. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating; 2023.

B. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

C. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

D. SSPC-SP 6/NACE No.3 - Commercial Blast Cleaning; 2006.

E. SSPC-SP 13/NACE No.6 - Surface Preparation of Concrete; 2018.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
   1. Where sheen is specified, submit samples in only that sheen.
   2. Where sheen is not specified, submit each color in each sheen available.
   3. Allow 30 days for approval process, after receipt of complete samples by Architect.
   4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.

C. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

D. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Paint and Finish Materials: 1 gal of each color; from the same product run, store where directed.
   3. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum three years experience and approved by manufacturer.

1.05 MOCK-UP

A. See Section 014000 - Quality Requirements, for general requirements for mock-up.

B. Locate where directed by Architect.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. 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.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.

D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 fc measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes from manufactures as indicated on drawings.

B. Paints:
   1. Sherwin-Williams Company: www.sherwin-williams.com/
   2. Benjamin Moore. www.benjaminmoore.com

C. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Supply each paint material in quantity required to complete entire project's work from a single production run.
   3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Flammability: Comply with applicable code for surface burning characteristics.

C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

D. Colors: As indicated on drawings.
   1. Selection to be made by Architect after award of contract.

2.03 PAINT SYSTEMS - INTERIOR

A. PT-1 through PT-6 Interior Surfaces to be Painted, Unless Otherwise Indicated: As indicated on drawings.
   1. Two top coats and one coat primer.
   2. Top Coat(s): High Performance Architectural Interior Latex.

B. PT-7 Interior Surfaces to be Painted: As indicated on drawings
   1. Two top coats and one coat primer:
      a. Products:
         1) As indicated on drawings.

2.04 PRIMERS

A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

C. Test shop-applied primer for compatibility with subsequent cover materials.

D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
   1. Gypsum Wallboard: 12 percent.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

F. Acoustical Panel Ceilings:

G. Concrete:
   1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
   2. Clean surfaces with pressurized water. Use pressure range of 1,500 to 4,000 psi at 6 to 12 inches. Allow to dry.
   3. Clean concrete according to ASTM D4258. Allow to dry.
   4. Prepare surface as recommended by top coat manufacturer and in accordance with SSPC-SP 13/NACE No.6.

H. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

I. Ferrous Metal:
   1. Solvent clean according to SSPC-SP 1.
   2. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning in accordance with SSPC-SP 6/NACE No.3. Protect from corrosion until coated.

3.03 APPLICATION

A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

E. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

A. See Section 014000 - Quality Requirements, for general requirements for field inspection.

3.05 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.06 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 099300
STAINING AND TRANSPARENT FINISHING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Field application of stains.

1.02 RELATED REQUIREMENTS

A. Section 099123 - Interior Painting: Stains and transparent finishes for concrete substrates.

1.03 DEFINITIONS

A. Comply with ASTM D16 for interpretation of terms used in this section.

1.04 REFERENCE STANDARDS

A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.

B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.

C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

D. SCAQMD 1113 - Architectural Coatings; 1977, with Amendment (2016).

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and catalog number, and general product category.

C. Samples: Two samples on actual wood substrate to be finished, 3 by 12 inch in size, indicating selected colors and sheens for each system, with specified coats cascaded.

D. Manufacturer's Instructions: Indicate special surface preparation procedures.

E. Manufacturer's Qualification Statement.

F. Applicator's Qualification Statement.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with at least three years of documented experience.

B. Applicator Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of stain or transparent finish, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Stain and Transparent Finish Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.08 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by manufacturer of stains and transparent finishes.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.

D. Minimum Application Temperature: 50 degrees F unless required otherwise by manufacturer's instructions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Transparent Finishes:
   1. To match existing on site..

B. Stains:
   1. To match existing stains on site.

2.02 STAINS AND TRANSPARENT FINISHES - GENERAL

A. Finishes:
   1. Provide finishes capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Provide materials compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
   3. Supply each finish material in quantity required to complete entire project's work from a single production run.
   4. Do not reduce, thin, or dilute finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
   5. Contractor to make sure the stain and transparent, match as close as possible to the existing.

B. Flammability: Comply with applicable code for surface burning characteristics.

C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

D. Colors: As indicated on drawings.

2.03 INTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS

A. Finish on Wood:
   1. 2-coat varnish over 3-coat stain.
   2. Stain: Semi-transparent stain for wood, solvent based.
      a. Products:
         1) To match existing as close as possible.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin application of stains and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or repair existing finishes that exhibit surface defects.

D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

E. Seal surfaces that might cause bleed through or staining of topcoat.

F. Wood Surfaces to Receive Opaque 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. Back prime concealed surfaces before installation.

G. Wood Surfaces 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. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

H. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.

3.03 APPLICATION

A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

D. Sand wood surfaces lightly between coats to achieve required finish.

E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

F. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

G. Reinstall items removed prior to finishing.

3.04 FIELD QUALITY CONTROL

A. See Section 014000 - Quality Requirements for general requirements for field inspection.

3.05 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.06 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 099723
CONCRETE AND MASONRY COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Moisture resistant textured concrete and masonry coatings.

1.02 REFERENCE STANDARDS

A. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus; 2019.

B. ASTM D522/D522M - Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings; 2017 (Reapproved 2021).

C. ASTM D968 - Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive; 2022.

D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

E. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.

F. ASTM G153 - Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials; 2013 (Reapproved 2021).

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

1.04 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section with minimum 10 years documented experience.

1.05 FIELD CONDITIONS

A. Do not install materials when temperature is below 55 degrees F or above 90 degrees F.

B. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.

C. Restrict traffic from area where coating is being applied or is curing.

1.06 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Correct defective Work within a five year period after Date of Substantial Completion.

C. Warranty: Include coverage for bond to substrate.

PART 2 PRODUCTS

2.01 CONCRETE AND MASONRY COATINGS

A. Provide high-build, weather resistant coating systems that meet the following minimum performance criteria, unless more stringent criteria are specified:
   1. Salt Spray Resistance: Passes when tested according to ASTM B117 for 2000 hours.
   2. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0, maximum, when tested in accordance with ASTM E84.
   3. Accelerated Outdoor Exposure: Passes when tested according to ASTM G153 for 5,000 hours.

2.02 MATERIALS

A. Coatings - General: Provide complete systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated.

B. High Build, One Coat, Water Based Elastomeeric Textured Coating for 'Green' Concrete: Water based, Epoxy mixed, Isocyanate based coating with graded textured aggregate.
   1. Stated by manufacturer as suitable for installation on visibly damp surfaces and concrete that has hardened but is not fully cured ("green" concrete) without requiring a primer.
   2. Dry Film Thickness: 15 mils, minimum.
   3. Flexibility Test: Passing, when tested according to ASTM D522/D522M with a 1 inch mandrel.
   4. Abrasion Resistance: Passing, when tested according to ASTM D968 with 792 gallons of falling sand.
   5. Water Vapor Transmission: 20 perms, maximum, when tested in accordance with ASTM E96/E96M.
   6. Color: To be selected by Architect from manufacturer's standard range.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.

C. Cementitious Substrates: Do not begin application until substrate has cured 28 days minimum and measured moisture content is not greater than 16 percent.

3.02 PREPARATION

A. Clean surfaces of loose foreign matter.

B. Remove substances that would bleed through finished coatings.

C. Protect adjacent surfaces and materials not receiving coating from spatter and overspray; mask if necessary to provide adequate protection. Repair damage.

3.03 PRIMING

A. Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

3.04 COATING APPLICATION

A. Apply coatings in accordance with manufacturer's instructions, to thicknesses specified.

B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

3.05 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

B. Clean surfaces immediately of overspray, splatter, and excess material.

3.06 PROTECTION

A. Protect finished work from damage.

END OF SECTION

SECTION 102113
TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Metal toilet compartments.

1.02 RELATED REQUIREMENTS

A. Section 061000 - Rough Carpentry: Blocking and supports.

1.03 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.

C. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.

1.04 ADMINISTRATIVE REQUIREMENTS

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Show panel construction, hardware, and accessories.

C. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, and door swings.

D. Samples: Submit two samples of partition panels, 2-1/2 by 4-3/4 inches, illustrating finish.

E. Manufacturer's Instructions: Indicate installation special procedures.

F. Specimen warranty.

G. Executed warranty.

1.06 DELIVERY, STORAGE, AND HANDLING

A. See Section 017419 - Construction Waste Management and Disposal for packaging waste requirements.

B. Deliver and store materials in manufacturer's unopened packaging, with labels intact.

1.07 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Powder Coated Compartment Manufacturer Warranty: Provide 3-year manufacturer warranty against material defects. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hadrian: www.hadrian-inc.com/#sle.

2.02 METAL TOILET COMPARTMENTS

A. Description: Factory-fabricated doors, pilasters, and divider panels made of galvannealed, powder-coated steel faces laminated to honeycomb core; corners mitered, welded, and ground smooth; floor mounted headrail braced.
   1. Comply with ADA Standards.
   2. Color: 504 linen.

B. Door and Panel Dimensions:
   1. Steel Face Thickness: 22 gauge, 0.0299 inch, minimum.
   2. Core Thickness: 1 inch.
   3. Height: 58 inches.

4. Door Width: 24 inches.
5. Door Width for Accessible Compartments: 36 inches, outswinging.

C. Pilasters:
1. Steel Face Thickness: 22 gauge, 0.0299 inch, minimum.
2. Core Thickness: 1-1/4 inch.
3. Reinforce pilaster tops with 20 gauge, 0.0359 inch channel.

D. Screens: Same material and finish as doors.
1. Mounting Type: Wall mounted.
a. Height: 48 inches.
2. Depth: 18 inches.

2.03 HARDWARE

A. Hardware for Powder Coated Compartments: Chrome-plated zinc die castings, unless specified otherwise.
1. Hinges: Gravity type, adjustable, concealed, with threaded top hinge pin and self-lubricating nylon sleeve.
2. Coat Hooks: Provide one per compartment, with rubber bumper.
3. Door Pulls: Provide one for each outswinging door and each inswinging accessible compartment door.
4. Strikes and Keepers: Mounted on pilaster in alignment with door latch; include 3/4-inch diameter rubber bumper.

B. Pilaster Shoes: Stainless steel, one-piece design, 4 inches tall, concealing floor fastenings.

C. Fasteners: Stainless steel, tamper-proof type.
1. Use through-bolts and nuts to attach panels and pilasters to brackets.

2.04 MATERIALS

A. Stainless Steel Sheet: ASTM A666, Type 304.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify field measurements comply with manufacturer's requirements.

B. Verify plumbing fixture spacing and locations.

C. Verify locations of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

A. Install partitions, screens, and hardware in accordance with manufacturer's instructions.

B. Do not perform field touch-ups of scratched or damaged finishes; replace with new materials.

3.03 TOLERANCES

A. Maximum Variation from True Position: 1/4 inch.

B. Maximum Variation from Plumb: 1/8 inch.

3.04 ADJUSTING

A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.

B. Adjust hinges to position doors in partially open position when unlatched. Return outswinging doors to closed position.

C. Adjust adjacent components for consistency of line or plane.

3.05 CLEANING

A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

B. Clean compartment surfaces and hardware in accordance with manufacturer's instructions.

3.06 PROTECTION

A. Protect installed compartments from subsequent construction operations.

END OF SECTION

SECTION 102213
WIRE MESH PARTITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wire mesh systems for Protective cages.

1.02 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.

B. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2023.

C. ASTM A510/A510M - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel; 2020.

D. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hard enable; 2023, with Editorial Revision.

E. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021, with Errata (2023).

F. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2020, with Errata (2023).

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data for mesh materials, finishes.

C. Shop Drawings: Indicate plan and vertical dimensions, elevations, component details; head, jamb, and sill details; location of hardware. Provide anchorage and type and location of fasteners.

D. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before the start of scheduled welding work.

PART 2 PRODUCTS

3.01 MANUFACTURERS

A. Wire Mesh Protective Cages:
   1. Paul S. Leskew & Associates Inc.: www.scoreboardman.com/metal-mesh-protective-cages/.
   2. Substitutions: See Section 016000 - Product Requirements.

3.02 WIRE MESH PROTECTIVE CAGES

A. Wire Mesh Protective Cages: Factory-fabricated modular assemblies of panels, anchors, and accessories as required to provide a complete system.

3.03 COMPONENTS

A. Woven Wire Mesh: Heavy duty.
   1. Material: ASTM A510/A510M uncoated crimped steel wire.
   2. Wire Size: 6-gauge, 0.192 inch.
   3. Mesh Opening Size: 2-inch square shape.
   4. Mesh Weave: Plain weave, double crimped.

B. Framing and Support Members:

   1. Material: ASTM A36/A36M steel shapes and ASTM A500/A500M cold-formed steel tubing.

C. Sheet Metal Base Panel: ASTM A1008/A1008M, cold rolled steel sheet.

D. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

3.04 FASTENERS

A. Bolts, Nuts and Washers: Hot dip galvanized.

B. Anchorage Devices: Provide power driven, powder actuated, and drilled expansion bolts.

C. Exposed Mechanical Fastenings: Flush countersunk screws or bolts, unobtrusively located, consistent with design of structure.

3.05 FABRICATION

A. Fit and assemble in largest practical sections for delivery to site, ready for installation.

B. Make exposed joints flush or tight.

3.06 FINISHES

A. Painted Finish: Manufacturer’s standard powder coat finish.
   1. Color: Black.

PART 3 EXECUTION

5.01 EXAMINATION

A. Verify that field measurements are as indicated.

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

5.02 PREPARATION

A. Clean substrate surfaces.

5.03 INSTALLATION

A. Install in accordance with manufacturer's instructions.
B. Install items plumb and level, accurately fitted, free from distortion or defects.

5.04 CLEANING

A. Remove temporary protection to prefinished surfaces.

END OF SECTION

SECTION 102800
TOILET ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Commercial toilet accessories.

B. Under-lavatory pipe supply covers.

C. Electric hand/hair dryers.

D. Diaper changing stations.

E. Utility room accessories.

1.02 RELATED REQUIREMENTS

A. Section 093000 - Tiling: Ceramic washroom accessories.

B. Section 224000 - Plumbing Fixtures: Under-lavatory pipe and supply covers.

1.03 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. ASTM C1036 - Standard Specification for Flat Glass; 2021.

C. ASTM F2285 - Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use; 2022.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Commercial Toilet Room Accessories:
   1. American Specialties, Inc: www.americanspecialties.com/#sle.
   2. Bradley Corporation: www.bradleycorp.com/#sle.
   3. Substitutions: Section 016000 - Product Requirements.

B. Diaper Changing Stations:
   1. Bradley Corporation; _____: www.bradleycorp.com/#sle.
   2. Koala Kare Products; _____: www.koalabear.com/#sle.

C. Provide products of each category type by single manufacturer.

2.02 FINISHES

A. Stainless Steel: Satin finish, unless otherwise noted.

2.03 COMMERCIAL TOILET ACCESSORIES

A. Toilet Paper Dispenser: Single roll, surface mounted bracket type, stainless steel, spindle less type for tension spring delivery designed to prevent theft of tissue roll.

B. Soap Dispenser: Liquid soap dispenser, deck-mounted on vanity, with polyethylene container concealed below deck; piston and 4 inch spout of stainless steel with bright polished finish; chrome-plated deck escutcheon.

C. Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.

D. Grab Bars: Stainless steel, textured surface.
   1. Standard Duty Grab Bars:

a. Push/Pull Point Load: 250 pound-force, minimum.
b. Dimensions: 1-1/4 inch outside diameter, minimum 0.05 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
c. Length and Configuration: As indicated on drawings.

2.04 UNDER-LAVATORY PIPE AND SUPPLY COVERS

A. Specified in 224000 - Plumbing Fixtures.

2.05 ELECTRIC HAND/HAIR DRYERS

A. Electric Hand Dryers: Traditional fan-in-case type, with downward fixed nozzle.
1. Operation: Automatic, sensor-operated on and off.
2. Mounting: Wall-mounted - surface.
3. Cover: Plastic.
a. Tamper-resistant screw attachment of cover to mounting plate.

2.06 DIAPER CHANGING STATIONS

A. Diaper Changing Station: Wall-mounted folding diaper changing station for use in commercial toilet facilities, meeting or exceeding ASTM F2285.
1. Material: Polyethylene.
2. Mounting: Surface.
3. Color: Gray.
4. Minimum Rated Load: 250 pounds.

2.07 UTILITY ROOM ACCESSORIES

A. Mop and Broom Holder: 0.05 inch thick stainless steel, Type 304, hat-shaped channel.
1. Holders: Three spring-loaded rubber cam holders.
2. Length: 36 inches.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify exact location of accessories for installation.

C. For electrically-operated accessories, verify that electrical power connections are ready and in the correct locations.

3.02 PREPARATION

A. Deliver inserts and rough-in frames to site for timely installation.

B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.

B. Install plumb and level, securely and rigidly anchored to substrate.

C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.
1. Grab Bars: As indicated on drawings.
2. Mirrors: 40 inch, measured from floor to bottom of mirrored surface.
3. Electric Hand Dryers: Measured from floor to bottom of nozzle:
a. Men: 44 inches.
b. Women: 42 inches.
c. Teenager: 41 inches.
d. Child: 32 inches.
e. Handicap: 36 inches.

3.04 PROTECTION

A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

SECTION 104400
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire extinguishers.

B. Fire extinguisher cabinets.

C. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 061000 - Rough Carpentry: Wood blocking product and execution requirements.

B. Section 099123 - Interior Painting: Field paint finish.

1.03 REFERENCE STANDARDS

A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.

B. NFPA 10 - Standard for Portable Fire Extinguishers; 2022.

C. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide extinguisher operational features.

C. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.

D. Warranty: Sample of special warranty

1.05 QUALITY ASSURANCE

A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."

B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.
   1. Provide fire extinguishers approved, listed, and labeled by FMG.

1.06 COORDINATION

A. Coordinate type and capacity of fire extinguishers with fire protection cabinets to ensure fit and function.

1.07 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Failure of hydrostatic test according to NFPA 10.
      b. Faulty operation of valves or release levers.
   2. Warranty Period: Six years from date of Substantial Completion.

1.08 FIELD CONDITIONS

A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Fire Extinguisher Cabinets and Accessories:
   1. Activar Construction Products Group, Inc. - JL Industries; Ambassador Series: www.activarcpg.com/#sle.
   2. Substitutions: See Section 016000 - Product Requirements.

2.02 FIRE EXTINGUISHERS

A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
   1. Provide extinguishers labeled by UL (DIR) for purpose specified and as indicated.

2.03 FIRE EXTINGUISHER CABINETS

A. Fire Rating: Listed and labeled in accordance with ASTM E814 requirements for fire resistance rating of walls where being installed.

B. Fire Rated Cabinet Construction: One-hour fire rated.

C. Door: 0.036 inch metal thickness, reinforced for flatness and rigidity with nylon catch. Hinge doors for 180 degree opening with two butt hinges.

D. Door Glazing: Acrylic plastic, clear, 1/8 inch thick, flat shape and set in resilient channel glazing gasket.

E. Fabrication: Weld, fill, and grind components smooth.

F. Finish of Cabinet Exterior Trim and Door: Red baked enamel.

G. Finish of Cabinet Interior: Red colored enamel.

2.04 ACCESSORIES

A. Extinguisher Brackets: Formed steel, galvanized and enamel finished.

B. Lettering: “FIRE EXTINGUISHER” decal, or vinyl self-adhering, prespaced black lettering in accordance with authorities having jurisdiction (AHJ).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install cabinets plumb and level in wall openings, ____ inches from finished floor to inside bottom of cabinet.

C. Secure rigidly in place.

D. Place extinguishers in cabinets.

END OF SECTION

SECTION 116623
GYMNASIUM EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wall mounted protection pads.

1.02 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

B. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.

1.03 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data showing configuration, sizes, materials, finishes, hardware, and accessories; include:
   1. Fire rating certifications.
   2. Manufacturer's installation instructions.

C. Shop Drawings: For custom fabricated equipment indicate, in large scale detail, construction methods; method of attachment or installation; type and gauge of metal, hardware, and fittings; plan front elevation; elevations and dimensions; minimum one cross section; utility requirements as to types, sizes, and locations.

D. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to project site in manufacturer's original packaging with factory original labels attached.

B. Store products indoors and elevated above floor; prevent warping, twisting, or sagging.

C. Store products in accordance with manufacturer's instructions; protect from extremes of weather, temperature, moisture, and other damage.

1.05 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. See drawings for sizes and locations, unless noted otherwise.

2.02 WALL PADDING

A. Wall Padding: Wall panel surfaces consist of a high pressure thermosetting plastic surfacing material, consisting of fibrous multilayer core material impregnated with thermosetting phenolic resin, covered by a fibrous material decorative layer impregnated with thermosetting melamine resin.
   1. Surface Burning Characteristics: Flame spread index (FSI) of 25 or less, smoke developed index (SDI) of 450 or less, Class A, when tested in accordance with ASTM E84 as a complete panel.
   2. Flammability: Comply with NFPA 286.
   3. Panel Dimensions: 48 inches wide by 96 inches long, including nailing/fastening margins.
   4. Installation: Aluminum attachment spline by manufacturer
   5. Mounting: Permanent; using screws.
   6. Manufacturers:
      a. Substitutions: See Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install in accordance with Contract Documents and manufacturer's instructions.

B. Install wall padding securely, with edges tight to wall and without wrinkles in fabric covering.

C. Separate dissimilar metals to prevent electrolytic corrosion.

3.02 CLEANING

A. Remove masking or protective covering from finished surfaces.

B. Clean equipment in accordance with manufacturer's recommendations.

END OF SECTION

SECTION 123600
COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for architectural cabinet work.

1.02 RELATED REQUIREMENTS

A. Section 093000 - Tiling: Tile for countertops.

1.03 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).

C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Natural Stone Institute (NSI) Accredited Natural Stone Fabricator; www.naturalstoneinstitute.org/#sle.

B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD 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.

PART 2 PRODUCTS

2.01 COUNTERTOPS

A. Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.
   1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.
      a. Manufacturers:
         1) Wilsonart; P.LAM-1 & P.LAM-2: www.wilsonart.com.
      b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
      c. Surface Color and Pattern: As indicated on drawings.
   2. Back and End Splashes: Same material, same construction.
   3. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Custom Grade.

2.02 MATERIALS

A. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

B. Joint Sealant: Mildew-resistant silicone sealant, white.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
   1. Join lengths of tops using best method recommended by manufacturer.
   2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
   3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
   1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
   2. Height: 4 inches, unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 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.

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.

C. Seal joint between back/end splashes and vertical surfaces.

3.04 CLEANING

A. Clean countertops surfaces thoroughly.

3.05 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION