



DES PLAINES PUBLIC LIBRARY

1501 Ellinwood Street • Des Plaines, IL 60016

4th FLOOR RENOVATION PROJECT 2023-24

PROJECT MANUAL
ISSUE FOR BID & PERMIT
October 11, 2023

**SECTION 00 0102
PROJECT INFORMATION**

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

- A. Project Name: Des Plaines Public Library 4th Floor Renovation 2023-24, located at: 1501 Ellinwood St, Des Plaines, IL 60016.
- B. The Owner, hereinafter referred to as Des Plaines Public Library.

1.02 NOTICE TO PROSPECTIVE BIDDERS

- A. These documents constitute an Invitation to Bid to and request for qualifications from General Contractors for the construction of the project described below.

1.03 PROJECT DESCRIPTION

- A. Summary Project Description: This project consists of renovations to approximately 2,500 square feet of interior space, on the fourth floor of the existing library building. Some demolition of existing construction will be necessary. Limited modifications will be necessary on other floors to accommodate infrastructure. The programmatic intentions for the renovation include: provision of a new large multi-purpose space suitable for various library programs such as maker events, craft classes, meetings, parties, social events, etc. plus a new small digital media lab, a staff workroom/storage room, and two new individual or small group study rooms; provision of new and/or renovated infrastructure for the above-mentioned spaces including new ventilation and/or exhaust needs, additional power and data needs, new lighting, etc.; replacement of existing finishes and provision of new finishes in the above-mentioned spaces..

1.04 PROJECT CONSULTANTS

- A. The Architect, hereinafter referred to as Architect: Lohan Architecture, pllc.
 - 1. Address: 209 S. LaSalle St., Suite 980.
 - 2. City, State, Zip: Chicago, IL 60604.
 - 3. Phone/Fax: (312) 209-8029.
 - 4. E-mail: info@lohanarchitecture.com.

1.05 PROCUREMENT TIMETABLE

- A. Pre-Bid Briefing and Tour: 9:30 am on Friday, November 3 at Meeting Room A of the Library.
- B. Last Request for Substitution Due: 7 days prior to due date of bids.
- C. Last Request for Information Due: 7 days prior to due date of bids.
- D. Bid Due Date: December 1, 2023, before 1:00 pm local time.
- E. Bid Opening: Same day, 1:00 pm local time.
- F. The Owner reserves the right to change the schedule or terminate the entire procurement process at any time.

1.06 PROCUREMENT DOCUMENTS

- A. Availability of Documents: Complete sets of procurement documents in digital form may be obtained:
 - 1. From the Architect via written or emailed request.

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END OF SECTION 00 0110

**SECTION 00 1113
ADVERTISEMENT FOR BIDS**

FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

- A. Des Plaines Public Library
- B. Address:
 - 1501 Ellinwood Street
 - Des Plaines, IL, 60016

1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT):

- A. Lohan Architecture, pllc
- B. Address:
 - 209 S. LaSalle Street
 - Suite 980
 - Chicago, IL 60604
- C. Email: info@lohanarchitecture.com

1.03 DATE: OCTOBER 11, 2023

1.04 TO: POTENTIAL BIDDERS

- A. Notice is hereby given by the Des Plaines Public Library that sealed bids will be received.
- B. All bidders are required to prequalify to the requirements described in Document 00 2113 - Instructions to Bidders.
- C. Project Description: Des Plaines Public Library 4th Floor Renovations 2023-24.
- D. Bid Documents for a Stipulated Sum contract, in digital format, may be obtained from the office of the Architect free of charge via download upon written or emailed request.
- E. A mandatory bidders conference and tour has been scheduled for 9:30 am local time on Friday, November 3, 2023 at the Des Plaines Public Library, in Meeting Room A, located on the 1st floor, north side of the library.
- F. Bids signed and under seal, executed, and dated will be received at the administration office of the Owner before 1:00 pm local time on Friday, December 1, 2023, on the 2nd floor of the Library.
- G. Offers submitted after the above time will be returned to the bidder unopened.
- H. Offers will be opened publicly immediately after the time for receipt of bids. The bid opening will take place at the Des Plaines Public Library, in Meeting Room A, located on the 1st floor, north side of the library.

END OF SECTION 00 1113

**SECTION 00 2113
INSTRUCTIONS TO BIDDERS**

SUMMARY

1.01 DOCUMENT INCLUDES

- A. Invitation
 - 1. Bid Submission
 - 2. Intent
 - 3. Work Identified in Contract Documents
 - 4. Contract Time
- B. Bid Documents and Contract Documents
 - 1. Contract Documents Identification
 - 2. Availability
 - 3. Examination
 - 4. Inquiries/Addenda
- C. Site Assessment
 - 1. Site Examination
 - 2. Prebid Conference
- D. Qualifications
 - 1. Qualifications
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- F. Bid Enclosures/Requirements
 - 1. Insurance
 - 2. Bid Form Requirements
 - 3. Fees for Changes in the Work
 - 4. Bid Form Signature
- G. Offer Acceptance/Rejection
 - 1. Duration of Offer
 - 2. Acceptance of Offer

1.02 RELATED DOCUMENTS

- A. Document 01 1000 - Summary.
- B. Document 00 1113 - Advertisement for Bids.
- C. Document 00 4100 - Bid Form.

INVITATION

2.01 BID SUBMISSION

- A. Bids signed and under seal, executed, and dated will be received at the administration office of the Owner at 1501 Ellinwood Street, Des Plaines, IL 60016 before 1:00 p.m. local time on December 1, 2023.
- B. Offers submitted after the above time will be returned to the bidder unopened.
- C. Offers will be opened publicly immediately after the time for receipt of bids.

2.02 INTENT

- A. The intent of this Bid request is to obtain an offer to perform work to complete project named Des Plaines Public Library 4th Floor Renovation 2023-24 for a Stipulated Sum contract, in accordance with Contract Documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

- A. Work of this proposed Contract comprises renovation, including general construction, mechanical, and electrical Work.

2.04 CONTRACT TIME

- A. Identify Contract Time in the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 CONTRACT DOCUMENTS IDENTIFICATION

- A. Contract Documents are identified as 4th Floor Renovation Project 2023-24, Issue For Bid & Permit, October 11, 2023.
- B. Addenda are written, or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents, including Drawings and Specifications, by additions, clarifications or corrections. Addenda will become part of the Contract Documents when the Construction Contract is executed.
- C. Bidding Documents include the Advertisement for Bid, Instructions to Bidders, the Bid Form, Bid Bond, Bidder Certification, Prevailing Rate of Wages and the Contract Documents including any addendum issued prior to receipt of bids.
- D. The Construction Contract is anticipated to follow AIA Document A105-2017, Standard Short Form of Agreement Between Owner and Contractor.

3.02 AVAILABILITY

- A. Bid Documents may be obtained at the office of Architect upon written or emailed request.
- B. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

3.03 EXAMINATION

- A. Upon receipt of Bid Documents verify that documents are complete. Notify Architect should the documents be incomplete.
- B. Immediately notify Architect upon finding discrepancies or omissions in the Bid Documents.
- C. Before submitting a bid, each bidder must:
 - 1. Examine the Bidding Documents thoroughly.
 - 2. Become familiar with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or furnishing the goods and special services.
 - 3. Become familiar with City of Des Plaines Ordinance 1-10-2 (A) (5) and its requirements for bidders.
 - 4. Study and carefully correlate bidder's observations with the Bidding Documents.
- D. The submission of a bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of Article 3.03.C and that the Bidding Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for furnishing the goods and special services.
- E. Owner and Architect will not approve any additional payments to Bidder for conditions which would have been disclosed to builder by examining the Bidding Documents and visiting the site prior to the bid opening.

3.04 INQUIRIES/ADDENDA

- A. Direct questions to Lohan Architecture, pllc, email; info@lohanarchitecture.com.
- B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.
- D. Clarifications requested by bidders must be in writing not less than 7 days before date set for receipt of bids. The reply will be in the form of an Addendum, a copy of which will be forwarded to known recipients.

3.05 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. General Requirements for Substitution Requests:
- B. Substitution Request Time Restrictions:
 - 1. Where the Bid Documents stipulate a particular product, substitutions will be considered up to 7 days before receipt of bids.

- C. Review and Acceptance of Request:
 - 1. Architect may approve the proposed substitution and will issue an Addendum to known bidders.
- D. See Section 01 2500 - Substitution Procedures for additional requirements.

SITE ASSESSMENT

4.01 SITE EXAMINATION

- A. Examine the project site before submitting a bid.

4.02 PREBID CONFERENCE

- A. A mandatory bidders conference and tour has been scheduled for 9:30 am on Friday, November 3, 2023, at the Des Plaines Public Library, in Meeting Room A, located on the 1st floor, north side of the library.
- B. All general contract bidders are invited.
- C. Representatives of Architect will be in attendance.
- D. Failure to attend may be grounds for rejection of the contractors bid.
- E. Attendees shall bring their own printed copies of the contract documents for reference during the meeting.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS

- A. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position, previous experience, and current commitments, license to perform work in the State.

5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS

- A. Owner reserves the right to reject a proposed subcontractor for reasonable cause.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Submit two copies of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name and Owner's name on the outside.
- C. Improperly completed information, irregularities in bid bond, may be cause not to open the Bid Form envelope and declare the bid invalid or informal.

6.02 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.
- B. Bid Forms, Appendices, and enclosures that are improperly prepared may, at the discretion of Owner, be declared unacceptable.

BID ENCLOSURES/REQUIREMENTS

7.01 PERFORMANCE ASSURANCE

- A. Include the cost of performance assurance bonds in the Bid Amount.

7.02 INSURANCE

- A. Prior to commencing construction on any alterations, the Library shall require its contractors, subcontractors, and agents to obtain Builder's Risk Insurance covering the full extent of the insurable value thereof and Worker's Compensation Insurance covering all persons employed in connection with such construction and with respect to whom death or bodily injury claims could be asserted against the City of Des Plaines, the Library, and/or the Des Plaines Public Library property with limits of not less than one million dollars (\$1,000,000) in the event of bodily injury or death to one (1) person and not less than two million dollars (\$2,000,000) in the event of bodily

injury or death to any number of persons in any one accident, and with limits of not less than one million dollars (\$1,000,000) for damages or injury to property. The City of Des Plaines, the Des Plaines Public Library, its Engineers, Board Members, Officers, Agents and Employees, individually and collectively, shall be named as additional insured.

7.03 BID FORM REQUIREMENTS

- A. Complete all requested information in the Bid Form and Appendices.
- B. Taxes: Refer to Supplementary Conditions for inclusion of taxes, procedures for tax rebate claims, and products that are tax exempt.
- C. Bid Forms must be completed in ink or typewritten. The bid price of each item on the form must be stated in words and numerals. All blank spaces must be filled in or if not applicable use "N/A".
- D. Envelope must be marked on the outside as follows:
 - 1. Bid for Des Plaines Public Library 4th Floor Renovation Project 2023-24.
 - 2. Name of Bidding Contractor
- E. The complete Bid Document will have the following properly filled in and signed documents:
 - 1. Two (2) Bid Form.
 - 2. Two (2) Bid Bond.
 - 3. Two (2) Bidder Certification.
 - 4. Two (2) Certificate of Compliance, Illinois Drug-Free Workplace Act.
 - 5. Two (2) Sexual Harassment Policy Certificate.

7.04 FEES FOR CHANGES IN THE WORK

- A. Include the fees for overhead and profit on own Work and Work by subcontractors, identified in Supplementary Conditions.
- B. Include in the Bid Form, the overhead and profit fees on own Work and Work by subcontractors, applicable for Changes in the Work, whether additions to or deductions from the Work on which the Bid Amount is based.
- C. Include in the Bid Form, the fees proposed for subcontract work for changes (both additions and deductions) in the Work. Contractor shall apply fees as noted, to the subcontractor's gross (net plus fee) costs on additional work.

7.05 BID FORM SIGNATURE

- A. The Bid Form shall be signed by the bidder, as follows:
 - 1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
 - 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
 - 3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, must also be submitted with the Bid Form in the bid envelope.
 - 4. Joint Venture: Each party of the joint venture shall execute the Bid Form under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

7.06 ADDITIONAL BID INFORMATION

- A. Retail Sales Tax Exemption.
 - 1. Building materials purchased for incorporation into this project are exempt from federal, state and local sales taxes. Bidder shall not include sales taxes in their bid.
- B. Prevailing Wages.
 - 1. All contracts for work on the project are subject to the provisions of Chapter 48, Sections 39s-1 through 39s-12, Illinois Revised Statutes, requiring the prevailing rate of wage to all laborers, workman and mechanics engaged in work on the project. The Prevailing Rate of Wages for the project is set forth herein at Section 00825.

- C. City of Des Plaines Ordinance 1-10-2 (A) (5).
 - 1. All contracts for work on the project are subject to the provisions of this Ordinance.
 - 2. Bidders are to review and comply with the Ordinance available at this website:
https://codelibrary.amlegal.com/codes/desplainesil/latest/desplaines_il/0-0-0-558.

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

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

8.02 ACCEPTANCE OF OFFER

- A. The Owner is not obligated to accept the lowest or any other bid and reserves the right to reject any or all bids, to waive any informalities and irregularities in bidding procedure and to award the contract to the lowest responsible bidder, as determined by the Owner. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- B. In evaluating bids, Owner shall consider the qualifications of the Bidders, conformity with the Bid Documents, terms of delivery, quality and serviceability. This list, however, may not be exhaustive of all factors the Owner will consider when awarding the bid.
- C. Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications, and financial ability of the bidders to furnish the goods and special services in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- D. Owner reserves the right to reject the bid of any bidder who does not pass any such evaluation to Owner's satisfaction.
- E. If the contract is to be awarded, Owner will give the successful Bidder a Notice of Award within thirty (30) days after the day of the bid opening.

END OF SECTION 00 2113

**SECTION 00 4100
BID FORM**

THE PROJECT AND THE PARTIES

1.01 TO:

- A. Owner
 Des Plaines Public Library
 1501 Ellinwood Street
 Des Plaines, Illinois 60016

1.02 FOR:

- A. Project: Des Plaines Public Library 4th Floor Renovation 2023-24

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

- A. Bidder's Full Name _____
 - 1. Address _____
 - 2. City, State, Zip _____

1.05 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by Lohan Architecture, pllc for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:
- B. _____ dollars
 (\$ _____), in lawful money of the United States of America.
- C. Accompanying this proposal is a Bid Bond or Bid Security payable to Des Plaines Public Library which is agreed will be forfeited to the aforementioned if the undersigned fails to execute the Standard Short Form of Owner/Contractor Agreement (AIA Document A105-2017), which is hereby made a part of these Contract Documents by reference. Bidder shall furnish evidence of his ability to become bonded and to provide insurance coverage as specified within five (5) days after notification of the intent to award the contract to the undersigned.
- D. All applicable federal taxes are included and State of Illinois taxes are included in the Bid Sum.
- E. In signing and submitting this bid, the undersigned certifies that all materials and construction to be provided are as indicated in the proposed Bid Documents.

1.06 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
 - 1. Execute the Agreement within seven days of receipt of Notice of Award.
 - 2. Furnish the required bonds within seven days of receipt of Notice of Award.
 - 3. Commence work within seven days after written Notice to Proceed of this bid.

1.07 CONTRACT TIME

- A. If this Bid is accepted, we will:
- B. Complete the Work in _____ calendar weeks from Notice to Proceed. (Bidder to enter number of weeks.)

1.08 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
 - 1. Addendum # _____ Dated _____.
 - 2. Addendum # _____ Dated _____.

1.09 BID FORM SIGNATURE(S)

- A. The Corporate Seal of
- B. _____

- C. (Bidder - print the full name of your firm)
- D. was hereunto affixed in the presence of:
- E. _____
- F. (Authorized signing officer, Title)
- G. (Seal)
- H. _____
- I. (Authorized signing officer, Title)

END OF SECTION 00 4100

BID BOND

We _____ as Principal and _____ as a corporation of the State of _____ as Surety, are held and firmly bound unto _____ as Obligee, in the amount of _____ Dollars (\$ _____), for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, to the agreement.

Principal has submitted to Obligee a bid to enter into a written contract for _____ in accordance with Bidding Documents for the project, which contract is by reference made a part hereof and is hereinafter referred to as "the Contract".

The condition of this obligation is that if Principal, upon acceptance by Obligee of its bid within the period of time specified for acceptance, shall comply with all post award requirements as required by the terms of the bid within the time specified after from Standard Documents of the Notice of Award, or in the event of the failure to comply with all post award requirements, if Principal shall pay Obligee (1) for all costs of procuring the work which exceeds the amount of its bid, or (2) shall pay Obligee the amount of this bond as liquidated damages in the event Principal is a sole bidder and after an attempt to secure other bids by re-advertising none can be obtained, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

Surety hereby agrees that its obligation shall not be impaired by any extensions of time for Obligee's acceptance or compliance with post award requirements. Surety hereby waives notice of such extensions.

Signed and sealed this _____ day of _____, 2023.

PRINCIPAL TITLE CORPORATE SEAL

SURETY COMPANY SEAL HERE

ATTORNEY-IN-FACT

ATTEST:

CORPORATE SECRETARY WITNESS

END OF BID BOND

BIDDER CERTIFICATION

We hereby certify that our firm _____
is not barred from bidding on public contracts as a result of a violation of or conviction for either
bid-rigging or bid rotation under Article 33E of the State of Illinois Criminal Code, or any other
provision of Illinois Law.

We further certify and affirm that our proposal was prepared independently for this project and
that it contains no fees or amounts other than for the legitimate execution of the work as
specified and it has no understanding or agreements in restraint of trade.

This certification must be executed by the Bidder and submitted with the Bidder's Bid Form.

FIRM
NAME _____
CORPORATE SEAL

BY _____
(SIGNATURE)

TITLE _____

ATTEST _____
(SECRETARY)

Subscribed and sworn to before me on this
_____ Day of _____, 2023

SEAL

(NOTARY PUBLIC)

END BIDDER CERTIFICATION

CERTIFICATE OF COMPLIANCE, ILLINOIS DRUG-FREE WORKPLACE ACT

(Contractors with 25 or more Employees)

**CERTIFICATE OF COMPLIANCE WITH
ILLINOIS DRUG-FREE WORKPLACE ACT**

_____ Contractor, having 25 employees, does hereby certify pursuant to Section 3 of the Illinois Drug-Free Workplace Act (Ill. Rev. Stat. ch. 127 par. 132.313) that [he, she, it] shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the *Illinois Drug-Free Workplace Act* and, further certified, that [he, she, it] is not ineligible for award of this contract by reason of debarment for a violation of the *Illinois Drug-Free Workplace Act*.

Firm Name: _____

by _____
(Authorized Agent of Contractor)

Title

Subscribed and sworn to before me this _____ day

of _____, 2023

Notary Public

Seal

**END CERTIFICATE OF COMPLIANCE WITH ILLINOIS DRUG-FREE WORKPLACE
ACT**

SEXUAL HARASSMENT POLICY CERTIFICATE

SEXUAL HARASSMENT POLICY CERTIFICATE

_____ contractor does hereby certify pursuant to Section 2-105 of the *Illinois Human Rights Act* (775 ILCS 5/2 - 105) that [he, she, it] has a written sexual harassment policy that includes, at a minimum, the following information: (I) the illegality of sexual harassment; (ii) the definition of sexual harassment under State Law; (iii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Department of Human Rights and Human Rights Commission; (vi) directions on how to contact the Department of Human Rights and Human Rights Commission; and (vii) protection against retaliation.

By _____
(Authorized Agent of Contractor)

Title

Date

Subscribed and sworn to before me this ____ day
of _____, 2023

Notary Public Seal

END SEXUAL HARASSMENT POLICY CERTIFICATE

PREVAILING RATE OF WAGES

PART 1 - GENERAL

1.01 REQUIREMENTS

You are receiving this notice because you may or will be performing *public works* for the Des Plaines Public Library as that term is defined in Section 2 of the Illinois Prevailing Wage Act, 820 ILCS 130.

This notice applies to the public works described as Des Plaines Public Library Chiller Replacement Project.

- A. Each bidder shall comply with the provisions of "an act regulating wages of laborers, mechanics or other workmen employed in any public works by the state, county, city or any public body or any political subdivision or by anyone under contract for public works", approved June 26, 1941, as amended.
- B. The Prevailing Wage Act requires contractors and subcontractors to pay laborers, workers, and mechanics performing services on public works projects no less than the *prevailing rate of wages* (hourly cash wages plus fringe benefits) in the county where the work is performed. Any prevailing rate of wages as they are revised by the Dept. of Labor shall apply to this contract. You are notified that any rate changes to the prevailing wage rate are available on the Dept.'s official website. For information regarding current prevailing wage rates, please see the Illinois Dept. of Labor's website at: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/current-prevailing-rates.aspx> and www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx.
- C. All contractors and subcontractors rendering services for the public works must comply with all requirements of the Prevailing Wage Act, including but not limited to, all wage, notice, and record-keeping duties. **The Library requires certified payrolls prior to releasing funds.**
- D. The above will be included in the contract. 820 ILCS 130/4(a-1).
- E. Bidder hereby agrees to defend, indemnify and hold harmless the Owner and Engineer from any and all claims, demands, liens or suits of any kind or nature whatsoever (including suits for injunctive relief) by the Illinois Department of Labor under the Illinois Prevailing Wage Act or by any laborer, worker or mechanic employed by the Bidder who alleges that he has been paid for his services in a sum less than prevailing wage rates required by Illinois law.

END OF PREVAILING RATE OF WAGES

**SECTION 01 1000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Des Plaines Public Library 4th Floor Renovation 2023-24
- B. Owner's Name: Des Plaines Public Library.
- C. Architect's Name: Lohan Architecture, pllc.

1.02 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings.
- B. Scope of alterations work is indicated on drawings.

1.03 CONTRACTOR USE OF SITE AND PREMISES

- A. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Owner.
 - 3. Use of site and premises by the public.
- B. 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.
- C. Time Restrictions:
 - 1. Limit conduct of especially noisy, malodorous, and dusty work to times agreed to by the Owner.
- D. Utility Outages and Shutdown:
 - 1. Limit disruption of utility services to hours the building is unoccupied.
 - 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
 - 3. Prevent accidental disruption of utility services to other facilities.

END OF SECTION 01 1000

**SECTION 01 2500
SUBSTITUTION PROCEDURES**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

1.02 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.01 GENERAL REQUIREMENTS**

- A. A Substitution Request for products, assemblies, materials, and equipment 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, equipment, assembly, or system.
 2. Agrees to provide the same warranty for the substitution as for the specified product.
 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
 4. 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.
 5. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
1. No specific form is required. Contractor's Substitution Request documentation must include the following:
 - a. Project Information:
 - 1) Official project name, and any additional required identifiers established in Contract Documents.
 - b. Substitution Request Information:
 - 1) Description of Substitution.
 - 2) Reason why the specified item cannot be provided.
 - 3) Differences between proposed substitution and specified item.
 - c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
 - 1) Physical characteristics.
 - 2) Expected durability.
 - 3) Visual effect.
 - 4) Warranties.
 - 5) Other salient features and requirements.
 - 6) Include, as appropriate or requested, the following types of documentation:
 - (a) Product Data:
 - (b) Samples.
 - (c) Certificates, test, reports or similar qualification data.
 - (d) Drawings, when required to show impact on adjacent construction elements.
 - d. Impact of Substitution:
 - 1) Savings to Owner for accepting substitution.

- 2) Change to Contract Time due to accepting substitution.
- D. Limit each request to a single proposed substitution item.
1. Submit an electronic document, combining the request form with supporting data into single document.

3.02 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submit request for Substitution for Convenience within 14 days of discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
 3. Bear the costs engendered by proposed substitution of:
 - a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
 - b. Other construction by Owner.
 - c. Other unanticipated project considerations.
- B. Substitutions will not be considered under one or more of the following circumstances:
1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 2. Without a separate written request.
 3. When acceptance will require revisions to Contract Documents.

3.03 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
1. Architect's decision following review of proposed substitution will be noted on the submitted form.

3.04 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

END OF SECTION 01 2500

**SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction meeting.
- B. Site mobilization meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Submittal procedures.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Schedule meeting after Notice of Award.
- B. Attendance Required:
 - 1. Owner.
 - 2. Architect.
 - 3. Contractor.
- C. Agenda:
 - 1. Distribution of Contract Documents.
 - 2. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 3. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 4. Scheduling.
- D. 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.

3.02 SITE MOBILIZATION MEETING

- A. Schedule meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- C. Agenda:
 - 1. Use of premises by Owner and Contractor.
 - 2. Owner's requirements.
 - 3. Construction facilities and controls provided by Owner.
 - 4. Temporary utilities provided by Owner.
 - 5. Survey and building layout.
 - 6. Security and housekeeping procedures.
 - 7. Schedules.
 - 8. Application for payment procedures.
 - 9. Procedures for testing.
 - 10. Procedures for maintaining record documents.
 - 11. Requirements for start-up of equipment.
 - 12. Inspection and acceptance of equipment put into service during construction period.

- D. 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.

3.03 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum weekly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of RFIs log and status of responses.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to work.
- E. 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.

3.04 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the 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.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.05 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.

- a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
- 2. Prepare in a format and with content acceptable to Owner.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 - 1. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
 - a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
- F. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
 - 1. Indicate current status of every RFI. Update log promptly and on a regular basis.
 - 2. Note dates of when each request is made, and when a response is received.
 - 3. Highlight items requiring priority or expedited response.
 - 4. Highlight items for which a timely response has not been received to date.
- G. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
 - 1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
 - 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 - 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 - 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
 - 4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.06 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 for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below.

3.07 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's knowledge as contract administrator or for Owner.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
 1. Project record documents.
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect. If not indicated in the section minimally provide 3 samples.
 1. After review, produce duplicates.
 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.10 SUBMITTAL PROCEDURES

- A. General Requirements:
 1. Use a single transmittal for related items.
 2. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 3. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 4. 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.
 5. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 6. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 7. Provide space for Contractor and Architect review stamps.
 8. When revised for resubmission, identify all changes made since previous submission.
 9. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 10. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
 11. Submittals not requested will be recognized, but will be returned without comment.
- B. Product Data Procedures:
 1. Submit only information required by individual specification sections.
 2. Collect required information into a single submittal.
 3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.

2. Do not reproduce Contract Documents to create shop drawings.
3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

3.11 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's and consultants' actions on items submitted for review:
 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "REVIEWED", or language with same legal meaning.
 - b. "REVIEWED WITH COMMENTS", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - c. "MAKE CORRECTIONS NOTED, SUBMIT RECORD COPY", or language with same legal meaning.
 - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
 2. Not Authorizing fabrication, delivery, and installation:
 - a. "REVISE AND RESUBMIT".
 - 1) Resubmit revised item, with review notations acknowledged and incorporated.
 - b. "REJECTED".
 - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
 1. Items for which no action was taken:
 - a. "RECEIVED FOR RECORD ONLY" - to notify the Contractor that the submittal has been received for record only.
 2. Items for which action was taken:
 - a. "REVIEWED" - no further action is required from Contractor.

END OF SECTION 01 3000

**SECTION 01 4000
QUALITY REQUIREMENTS**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Submittals.
- B. References and standards.
- C. Testing and inspection agencies and services.
- D. Control of installation.
- E. Mock-ups.
- F. Tolerances.
- G. Manufacturers' field services.
- H. Defect Assessment.

1.02 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants 2008 (Reapproved 2023).
- B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation 2017.
- C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry 2023.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction 2019.
- E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection 2021.
- F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing 2021.
- G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components 2016.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Compliance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
 - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities

specified for Product Data.

1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

1.04 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.05 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:
 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
 2. Laboratory: Authorized to operate in the State in which the Project is located.
 3. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 4. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

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 MOCK-UPS

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.
- C. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- D. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- E. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
 - 1. Make corrections as necessary until Architect's approval is issued.
- F. Architect will use accepted mock-ups as a comparison standard for the remaining Work.
- G. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.03 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.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

- A. See individual specification sections for testing and inspection required.
- B. Testing Agency Duties:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
 - 6. Perform additional tests and inspections required by Architect.
 - 7. Attend preconstruction meetings and progress meetings.
 - 8. Submit reports of all tests/inspections specified.
- C. 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.
- D. 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.
- E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.
- G. Time and expenses of the Architect shall be reimbursed by the Contractor for retesting because of non-conformance of specified requirements.

3.05 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.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.
- B. If, in the opinion of Owner, it is not practical to remove and replace the work, Owner will direct an appropriate remedy or adjust payment.

END OF SECTION 01 4000

**SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.

1.03 TEMPORARY SANITARY FACILITIES

- A. Use of existing facilities is permitted, to be coordinated with Owner.
- B. Maintain daily in clean and sanitary condition.
- C. At end of construction, return facilities to same or better condition as originally found.

1.04 BARRIERS

- A. As coordinated with Owner, provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 SECURITY

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.06 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Parking arrangements are to be coordinated with Owner.
- C. Coordinate access and haul routes with governing authorities and Owner.
- D. Provide and maintain access to fire hydrants, free of obstructions.

1.07 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

1.08 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.
- D. Restore new permanent facilities used during construction to specified condition.

END OF SECTION 01 5000

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Substitution limitations.
- D. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 4000 - Quality Requirements: Product quality monitoring.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 01 4000 - Quality Requirements, for additional source quality control requirements.
- C. 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.

2.02 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 2500 - Substitution Procedures.

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. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Provide protection of stored materials and products against theft, casualty, or deterioration.
- B. 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 01 7419.

1. Structural Loading Limitations: Handle and store products and materials so as not to exceed static and dynamic load-bearing capacities of project floor and roof areas.
- C. Store and protect products in accordance with manufacturers' instructions.
- D. Store with seals and labels intact and legible.
- E. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- F. For exterior storage of fabricated products, place on sloped supports above ground.
- G. Provide off-site storage and protection when site does not permit on-site storage or protection.
- H. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- I. Comply with manufacturer's warranty conditions, if any.
- J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- K. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- L. Prevent contact with material that may cause corrosion, discoloration, or staining.
- M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- N. 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 01 6000

**SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Cutting and patching.
- C. Cleaning and protection.
- D. Starting of systems and equipment.
- E. Demonstration and instruction of Owner personnel.
- F. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- G. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

- A. Section 01 7900 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections
- B. Section 07 8400 - Firestopping.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Include design drawings and calculations for bracing and shoring.
 - 2. Identify demolition firm and submit qualifications.
 - 3. Include a summary of safety procedures.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- D. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.05 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for

installing, connecting to, and placing in service, such equipment.

- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-complying work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.
- I. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- 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 and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Prohibit traffic from landscaped areas.

- H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.07 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.08 DEMONSTRATION AND INSTRUCTION

- A. See Section 01 7900 - Demonstration and Training.

3.09 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.10 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Clean filters of operating equipment.
- G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.11 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 - 1. Provide copies to Architect and Owner.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

3.12 MAINTENANCE

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION 01 7000

**SECTION 01 7800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Individual Product Sections: Specific requirements for operation and maintenance data.
- C. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.

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

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Include color coded wiring diagrams as installed.
- E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- G. Provide servicing and lubrication schedule, and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.

- I. Include sequence of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- O. Include test and balancing reports.
- P. Additional Requirements: As specified in individual product specification sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
 - 1. Project Directory.
 - 2. Table of Contents, of all volumes, and of this volume.
 - 3. Operation and Maintenance Data: Arranged by system, then by product category.
 - a. Source data.
 - b. Product data, shop drawings, and other submittals.
 - c. Operation and maintenance data.
 - d. Field quality control data.
 - e. Photocopies of warranties and bonds.

3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

- E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION 01 7800

**SECTION 01 7900
DEMONSTRATION AND TRAINING**

PART 1 GENERAL**1.01 SUMMARY**

- A. Demonstration of products and systems where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
 - 1. All software-operated systems.
 - 2. HVAC systems and equipment.
 - 3. Electrical systems and equipment.
 - 4. Items specified in individual product Sections.
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
 - 1. Roofing, waterproofing, and other weather-exposed or moisture protection products.
 - 2. Fixtures and fittings.
 - 3. Items specified in individual product Sections.

1.02 RELATED REQUIREMENTS

- A. Section 01 7800 - Closeout Submittals: Operation and maintenance manuals.
- B. Section 01 9113 - General Commissioning Requirements: Additional requirements applicable to demonstration and training.
- C. Other Specification Sections: Additional requirements for demonstration and training.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
 - 1. Submit to Architect for transmittal to Owner.
 - 2. Submit not less than four weeks prior to start of training.
 - 3. Revise and resubmit until acceptable.
 - 4. Provide an overall schedule showing all training sessions.
 - 5. Include at least the following for each training session:
 - a. Identification, date, time, and duration.
 - b. Description of products and/or systems to be covered.
 - c. Name of firm and person conducting training; include qualifications.
 - d. Intended audience, such as job description.
 - e. Objectives of training and suggested methods of ensuring adequate training.
 - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
 - g. Media to be used, such as slides, hand-outs, etc.
 - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
 - 1. Include applicable portion of O&M manuals.
 - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
 - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Training Reports:
 - 1. Identification of each training session, date, time, and duration.
 - 2. Sign-in sheet showing names and job titles of attendees.
 - 3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.
- E. Video Recordings: Submit digital video recording of each demonstration and training session for Owner's subsequent use.

1. Format: DVD Disc.
2. Label each disc and container with session identification and date.

1.04 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstration may be combined with Owner personnel training if applicable.
- C. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
1. Perform demonstrations not less than two weeks prior to Substantial Completion.
 2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
1. Perform demonstrations not less than two weeks prior to Substantial Completion.

3.02 TRAINING - GENERAL

- A. Conduct training on-site unless otherwise indicated.
- B. Owner will provide classroom and seating at no cost to Contractor.
- C. Provide training in minimum two hour segments.
- D. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
- E. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
1. The location of the O&M manuals and procedures for use and preservation; backup copies.
 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
 3. Typical uses of the O&M manuals.
- F. Product- and System-Specific Training:
1. Review the applicable O&M manuals.
 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
 3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
 4. Provide hands-on training on all operational modes possible and preventive maintenance.
 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
 6. Discuss common troubleshooting problems and solutions.
 7. Discuss any peculiarities of equipment installation or operation.
 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
 9. Review recommended tools and spare parts inventory suggestions of manufacturers.

10. Review spare parts and tools required to be furnished by Contractor.
 11. Review spare parts suppliers and sources and procurement procedures.
- G. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION 01 7900

**SECTION 06 1000
ROUGH CARPENTRY**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Nonstructural dimension lumber framing.
- B. Roof-mounted curbs.
- C. Concealed wood blocking, nailers, and supports.

1.02 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2023.
- B. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings 2018, with Errata (2019).
- C. AWPA U1 - Use Category System: User Specification for Treated Wood 2023.
- D. PS 20 - American Softwood Lumber Standard 2021.
- E. WWPA G-5 - Western Lumber Grading Rules 2021.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide technical data on insulated sheathing, wood preservative materials, and application instructions.
- C. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.
- D. Warranty Documentation: 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. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

1.05 WARRANTY

- A. See Section 01 7800 - 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.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Western Wood Products Association; WWPA G-5.
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 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.

2.04 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.

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 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.
- E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.04 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. Wall-mounted door stops.
 4. Wall paneling and trim.
 5. Joints of rigid wall coverings that occur between studs.

3.05 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
- B. Provide wood curb at each roof opening except where prefabricated curbs are specified and where specifically indicated otherwise; form corners by alternating lapping side members.

3.06 TOLERANCES

- A. Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.07 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.

3.08 CLEANING

- A. Waste Disposal: See Section 01 7419 - 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 06 1000

**SECTION 06 4100
ARCHITECTURAL WOOD CASEWORK**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Specially fabricated cabinet units.
- B. Countertops.
- C. Hardware.
- D. Laminate shelving.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- B. Section 12 3600 - Countertops.

1.03 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard 2022.
- 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. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood 2020.
- F. NEMA LD 3 - High-Pressure Decorative Laminates 2005.
- G. UL (DIR) - Online Certifications Directory Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit actual samples of architectural cabinet construction, minimum 8 inches square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.
- E. Samples: Submit actual sample items of proposed pulls, hinges, shelf standards, and locksets, demonstrating hardware design, quality, and finish.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.07 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

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. Cabinets:
 - 1. Finish - Exposed Exterior Surfaces: Decorative laminate.
 - 2. Finish - Exposed Interior Surfaces: Decorative laminate.
 - 3. Door and Drawer Front Edge Profiles: Square edge with thin applied band.
 - 4. Door and Drawer Front Retention Profiles: Fixed panel.

5. Casework Construction Type: Type A - Frameless.
6. Adjustable Shelf Loading: 50 psf.
7. Cabinet Style: Flush overlay.
8. Cabinet Doors and Drawer Fronts: Flush style.
9. Drawer Side Construction: Multiple-dovetailed.
10. Drawer Construction Technique: Dovetail joints.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 PANEL CORE MATERIALS

- A. Particleboard: Composite panel composed of cellulosic particles, additives, and bonding system; comply with ANSI A208.1.

2.04 HARDWOOD PLYWOOD PANELS

- A. Hardwood Plywood: Plywood manufactured for nonstructural decorative applications; consisting of faces and backs applied to a variety of core types; comply with HPVA HP-1.
 1. Woodwork Quality Standard: Panels complying with specified woodwork quality standard.

2.05 THERMALLY FUSED LAMINATE PANELS

- A. Thermally Fused Laminate (TFL): Melamine- or polyester-resin-saturated decorative papers; for fusion to composite wood substrates under heat and pressure.
 1. Panel Core Substrate: Particleboard.
 2. Color: As selected from manufacturer's standard range of colors.

2.06 LAMINATE MATERIALS

- A. Manufacturers:
 1. Wilsonart LLC: www.wilsonart.com/#sle.
 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
- C. Provide specific types as indicated.
 1. Horizontal Surfaces: HGS, 0.048 inch nominal thickness, two colors, as selected by Architect from manufacturer's full line, finish as indicated.
 2. Vertical Surfaces: VGS, 0.028 inch nominal thickness, two colors, as selected by Architect from manufacturer's full line, finish as indicated.

2.07 COUNTERTOPS

- A. Countertops: See Section 12 3600.

2.08 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Fasteners: Size and type to suit application.
- C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
- D. Concealed Joint Fasteners: Threaded steel.

2.09 HARDWARE

- A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.
- 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. Drawer and Door Pulls: Bar Pull, 10-1/16 inch centers.
 1. Manufacturers:
 - a. Amerock; Bar Pulls : www.amerock.com/
 - b. Finish: As selected by Architect from manufacturer's full line.

- D. Keyed Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish.
- E. Cabinet Catches and Latches:
 - 1. Type: Magnetic catch.
- F. Drawer Slides:
 - 1. Type: Full extension.
 - 2. Static Load Capacity: Commercial grade.
 - 3. Mounting: Side mounted.
 - 4. Stops: Integral type.
 - 5. Features: Provide self closing/stay closed type.
- G. Hinges: European style concealed self-closing type, steel with satin finish.
- H. Pull Up Cabinet Door Supports: Surface-mounted; steel with satin finish.
- I. Hooks: Surface-mounted; stainless steel, satin finish.

2.10 LAMINATE SHELVING

- A. Loose shelves.
 - 1. Size: As indicated on drawings.
 - 2. Construction: Similar to cabinetry components.
 - 3. Finish: Similar to cabinetry components.
 - 4. Color: As indicated on drawings.

2.11 SHOP TREATMENT OF WOOD MATERIALS

- A. Provide UL (DIR) listed and approved identification on fire retardant treated material.

2.12 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.
- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

2.13 SHOP FINISHING

- A. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:
 - 1. Opaque:
 - a. Color: As selected by Architect.
 - b. Sheen: Flat.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 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.
- C. Use fixture attachments in concealed locations for wall mounted components.
- D. Use concealed joint fasteners to align and secure adjoining cabinet units.
- E. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

- F. Secure cabinets to floor using appropriate angles and anchorages.

3.03 ADJUSTING

- A. Test installed work for rigidity and ability to support loads.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION 06 4100

**SECTION 08 4126
ALL-GLASS ENTRANCES AND STOREFRONTS**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Interior all-glass door and sidelite assembly components with concealed door closers, patch fittings, and top pivots, and sliding door hardware.
- B. Installation of Glass components of All-Glass Entrances supplied under Division 8: Glass and Glazing:
 - 1. Swinging doors, single-acting, as a component of the assembly.
 - 2. Sliding doors (not on exterior), as a component of the assembly.
 - 3. Sidelites, as a component of the assembly.
- C. All-glass storefronts.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry
- B. Section 08 7100 - Door Hardware.
- C. Section 08 8000 - Glazing

1.03 REFERENCE STANDARDS

- A. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass 2018.
- B. BHMA A156.3 - Exit Devices 2020.
- C. BHMA A156.4 - Door Controls - Closers 2019.
- D. BHMA A156.13 - Mortise Locks & Latches Series 1000 2022.
- E. BHMA A156.17 - Self Closing Hinges & Pivots 2019.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate installation of all-glass door assemblies with installation of floor and wall opening construction to comply with tolerance requirements of recessed components.
 - 2. Coordinate installation of anchors and blocking indicated on all-glass entrance shop drawings.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's descriptive literature for each component in all-glass entrance assembly.
 - 1. Glass panels.
 - 2. Patch fittings.
 - 3. Door closer and pivots.
 - 4. Auxiliary door hardware and accessories.
- C. Shop Drawings: Drawings showing layout, dimensions, identification of components, and interface with adjacent construction.
 - 1. Include field measurements of openings.
 - 2. Include elevations showing:
 - a. Appearance of all-glass entrance layouts.
 - b. Locations and identification of manufacturer-supplied door hardware and fittings.
 - c. Locations and sizes of cut-outs and drilled holes for other door hardware.
 - 3. Include details of:
 - a. Requirements for support and bracing at openings.
 - b. Installation details.
 - c. Locations and requirements for recesses and attachments to other work.
 - d. Door hardware components, locations, mounting heights, and installation requirements.
 - e. Size and finish of each item.

- f. Indicate Handing of each door and hardware component.
- g. Indicate finish floor type and thickness and if any underlayment is required.
- D. Selection Samples: Two sets, representing manufacturer's full range of available materials and finishes.
- E. Verification Samples:
 - 1. Glass: Two samples, minimum size 6 by 6 inches, representing actual material and finishes.
 - 2. Hardware: One of each type of exposed door hardware items.
- F. Installer's Qualification Statement.
- G. Warranty: Sample of unexecuted manufacturer warranty.
- H. Operation and Maintenance Data: For manufacturer-supplied operating hardware.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Experienced Installer equipped and trained for installation of glass door assemblies required for this Project with record of successful completion of not less than five projects of similar scope.

1.07 WARRANTY

- A. Manufacturer's Warranty: Standard form in which manufacturer agrees to repair or replace components of glass door assemblies that demonstrate deterioration or faulty operation due to defects in materials or workmanship under normal use within warranty period specified.
 - 1. Warranty Period: Two years pursuant to Manufacturer's Warranty documentation from the date of invoice unless otherwise indicated by Product Manufacturer.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis-of-Design Product: Provide glass door assemblies manufactured by Dormakaba USA, Inc.; (844) 773-2669; email: specifications@dormakaba.com; website: www.dormakaba.us.
- B. Source Limitations: Provide all-glass entrance assemblies including glass panels, fittings and hardware, and accessories through one source.

2.02 ALL-GLASS ENTRANCES AND STOREFRONTS ASSEMBLIES

- A. All-Glass Entrance Assembly Configurations: Interior tempered-glass frameless entrance assembly, with perimeter fittings, patch fitting mountings and supports, door pivots, closers, locks, and accessories.
 - 1. Manual-Swinging, All-Glass Entrance Doors:
 - a. Patch fittings at head and Patch fittings at sill.
 - b. Single Door: Size as scheduled, single-action
 - c. Door Supports: Building structure indicated on Drawings
 - 2. All-Glass Entrance, Sidelights: Glass panels of material and thickness specified, of size indicated on Drawings, held within glazing U channels perimeter fittings.

2.03 FITTINGS AND HARDWARE

- A. Patch Style Fittings for Swinging Doors and Related Fixed Glazing:
 - 1. Top and bottom patch fittings to be 2 inches x 6-1/2 inches and to include the following components:
 - a. Base fitting - cast aluminum with adjustable connecting screws, with frame.
 - b. Adjustable Inserts – material to be a combination of aluminum and hardened steel.
 - c. Inserts to accommodate the pivot/closer mechanisms.
 - d. Covers - snap on type in aluminum anodized as finish requires.
 - e. Provide Fiber Gasket between glass and aluminum assembly, with the addition of a 2-part epoxy and corresponding gasket for laminated glass and doors over 330 lbs.
 - 2. Basis of Design: Dormakaba Universal Center Hung Patch Fittings.
 - a. Clip-on Cover Material and Finish:
 - 1) Aluminum, clear anodized

- b. Sidelite hardware:
 - 1) Top dry gasket channel: Dormakaba Dri-Fit U_Channel
 - 2) Bottom dry gasket channel: Dormakaba Dri-Fit U_Channel
- 3. Materials for base plates, components, and covers:
 - a. Aluminum: ASTM B 221 (ASTM B 221M), with strength and durability characteristics of not less than Alloy 6063-T5.

2.04 SLIDING DOOR ASSEMBLIES

- A. Accessibility Standard: Comply with applicable provisions in ADA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 requirements of authorities having jurisdiction.
- B. Door Panels:
 - 1. Glass panels of material and thickness specified, of size indicated on Drawings.
- C. Sidelights: Glass panels of material and thickness specified, of size indicated on Drawings.
- D. Sliding Door Track: Full-width extruded aluminum track with end caps, 2-3/4 inches (69 mm) high (MUTO), designed for operation, size, and weight of panel door, with factory-finished track with roller carriers, integrated end-of-travel stops, and floor guide.
 - 1. Finish: Anodic Finish: AAMA 611-12, Class II, 0.010 mm or thicker.
 - a. Color: Clear
- E. Track Mounting:
 - 1. Ceiling surface-mounted.
- F. Door Panel Carriers:
 - 1. MUTO Concealed trolley system designed for operation, size, and weight of glass panel door, with ball-bearing wheels, and with clamp-on attachment to glass panels requiring no glass penetration.
- G. Manual Sliding Door Operation:
 - 1. Sliding doors with cushioned close.
 - a. Basis of Design: Dormakaba MUTO XL 150 DORMOTION.
- H. Sidelights: Captured by U channels integrated with door top track assembly. Bottom of sidelites held within glazing U channels as indicated on Drawings.

2.05 DOOR HARDWARE

- A. General: Provide heavy-duty entrance door hardware units in sizes, quantities, and types recommended by manufacturer for all-glass entrance systems indicated. For exposed parts, match metal and finish of rail fittings.
- B. Concealed Floor Closers and Top Pivots: Center hung; BHMA A156.4, Grade 1. Provide housings, bottom insert, top walking beam pivots, mounting plates, and accessories.
 - 1. Basis of Design: Dormakaba, BTS75VBF Series.
 - 2. Provide separate valves for latch speed and sweep speed.
 - 3. Provide built-in pressure relief valve.
 - 4. Provide brackets, as directed in manufacturer's installation instructions, to insure proper installation.
 - 5. Closers shall be non-handed.
 - 6. Swing: Single or double acting as indicated on Drawings.
 - 7. Hold Open: Fixed
 - 8. Opening Force: Comply with interior door operating force of authorities having jurisdiction for accessibility requirements and egress doors .
- C. Pulls and Handles:
 - 1. Mounting style to be Back-to-back – B2B as specified.
 - a. Provide with manufacturer supplied fasteners for Glass Door applications.
 - b. Provide finished mounting roses for single-side mount.
 - c. Provide pulls with proper number of support fixings to accommodate length of pull as recommended by the manufacturer.
- D. Mechanical Locks and Latches:

1. Provide tubular locking ladder type round pull handles with flat tops mounted in a vertical position with straight support fixings.
 - a. Basis of Design: Dormakaba, TG138 Top Locking Ladder Pull or DG1300 Top Locking Ladder Pull.
 - b. Locking Ladder Pull to use Rim type cylinder.
 - c. Locking Ladder Pull to use Rim type cylinder.
 - d. Material: stainless steel.
 - e. Bar diameter: 1-3/8 inches (35mm)
 - f. Bar center to center length: Custom Size as selected by Architect.
 - g. Pull to project off door 3-23/32 inches (94mm) on the non-locking side and 4-23/32 inches (120mm) on locking/cylinder side.
 - h. Provide Option for ADA compliance: Staggered at 10" off finished floor on pull side.
 - i. Latching: Provide Fixed strike or Electric strike for access control - at top latching devices only.
2. Provide conventional, small format interchangeable core (SFIC) type cylinders, with core in compliance with BHMA A156.5 at locations indicated.
3. Coordinate cylinder requirements as required for related sections.
4. Provide proper backplate to accommodate cylinders being provided

2.06 GLASS PANELS

- A. Glass Panels, General:
 1. Coordinate with Section 08 80 00 Glazing.
 2. Follow NGA – National Glass Association/GANA – Glass Association of North America Guidelines.
 3. Provide glass panels that comply with 16 CFR 1201, Category II requirements for safety glazing. Permanently mark glazing with certification label of the SGCC.
 4. Provide glass panels with exposed edges machine ground and flat polished.
 5. Provide holes and cutouts in glass to receive hardware, fittings, and accessories prior to tempering glass. Do not cut, drill, or make other alterations to glass after tempering.
 6. Fully temper glass using horizontal (roller-hearth) process, and fabricate so that when glass is installed, roll-wave distortion is parallel with bottom edge of door or lite.
- B. Hardware intended for use with glass thickness 3/8 inch (9.5 mm) to 13/16 inch (20 mm) tempered glass.

2.07 FABRICATION

- A. General: Fabricate all-glass door assemblies in sizes, profiles, and configurations shown on Drawings.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings are acceptable.
- B. Do not begin installation until substrates and openings have been properly prepared.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- D. Examine door opening to determine if work is within all-glass entrance manufacturer's required tolerances and ready to receive work. Proceed with installation once conditions affecting installation and performance meet manufacturer's requirements. All sides of an opening should be level within 1/8 inch.
- E. Never use glass with conchoidal fractures and/or damaged edges.
- F. Ensure all required wiring for electrified components are tested and in proper working order prior to installation of door.

3.02 PREPARATION

- A. Clean substrates thoroughly prior to installation.
- B. Prepare substrates using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 DOOR INSTALLATION

- A. General: Comply with all-glass entrance manufacturer's written installation instructions and approved shop drawings.
- B. Due to crushing hazards and possible injury caused by breakage of glass during mounting, corresponding protective clothing (especially gloves and protective goggles) is required.
- C. Install all-glass door assemblies after other finishing operations have been completed.
- D. Coordinate installation of recessed products prior to installation of adjacent materials and finishes.
- E. Set assembly units level, plumb, and true to line, with uniform joints.
- F. Ensure floor is level to maintain proper door undercut to avoid doors engaging with the finish floor during the operation of the door.
- G. Maintain uniform clearances between adjacent components.
- H. Secure housings and components to building structure using appropriate fasteners suitable for application.
- I. Provide $\frac{3}{4}$ inch wood blocking between finished material and stud support structure.
- J. Ensure all required wiring for electrified components are run and tested prior to installation of door.
- K. Do not swing doors with excessive force. Install limiting stop to prevent door from opening too far.

3.04 HARDWARE INSTALLATION

- A. Mount Locking Ladder pulls with cylinder on the outside of the space [and thumb-turn on inside of space].
 - 1. Measure and cut cylinder tail piece to the appropriate length for proper operation per manufacturer's written instructions.
 - 2. Ensure cylinder tail piece engages with locking mechanism and is oriented properly.
- B. Back to back mounted pulls to be mounted with set screw location on inside of space. Set screw to be in the downward position.
- C. Use all manufacturer provided fasteners, washers, spacers, anchors, single-sided trim roses, and associated mounting hardware per manufacturer's written instructions. Failure to do so may result in damage.
- D. Clean clamping area with safe alcohol-based standard commercial cleaning agent before mounting the glass hardware.
- E. Never clamp metal glass fitting hardware directly to glass surface.
- F. Never use clamping roller carriers on self-cleaning coatings.
- G. Do not use excessive force when installing the glass (avoid over tightening screws).
- H. When installing dust proof strikes:
 - 1. Drill a 11/16 inch [18mm] diameter hole, 1-5/8 inches [40mm] deep.
 - 2. Clean hole of debris.
 - 3. Insert dust proof strike into hole.
 - 4. Ensure strike functions properly.

3.05 ADJUSTING

- A. Adjust doors and hardware to produce smooth operation and uniform fit per manufacturer's written instructions.
- B. Adjust door closers to required timing and force per manufacturer's written instructions.
- C. Adjust finish hardware components for smooth operation per manufacturer's written instructions.
- D. Adjust locking pins to engage properly with dust proof strikes.
- E. When adjusting glass elements, always comply to the required clearance for the respective hardware. Adjust clearance so glass does not come in contact with any hard surfaces such as glass, metal or concrete.
- F. Replace damaged glass panels and accessories.
- G. Adjust door hardware for smooth operation.

3.06 CLEANING

- A. Clean glass panels in accordance with glass manufacturer's written instructions. Do not use cleaning agents or methods not approved by glass manufacturer.
- B. Clean exposed metal surfaces to factory new appearance.

3.07 PROTECTION

- A. Protect installed products until Date of Substantial Completion.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION 08 4126

**SECTION 08 7100
DOOR HARDWARE**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Hardware for glass doors.
- B. Electrically operated and controlled hardware.

1.02 RELATED REQUIREMENTS

- A. Section 10 2310 - Glazed Interior Wall and Door Assemblies.

1.03 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- B. BHMA A156.16 - Auxiliary Hardware 2023.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- D. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.
- E. NFPA 101 - Life Safety Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. UL (DIR) - Online Certifications Directory Current Edition.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.
- C. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- D. Keying Requirements Meeting:
 - 1. Schedule meeting at project site prior to Contractor occupancy.
 - 2. Attendance Required:
 - a. Contractor.
 - b. Owner.
 - 3. Agenda:
 - a. Establish keying requirements.
 - b. Verify locksets and locking hardware are functionally correct for project requirements.
 - 4. 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.
 - 5. 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.
 - 6. Deliver established keying requirements to manufacturers.

1.05 SUBMITTALS

- A. See Section 01 3000 - 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.
 - 3. Provide manufacturer name, product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.

- 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. Samples for Verification:
 - 1. Submit minimum size of 2 by 4 inch for sheet samples, and minimum length of 4 inch for other products.
 - 2. Submit one (1) sample of hinge, latchset, lockset, closer, and _____ illustrating style, color, and finish.
 - 3. Return full-size samples to Contractor.
 - 4. Submit product description with samples.
- 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.
- H. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Tools: One set of each special wrench or tool applicable for each different or special hardware component, whether supplied by hardware component manufacturer or not.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

1.08 WARRANTY

- A. See Section 01 7800 - 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. Closers: Ten years, minimum.
 - 2. Exit Devices: Three years, minimum.
 - 3. Locksets and Cylinders: Three years, minimum.
 - 4. 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. Applicable provisions of NFPA 101.

4. Auxiliary Hardware: BHMA A156.16.
 5. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.
- D. 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. Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates.

2.02 HARDWARE

- A. Provide products as listed in the Door Hardware Schedule on the drawings.

2.03 FINISHES

- A. Finishes: Identified in Door Hardware Schedule.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.
- B. Verify that electric power is available to power operated devices and of correct characteristics.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.
- C. Use templates provided by hardware item manufacturer.
- D. Do not install surface mounted items until application of finishes to substrate are fully completed.
- E. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
- F. 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.

3.03 CLEANING

- A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.04 PROTECTION

- A. Protect finished Work under provisions of Section 01 7000 - Execution and Closeout Requirements.
- B. Do not permit adjacent work to damage hardware or finish.

END OF SECTION 08 7100

**SECTION 08 8000
GLAZING****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Glazing units.
- B. Plastic films.

1.02 RELATED REQUIREMENTS

- A. Section 08 4126 - All-Glass Entrances and Storefronts: Glazing provided as part of entrance assembly.

1.03 REFERENCE STANDARDS

- A. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass 2018.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data on Glazing Unit and Plastic Film Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Samples: Submit two samples 6 by 6 inch in size of glass units.
- D. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

1.06 MOCK-UPS

- A. Provide mock-up of plastic film including glass.
- B. Mock-ups may remain as part of the Work.

1.07 FIELD CONDITIONS

- A. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Heat Soaked Tempered Glass: Provide a five (5) year manufacturer warranty to include coverage for spontaneous breakage of fully tempered glass caused by nickel sulfide (NiS) inclusions.

PART 2 PRODUCTS**2.01 MANUFACTURERS**

- A. Plastic Films Manufacturers:
 - 1. 3M Window Film: solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/#sle.

2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
 - 1. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
 - 2. Heat-Soak Testing (HST): Provide HST of fully tempered glass used on canopy, point-supported, spider wall, high-risk, sloping overhead, horizontal overhead, free-standing glass protective barrier, or other demanding applications of project, to reduce risks of spontaneous breakage due to nickel sulfide (NiS) induced fractures in accordance with industry established testing requirements.
 - 3. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

2.03 GLAZING UNITS

- A. Monolithic Interior Vision Glazing:
 - 1. Applications: Interior glazing unless otherwise indicated.
 - 2. Glass Type: Fully tempered float glass.
 - 3. Tint: Clear.
 - 4. Thickness: 1/2 inch, nominal.

2.04 PLASTIC FILMS

- A. Type F-1 - Simulated etched glass type.
 - 1. Application: Locations as indicated on drawings.
 - 2. Color, Density and Pattern: to match existing.
 - 3. Cut-out Graphics: As shown on drawings.
 - a. Per digital file to be provided by Architect.
 - 4. Manufacturers:
 - a. 3M Window Films; Fasara.:
solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/#sle.

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 the minimum required face and edge clearances are being provided.
- C. 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.
- D. Verify that sealing between joints of glass framing members has been completed effectively.
- E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 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. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- C. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- D. 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, etc.

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.

- B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION 08 8000

**SECTION 09 2116
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. Gypsum wallboard.
- F. Joint treatment and accessories.
- G. Noise barriers in gypsum board assemblies.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.

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 2018.
- 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 A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members 2015.
- G. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories 2020.
- H. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board 2017 (Reapproved 2022).
- I. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing 2023.
- J. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products 2020.
- K. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board 2020.
- L. 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.
- M. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs 2022.
- N. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base 2019.
- O. ASTM C1396/C1396M - Standard Specification for Gypsum Board 2017.
- P. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber 2021.
- Q. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements 2009 (Reapproved 2016).
- R. ASTM E413 - Classification for Rating Sound Insulation 2022.

- S. GA-216 - Application and Finishing of Gypsum Panel Products 2021.
- T. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data:
 - 1. Provide data on metal framing, gypsum board, accessories, and joint finishing system.
 - 2. Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.
- C. Test Reports: For stud framing products that do not comply with AISI S220 or ASTM C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.
- B. Documents at Project Site: Maintain at the project site a copy of reference standard documents containing execution requirements.

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.
- B. Store metal products to prevent corrosion.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:
 - 1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

2.02 METAL FRAMING MATERIALS

- A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.
- B. 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/240 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.
- C. 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 indicated on drawings.
- D. Non-structural Framing Accessories:
 - 1. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
- E. Grid Suspension Systems: Aluminum grid system of main tees and support bars connected to structure using hanging wire.

1. Products:
 - a. CertainTeed Corporation; ____: www.certainteed.com/ceilings-and-walls/#sle.
 - b. USG Corporation; Drywall Suspension System: www.usg.com/#sle.
 - c. Substitutions: See Section 01 6000 - Product Requirements.

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 1. CertainTeed Corporation; ____: www.certainteed.com/#sle.
 2. Georgia-Pacific Gypsum; ____: www.gpgypsum.com/#sle.
 3. USG Corporation; ____: www.usg.com/#sle.
 4. Substitutions: See Section 01 6000 - 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.
 3. Thickness:
 - a. Vertical Surfaces: 5/8 inch.
 - b. Ceilings: 1/2 inch.
 - c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.

2.04 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness 3 1/2 inch.
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- 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.
 2. Architectural Reveal Beads:
 - a. Reveal Depth: 1/2 inch.
 - b. Reveal Width: 1/2 inch.
 3. Expansion Joints:
 - a. Fire-Resistance Rated: 1 hour when joint system tested in accordance with UL 2079.
 - b. Type: V-shaped PVC with tear away fins.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
- E. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- F. 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.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C1007/AISI S220 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
 1. Level ceiling system to a tolerance of 1/1200.
 2. Laterally brace entire suspension system.
- C. Studs: Space studs at 16 inches on center.
 1. Extend partition framing to structure in all locations.
 2. 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.

- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- E. Blocking: Install wood blocking for support of:
 - 1. Framed openings.
 - 2. Wall-mounted cabinets.
 - 3. Plumbing fixtures.
 - 4. Wall-mounted door hardware.

3.03 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. Place one bead continuously on substrate before installation of perimeter framing members.
 - 2. Place continuous bead at perimeter of each layer of gypsum board.
 - 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 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. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
- D. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
 - 1. Not more than 30 feet apart on walls and ceilings over 50 feet long.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Decorative Trim: Install at locations shown on drawings and in accordance with manufacturer's instructions.
- D. Exterior Soffit Vents: Install according to manufacturer's written instructions and in locations indicated on drawings. Provide vent area specified.

3.06 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 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
 - 3. 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.
 - 2. Taping, filling, and sanding are not required at surfaces behind adhesive applied ceramic tile and fixed cabinetry.
 - 3. Taping, filling, and sanding are not required at base layer of double-layer applications.

3.07 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION 09 2116

**SECTION 09 6500
RESILIENT FLOORING**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Resilient tile flooring.
- B. Installation accessories.

1.02 REFERENCE STANDARDS

- A. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile 2020.

1.03 SUBMITTALS

- A. See Section 01 3000 - 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, 6 by 6 inch in size illustrating color and pattern for each resilient flooring product specified.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Flooring Material: 20 square feet of each type and color.
 - 3. Extra Wall Base: 20 linear feet of each type and color.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.

1.05 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.

1.06 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.

PART 2 PRODUCTS**2.01 TILE FLOORING**

- A. Vinyl Tile: Printed film type, with transparent or translucent wear layer; acoustic interlayer or backing.
 - 1. Manufacturers:
 - a. As scheduled..
 - b. Substitutions: Not permitted.
 - 2. Minimum Requirements: Comply with ASTM F1700, Class III.
 - 3. Wear Layer Thickness: 0.020 inch.
 - 4. Total Thickness: 0.20 inch.
 - 5. Pattern: As scheduled.
 - 6. Color: Two colors; as selected from manufacturer's full range of colors, and as indicated on drawings.

2.02 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.

- B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- C. Adhesive for Vinyl Flooring: type recommended by flooring material manufacturer.
- D. Moldings, Transition and Edge Strips: Same material as flooring.
- E. Filler for Coved Base: Plastic.

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. 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.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

- A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.
- C. Prohibit traffic until filler is fully cured.
- D. Clean substrate.

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. Fit joints and butt seams tightly.
 - 2. Set flooring in place, press with heavy roller to attain full adhesion.
- D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- E. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.04 INSTALLATION - TILE FLOORING

- 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 flooring with joints and seams parallel to building lines to produce symmetrical pattern.

3.05 INSTALLATION - RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.
- D. Scribe and fit to door frames and other interruptions.

3.06 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's written instructions.

3.07 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION 09 6500

**SECTION 09 8430
SOUND-ABSORBING WALL AND CEILING UNITS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sound-absorbing panels.

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's printed data sheets for products specified.
- C. Shop Drawings: Fabrication and installation details, panel layout.
- D. Selection Samples: Manufacturer's color charts for fabric covering, indicating full range of fabrics, colors, and patterns available.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with at least three years of documented experience.

PART 2 PRODUCTS

2.01 PET SOUND-ABSORBING UNITS

- A. Manufacturers:
 - 1. Frasch.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. 100% Polyethylene Terephthalate (PET) Plastic Acoustical Panels for Walls:
 - 1. As scheduled.
 - a. Three colors, to be selected by Architect from manufacturer's full line.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates for conditions detrimental to installation of acoustical units. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install acoustical units in locations as indicated, following manufacturer's installation instructions.
- B. Install mounting accessories and supports in accordance with shop drawings.

3.03 CLEANING

- A. Clean sound-absorptive panels upon completion of installation from dust and other foreign materials, following manufacturer's instructions.

3.04 PROTECTION

- A. Provide protection of installed acoustical panels until Date of Substantial Completion.
- B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

END OF SECTION 09 8430

**SECTION 09 9123
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. Glass.
 - 10. Concrete masonry units in utility, mechanical, and electrical spaces.
 - 11. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency current edition.
- 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. SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).
- E. SSPC-SP 6 - Commercial Blast Cleaning 2007.

1.03 SUBMITTALS

- A. See Section 01 3000 - 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/or catalog number, and general product category (e.g., "alkyd enamel").
 - 2. Cross-reference to specified paint system products to be used in project; include description of each system.
 - 3. Manufacturer's installation instructions.
 - 4. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- C. 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, discuss sheen options with Architect before preparing samples, to eliminate sheens not required.
 - 3. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- D. Samples: Submit two paper chip samples, 8 1/2 x 11 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
- E. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- F. Manufacturer's Instructions: Indicate special surface preparation procedures.

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 3 years experience and approved by manufacturer.

1.05 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.

1.06 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 used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Base Manufacturer: Benjamin Moore & Co: www.benjaminmoore.com..
 - 2. PPG Paints: www.ppgpaints.com/#sle.
 - 3. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 6000 - Product Requirements.

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. Provide materials that are 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. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
 - 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:

- a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
- 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Flammability: Comply with applicable code for surface burning characteristics.
- D. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.
 - 2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted.

2.03 PAINT SYSTEMS - INTERIOR

- A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, uncoated steel, and shop primed steel.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): Institutional Low Odor/VOC Interior Latex; MPI #143, 144, 145, 146, 147, or 148.
 - a. Products:
 - 1) Benjamin Moore; ULTRA SPEC 500.
 - 2) Substitutions: See Section 01 6000 - Product Requirements
 - 3. Top Coat Sheen:
 - a. Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
 - b. Low-Sheen Eggshell: MPI gloss level 3; use this sheen at all locations.
 - 4. Primer: As recommended by top coat manufacturer for specific substrate.
- B. Transparent Finish on Concrete Floors.
 - 1. 2 coats sealer.
 - 2. Sealer: Water Based Sealer for Concrete Floors; MPI #99.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been adequately 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 affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. 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.
 - 2. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
 - 3. Concrete Floors and Traffic Surfaces: 8 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. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
- F. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- G. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 Commercial Blast Cleaning. Protect from corrosion until coated.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- E. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION 09 9123

**SECTION 10 5617
WALL MOUNTED STANDARDS AND SHELVING**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Steel shelf standards, brackets, and accessories.
- B. Aluminum slatwall system.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Wood blocking in walls for attachment of standards.
- B. Section 06 4100-Architectural Wood Casework: Laminate shelves.
- C. Section 09 2116 - Gypsum Board Assemblies: Blocking in metal stud walls for attachment of standards.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store products under cover and elevated above grade.
- B. Store products in manufacturer's unopened packaging until ready for installation.

PART 2 PRODUCTS**2.01 MANUFACTURERS**

- A. Steel Shelf Standards and Brackets:
 - 1. Knappe & Vogt Manufacturing Company; 87™/187™ Series: www.knappeandvogt.com/#sle.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Aluminum Slatwall System:
 - 1. MegaWall, Inc.

2.02 COMPONENTS

- A. Steel Shelf Standards, Brackets, and Accessories:
 - 1. Super-Duty Shelf Standards and Brackets: Single-slotted channel standards for brackets adjustable in 1 inch increments along entire length of standard, drilled and countersunk for screws.
 - a. Product: KV 87/187.
 - b. Load Capacity: Recommended by manufacturer for loading of 540 to 1,060 pounds per pair of standards.
 - c. Lengths: As indicated on drawings.
 - d. Finish: Powder-coated, white; provide screws with matching heads.
 - e. Brackets: 12 gauge, 0.1046 inch sheet steel, reinforced, locking into slots with molded nylon cam lock lever; size to suit shelves; same finish as standards.
 - f. Bracket Quantity: Provide one bracket for each 12 inches of standard length.
- B. Aluminum Slatwall System:
 - 1. Components: MegaWall, Inc.
 - a. 1" Aluminum MegaWall, Hidden Fastener AHF-1-96
 - 1) Sizes: As indicated on drawings.
 - 2) Finish: Clear Anodized.
 - 3) Accessories: J-Caps at top and bottom.
- C. Fasteners: Screws as recommended by manufacturer for intended application or as otherwise required by project conditions. Finish of exposed to view fasteners to match finish of standards and other components.

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.

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. Install in accordance with manufacturer's instructions.
- B. Mount standards or brackets to solid backing capable of supporting intended loads.
- C. Install brackets, shelving, and accessories.

3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 10 5617

**SECTION 12 3600
COUNTERTOPS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Countertops for architectural cabinet work.

1.02 RELATED REQUIREMENTS

- A. Section 06 4100 - Architectural Wood Casework.

1.03 REFERENCE STANDARDS

- A. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position 2022.
- 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 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.
- D. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

PART 2 PRODUCTS**2.01 COUNTERTOPS**

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. 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: www.wilsonart.com/#sle.
 - 2) Substitutions: See Section 01 6000 - Product Requirements.
 - b. Finish: Matte or suede, gloss rating of 5 to 20.
 - c. Surface Color and Pattern: As selected by Architect from the manufacturer's full line.
 - 2. Back and End Splashes: Same material, same construction.
- C. Epoxy Resin Countertops: Filled epoxy resin molded into homogenous, non-porous sheets; no surface coating and color and pattern consistent throughout thickness; with integral or adhesively seamed components.
 - 1. Manufacturers:
 - a. Durcon, Inc, Classic Top: www.durcon.com/#sle.
 - 2. Flat Surface Thickness: 1 inch, nominal.
 - 3. Flammability: Self-extinguishing, when tested in accordance with ASTM D635.
 - 4. Surface Finish: Smooth, non-glare.
 - 5. Color: to be selected by Architect from manufacturer's full line..
 - 6. Exposed Edge Shape: 1/8 inch bevel chamfer.

7. Back and End Splashes: Same material, same thickness; separate for field attachment.

2.02 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. Attach epoxy resin countertops using compatible adhesive.
- D. Seal joint between back/end splashes and vertical surfaces.

3.04 TOLERANCES

- A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.
- B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.
- C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

- A. Clean countertops surfaces thoroughly.

3.06 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 12 3600