

Project Manual

NORTH DAKOTA GAME & FISH DEPARTMENT
NORTHWEST DISTRICT OFFICE BUILDING
EXTERIOR REMODEL
Williston, North Dakota

CD Submittal



Williston

301 2nd Street E, Suite A

Williston, ND 58801

p 701.609.5175

Project Number: JLG 260299

Date: September 15, 2026

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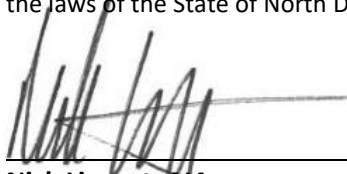
SECTION 00 0105 - CERTIFICATIONS PAGE

NORTHWEST DISTRICT OFFICE BUILDING EXTERIOR REMODEL

WILLISTON, NORTH DAKOTA

Architect

I hereby certify that this Plan, Specification, or Report was prepared by me or under my direct supervision, and that I am a duly Registered Architect under the laws of the State of North Dakota.

A handwritten signature in dark ink, appearing to read 'Nick Lippert', is written over a horizontal line.

Nick Lippert, AIA
Reg. No. 2759

September 15, 2026

END OF SECTION

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ADVERTISEMENT FOR BIDS

NORTH DAKOTA GAME & FISH DEPARTMENT

NORTHWEST DISTRICT OFFICE BUILDING EXTERIOR REMODEL

Williston, North Dakota

Owner: North Dakota Game & Fish Department

Sealed proposals for Construction of the Northwest District Office Building Exterior Remodel will be received by Justin Mattson at 5303 W Front St, Williston, ND 58801, (in person or by mail) until 11:30 AM local time on October 13, 2026 when bids will be opened and read aloud.

The Information to Bidders, Form of Bid, Form of Contract, Form of Performance-Payment Bond, Drawings, Specifications, Addenda, and other contract documents as prepared by JLG Architects may be examined at the following places:

The office of JLG Architects, 301 2nd Street E, Suite A, Williston, Design Professional State 58801.

The Builders Exchange(s) in Fargo, Grand Forks, Bismarck (BBX), Minot, and Dickinson, North Dakota.

The Builders Exchange(s) in Minneapolis (MBEX), Mankato, Rochester, Hibbing, Marshall, Willmar, and Duluth (MBEX), Minnesota.

The Builders Exchange(s) in Aberdeen, Rapid City, and Sioux Falls (Plains), South Dakota.

The Builders Exchange(s) in Billings, Montana.

Online at Construction Connect and Dodge Construction Network.

Bid Documents are available digitally to Prime bidders at the offices of JLG Architects, at no charge.

Each bid must be accompanied by a separate envelope containing the contractor's license and bid security. The bid security must be in a sum equal to five percent of the full amount of the bid and must be in the form of a bidder's bond. A bidder's bond must be executed by the bidder as principal and by a surety, conditioned that if the principal's bid is accepted and the contract awarded to the principal, the principal, within ten days after notice of the award, shall execute a contract in accordance with the terms of the bid, the bid bond, and any conditions of the governing body. Bids shall comply with North Dakota Century Code Chapter §48-01.2 as amended. If a successful bidder does not execute a contract within the time allowed, the bidder's bond shall be forfeited to the governing body and the project awarded to the next lowest responsible bidder.

No bidder may withdraw their bid within 60 days after the actual date of the opening thereof. The Bid Bond of the three lowest Bidders for each contract will be retained until the contract has been awarded and executed, but no longer than sixty (60) days after the date of the Bid.

All Bidders shall hold a valid North Dakota Contractor's license of the proper class for the full amount of the bid as required by North Dakota Law Sections §43-07-05 and §43-07-12 and shall enclose a copy of the license or Certificate of Renewal of the license in the same envelope as the Bidder's Bond. A Contractor shall be the holder of a license at least ten days prior to the date set for receiving Bids to be a qualified Bidder.

No bid will be read or considered which does not fully comply with the above requirements as to bond and licenses, and any deficient bid submitted must be resealed and returned to the bidder immediately.

Bids shall be in accordance with and submitted on the Bid form supplied within the Bid Documents. Failure to do so may result in rejection of the Bid. The Owner reserves the right to reject any and all bids and to waive any formalities therein and rebid the project until a satisfactory bid is received.

The successful Bidder will be required at the time the contract is executed to provide a certificate from and by the office of the State Tax Commissioner showing that all taxes due and owing to the State of North Dakota have been paid, Workers' Compensation Insurance Certificate, Certificate of Insurance to include North Dakota Stop Gap coverage, "Builder's Risk Coverage", Company Safety Manual, Performance and Payment Bond, and Waiver of Subrogation.

A Pre-Bid Conference will be held at the site on September 30, 2026, at 10:00 AM local time.

END OF SECTION

SECTION 00 2113 - INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.01 DEFINITIONS

- A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Bid Form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and all addenda issued prior to execution of the Contract.
- B. Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.
- C. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections.
- D. A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- E. The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- F. An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- G. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
- H. A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

1.02 BIDDER'S REPRESENTATIONS

- A. The Bidder by making a Bid represents that:
 - 1. The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.
 - 2. The Bid is made in compliance with the Bidding Documents.
 - 3. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
 - 4. The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.

1.03 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- A. The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies, or ambiguities discovered.
- B. Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.
- C. Interpretations, corrections, and changes to the Bidding Documents shall be made by Addendum. Interpretations, corrections, and changes to the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

1.04 SUBSTITUTIONS

- A. The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.
- B. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least seven days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.
- C. If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
- D. No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

1.05 ADDENDA

- A. Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.
- B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- C. Addenda will be issued no later than three days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.
- D. Each bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

1.06 PREPARATION OF BIDS

- A. Bids shall be submitted on the forms included with the Bidding Documents.
- B. All blanks on the bid form shall be legibly executed in a non-erasable medium.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- D. Interlineations, alterations, and erasures must be initialed by the signer of the Bid.
- E. It is requested that a change in cost be submitted for all Alternates. Failure to submit a cost change for an alternate may result in the Owner not being able to put together the project desired and cause the bid to not be considered. If no change in the Base Bid is required, enter "No Change."
- F. Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manor.
- G. Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agents authority to bind the Bidder.

1.07 RECEIPT AND OPENING OF BIDS

- A. Bids shall be received by the Owner as defined in the Advertisement or Invitation for Bids - Section 00 1113.
- B. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

- C. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- D. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 30 days after the actual date of opening thereof.

1.08 SUBMISSION OF BIDS

- A. Each bid must be submitted in a sealed envelope bearing the following information on the outside:
 - 1. NAME OF THE PROJECT:
 - 2. NAME OF THE BIDDER:
 - 3. ADDRESS OF THE BIDDER:
 - 4. The words: BID PROPOSAL FOR CONSTRUCTION WORK.
- B. Oral, telephonic, telegraphic, facsimile, or other electronically transmitted bids will not be considered.

1.09 SUBCONTRACTS

- A. The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner. Cause for rejection include, but are not limited to the following:
 - 1. Unacceptable workmanship on past projects.
 - 2. Lack of cooperation and/or inability to meet construction schedules on past projects.
 - 3. Inadequate personnel to meet construction schedule.
- B. The lowest bidder must submit to the Architect a complete list of all suppliers and subcontractors within seven days after the date of the bid. Inability to provide a list of acceptable subcontractors shall be just cause for rejection of the bidder's proposal.

1.10 MODIFICATION OF BIDS

- A. A Bid may not be modified, withdrawn, or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.
- B. Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worked as not to reveal the amount of the original Bid.
- C. Withdrawn Bids may be resubmitted to the date and time designated for the receipt provided that they are then fully in conformance with these Instructions to Bidder.

1.11 BID SECURITY

- A. Each bid must be accompanied by a Bid Bond attached thereto, duly executed by the bidder, as principal and having as surety thereon a surety company approved by the Owner in the amount of 5% of the bid. As soon as the BID prices have been compared, the Owner will return the BONDS of all except the three lowest responsible BIDDERS. When the CONTRACT is awarded, the BONDS of the two remaining will be returned. The BOND of the successful BIDDER will be retained under the AGREEMENT, Performance BOND and Payment BOND have been executed and approved, after which it will be returned. Signatures of all parties will be notarized.
- B. Bid Bonds shall be made payable to the Owner.
- C. The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.

1.12 CONSIDERATION OF BIDS

- A. Opening of Bids: The properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

- B. Rejection of Bids: The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.
- C. Acceptance of Bid (Award)
 - 1. It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgement, is in the Owner's own best interests.
 - 2. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

1.13 TIME OF COMPLETION

- A. Bidder agrees to commence work on or before a date to be specified in a written Notice to Proceed by the Owner and to fully complete the Construction Work as outlined in the project documents and as based on project alternates taken.
- B. Date of Substantial Completion: **May 31, 2027**
- C. Liquidated Damages: If the work is not Substantially Complete on or before the date specified or other date as granted by Change Order, the Contractor shall pay to the Owner as liquidated damages the sum of **\$500** for each calendar day of delay.

1.14 CONDITIONS OF WORK

- A. Each bidder must inform themselves fully of the conditions relating to the construction of the project. Failure to do so will not relieve a successful bidder of their obligation to furnish all materials and labor necessary to carry out their work and must employ such methods and/or means as will not cause any interruption of, or interference with the work of any other contractor.

1.15 PRE-BID CONFERENCE

- A. A Pre-Bid Conference will be held at the project site on Wednesday, September 30, 2026 at 10:00 am local time. Contractors shall meet on location site. After the conference, bidders will be able to tour the site.

1.16 BUILDING PERMIT

- A. The General Contractor shall include the cost of the building permit in their bid.

1.17 BUILDER'S RISK INSURANCE

- A. The General Contractor shall provide Builder's Risk Insurance.
- B. See AIA Document A201-2017 Subsection 11.5 for additional information and specification Section 00 7300 - Supplementary Conditions for modifications.

1.18 SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with their delivery of the executed contract, each contractor shall furnish a Performance-Payment Bond as security for faithful performance of this contract and furnishing materials in connection with this contract. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner. The amount of the bonds shall be 100% of the contract.

1.19 POWER OF ATTORNEY

- A. Attorneys-in-fact who sign bonds on contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

1.20 LAWS AND REGULATIONS

- A. The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout and they will be deemed to be included in the contract the same as though herein written out in full.

- B. Bidders must hold a North Dakota Contractor's license, carry North Dakota Worker's Compensation Insurance, and conform to all governing laws of the State of North Dakota.

1.21 OBLIGATION OF BIDDER

- A. At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and become thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect to their bid.

1.22 STATE EXCISE AND USE TAX (SALES TAX)

- A. In submitting the bid, the bidder is understood to have included in the bid price the state tax on all sales of building materials, supplies, and equipment to contractors, subcontractors, or builders for the erection of buildings or their alteration, repair, or improvement.

1.23 STORING MATERIALS OFF-SITE

- A. Contractor may store materials off-site and receive payment for said materials. If it is desired by the Contractor to order and store materials off-site, there shall be prior agreement to any arrangement by the Owner and Architect before ordering or Application for Payment. Evidence shall be furnished to the Owner and Architect that the materials have been ordered, delivered and paid for. A Certificate of Insurance for materials stored off-site shall accompany other required information at the time of the Application for Payment. The location of the stored materials shall be acceptable to the Owner.

1.24 OWNER REQUIREMENTS OF THE CONTRACTOR

- A. For Contract language that will be incorporated into AIA Owner-Contractor Agreements, see Project Manual Section 00 5000.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 00 2600 - PROCUREMENT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Requirements for submitting substitution requests for materials, products, equipment and methods of construction from those required by the Procurement Documents, during the procurement phase and prior to execution of the Owner/Contractor Agreement.

1.02 SUBSTITUTIONS (DURING THE PROCUREMENT/BIDDING PHASE)

- A. The technical specification sections may have several materials, products, equipment and methods of construction specified under the same heading. Selection of a specified materials, products, equipment and methods of construction shall be at the option of the Bidder. Where materials, products, equipment and methods of construction are specified accompanied with the phrase "Or Equal", "Approved Substitution", or similar verbiage, the Bidder may submit materials, products, equipment and methods of construction for approval in accordance with the requirements of this Document.
- B. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect (or Construction Manager as applicable) at least seven working days prior to the date for receipt of Bids.
 - 1. Submit each request for substitution on the Architect's "Procurement Substitution Request Form" included at the end of this Section.
 - 2. Submit one material, product, equipment and methods of construction per request form, either duplicated from the Project Manual or available from the Architect's office.
 - 3. Submittals not accompanied by this form properly filled in and endorsed, will be discarded without review. NO EXCEPTIONS.
 - 4. Where specified materials, products, and equipment are accompanied by a color, pattern or finish selection, requests for substitution shall include an actual sample of the proposed color, pattern or finish for review.
 - 5. Where multiple materials, products or equipment are specified within a single specification section, specifically identify which product you wish to substitute.
- C. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or rejection of a proposed substitution shall be final.
- D. Materials, products, equipment and methods of construction approved by this substitution procedure will be issued in an Addendum.
- E. Refer to Section 01 2500 for requests for substitutions after execution of the Owner/Contractor Agreement.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PROCUREMENT SUBSTITUTION REQUEST FORM

TO: JLG Architects
301 2nd Street E, Suite A
Williston, ND 58801

Phone: 320-271-7012
Contact: Greg Bohl
gbohl@jlgarchitects.com

PROJECT: ND Game & Fish Department, Northwest District Office Building Exterior Remodel, Williston, North Dakota

Section Number _____ Section Title _____

Specified Product _____

Proposed Substitution _____

All of the following questions must be answered. Incomplete forms will be not be reviewed.

1. The following supporting data is attached:
☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports
2. Does the proposed substitution affect dimensions shown on Drawings, or functional clearances?
☐ YES ☐ NO
3. Does the proposed substitution change the design or details shown on the Drawings?
☐ YES ☐ NO
4. Does the proposed substitution affect other trades?
☐ YES ☐ NO
5. Does the proposed substitution affect maintenance service, or source of replacement parts, if applicable?
☐ YES ☐ NO
6. Does the proposed guarantee or warranty differ from that specified?
☐ YES ☐ NO
7. If "YES" to Items 2, 3, 4, 5 or 6 above, attach a thorough explanation on your company letterhead.
8. If there are other major differences between proposed substitution and specified product, attach a thorough explanation on your company letterhead.
9. The proposed substitution was used within the last 24 months on the following project:
Project Name _____
Location _____
Architect _____ Telephone No. _____
10. Has the proposed substitution been used on a JLG Architects project within the last 12 months?
☐ YES ☐ NO; If yes, which project? _____
11. The undersigned states that the function, appearance and quality of the substitution item are equivalent or superior to the specified item.

Submitted By: Firm _____ Signature _____
Address _____
Telephone _____ Fax _____
Date _____ E-Mail _____

For Use By Design Consultant: ☐ Accepted ☐ Accepted As Noted ☐ Not Accepted ☐ Received Too Late

Name _____ Signature _____

Date _____ Remarks _____

SECTION 00 4100 - BID FORM

TO:

North Dakota Game & Fish Department

BID DATE: OCTOBER 13, 2026, 11:30 AM

Having examined all bidding requirements, general conditions, Specifications and Drawings entitled (Northwest District Office Building Exterior Remodel); dated: 9/14/2026, and addenda similarly entitled and numbered _____, _____, _____, as prepared by JLG Architects, and having visited the site and examined all conditions affecting the work, the undersigned agrees to furnish and pay for all labor, materials, and equipment for the following Construction Contract as required by the afore mentioned documents for the following proposals:

STIPULATED SUM BASE BID FOR (SINGLE PRIME):

GENERAL CONSTRUCTION

_____ Dollars, (\$_____)

ALTERNATES:

The undersigned agrees to perform Alternates (if required by Contract Documents) as described in the Contract Documents for the following cost as a change to the Base Bid Stipulated Sum stated above.

Alt. #	Description	Amount
--------	-------------	--------

1	OVERHEAD DOORS	ADD/ DEDUCT: _____
---	----------------	--------------------

State the amount to be ADDED to the Base Bid to provide all materials, labor & equipment required for replacing the overhead doors in lieu of repainting them, as indicated in the drawings and specifications.

MISCELLANEOUS:

BIDDER has familiarized themselves with the nature and extent of the Contract Documents including Work, site, locality, and all local conditions, and Laws & Regulations that in any manner may affect cost, progress, performance, or furnishing of the Work.

BIDDER has given the Architect and its consultants written notice of all conflicts, errors, or discrepancies that it has discovered in the Contract Documents and the written resolution by the Architect is acceptable to BIDDER. The low bidder agrees to submit a list of sub-contractors (AIA G705) within 24 hours of the date of the bid. In submitting this bid, the undersigned agree that this bid shall not be withdrawn for a period of sixty days.

NOTE: THIS BID FORM SHALL BE SUBMITTED IN DUPLICATE.

SIGNED:

_____, a (Sole Proprietorship) (Partnership) (Corporation).
Firm Name (strike through two)

Street Address

City, State ZIP code
Phone: _____ Fax: _____

_____, _____
Signed By, Title

_____, _____
Signed By, Title

_____, _____
Signed By, Title

_____, _____
Witnessed By, Title

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 the secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of director's authorizing them to do so, must be submitted with the Bid Form in the bid envelope.

END OF SECTION

SECTION 00 5000 - CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID LICENSE TO USE ALL COPYRIGHTED DOCUMENTS SPECIFIED BUT NOT INCLUDED IN THE PROJECT MANUAL.

1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT

- A. The Agreement form is AIA A101.
- B. The General Conditions are AIA A201.

1.03 FORMS

- A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in Contract Documents.
- B. Bond Forms:
 - 1. Performance and Payment Bond Form: AIA A312.
- C. Post-Award Certificates and Other Forms:
 - 1. Application for Payment Forms: AIA G702 with AIA G703 (for Contractors).
- D. Clarification and Modification Forms:
 - 1. Architect's Supplemental Instructions Form: AIA G710.
 - 2. Construction Change Directive Form: AIA G714.
 - 3. Change Order Form: AIA G701.
- E. Closeout Forms:
 - 1. Certificate of Substantial Completion Form: AIA G704.

1.04 REFERENCE STANDARDS

- A. AIA A101 - Standard Form of Agreement Between Owner and Contractor where the basis of Payment is a Stipulated Sum; 2017.
- B. AIA A201 - General Conditions of the Contract for Construction; 2017.
- C. AIA A312 - Performance Bond and Payment Bond; 2010.
- D. AIA G701 - Change Order; 2017.
- E. AIA G702 - Application and Certificate for Payment; 1992.
- F. AIA G703 - Continuation Sheet; 1992.
- G. AIA G704 - Certificate of Substantial Completion; 2017.
- H. AIA G710 - Architect's Supplemental Instructions; 2017.
- I. AIA G714 - Construction Change Directive; 2017.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 00 7300 - SUPPLEMENTARY CONDITIONS

PART 1 - GENERAL

The following supplements modify, change, delete from, or add to the General Conditions of the Contract for Construction, AIA Document A201, 2017. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 1 GENERAL PROVISIONS

1.1 Basic Definitions

Add: 1.1.3.1 The term "provide" shall mean furnish and install in place.

1.1.5 After the paragraph, Add: The general character and scope of the Work is shown by the Drawings. Where a portion of the Work is fully drawn and the remainder is merely indicated, the portion fully drawn shall apply to all similar parts of the Work.

Add: 1.1.5.1 Figured dimensions on the Drawings shall be followed in preference to scaled measurements on the Drawings.

1.1.6 After the paragraph, Add: Where Specifications are abbreviated type, they indicate complete sentences in the same manner as when a note occurs in the Drawings. Omissions of words such as "the Contractor shall" and "as shown on the Drawings" is intentional. The words "shall" or "shall be" are to be supplied by inference.

Add: 1.1.6.1 Where a number is listed in the Specifications (as for gauges, weights, temperatures, amounts of time, etc.), the number shall be interpreted as that or better.

1.2 Correlation and Intent of the Contract Documents

Add: 1.2.4 In the case of an inconsistency between Drawings and Specifications or within either Document not clarified by addendum, the better quality or greater quantity of Work shall be provided.

Add: 1.2.5 As experienced Contractors and Subcontractors, it is assumed each Contractor and Subcontractor understands not all components may be shown on the Drawings including, but not limited to, fasteners, connectors and incidental supports. This shall not relieve the Contractors or Subcontractors from providing all materials, equipment, fasteners, and incidental components as required for a complete installation in accordance with the design intent.

1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

Add: 1.5.2.1 The Contractor(s) may retain one record set of Drawings and Project Manual(s).

1.6 Notice

1.6.1 omit the words "if a method for electronic transmission is set forth in the Agreement".

ARTICLE 2 OWNER

2.3 Information and Services Required of the Owner

2.3.6 Replace the text with: The Contractor(s) will be furnished as many sets of Drawings and Project Manuals as the Architect has available for distribution, but in no case less than one. If the Contractor(s) require additional sets, an electronic copy of the documents will be provided in Adobe PDF format with which the Contractor(s) may use to make additional copies at their expense.

ARTICLE 3 CONTRACTOR

3.2 Review of Contract Documents and Field Conditions by Contractor

3.2.1 Add the words "including the geotechnical report (if any)," following the word "performed,".

3.4 Labor and Materials

Add: 3.4.2.1 After the Contract has been executed, the Owner and Architect may consider requests for the substitution of products in place of those specified. The Owner and Architect may, but are not obligated to, consider only those substitution requests that are in full conformance with the conditions set forth in the General Requirements (Division 1 of the Specifications). By making requests for substitutions, the Contractor:

- .1 represents that it has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to the product specified;
- .2 represents that it will provide the same warranty for the substitution as it would have provided for the product specified;
- .3 certifies that the cost data presented is complete and includes all related costs for the substituted product and for Work that must be performed or changed as a result of the substitution, except for the Architect's redesign costs, and waives all claims for additional costs related to the substitution that subsequently become apparent;
- .4 agrees that it shall, if the substitution is approved, coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects; and
- .5 represents that the request includes a written representation identifying any potential effect the substitution may have on the Project's achievement of a Sustainable Measure or the Sustainable Objective.

Add: 3.4.4 No trade shall commence Work until conditions are satisfactory for carrying out the Work properly, and surfaces to be covered are suitable.

Add: 3.4.5 Manufacturer's printed instructions covering details of installation shall be followed where not in conflict with these Specifications. If there is a conflict, notify the Architect and obtain Architect's approval before proceeding.

Add: 3.4.6 Completed Work shall be left plumb, level, true to line or plane, anchored securely in place, and free from damage.

Add: 3.4.7 Unless otherwise called for, all pieces of material shall be as large a stock size as is in conformity with standard good practice of the trade.

Add: 3.4.8 Except where in conflict with the Specifications, current manufacturer's printed instructions of herein specified proprietary products are made part of the Specifications.

Add: 3.4.9 The Owner shall be entitled to reimbursement from the Contractor for amounts paid to the Architect for reviewing the Contractor's proposed substitutions and making agreed-upon changes in the Drawings and Specifications resulting from such substitutions.

Add: 3.4.10 The Contractor shall provide all incidental materials and components including, but not limited to, fasteners, connectors, incidental supports and other components of construction as required for complete installation in accordance with the design intent.

3.5 Warranty

Add: 3.5.1.1 The Contractor further warrants that all products, materials and equipment provided under the Contract are asbestos-free as defined under current EPA Guidelines, and that they do not contain any other materials currently known to be hazardous.

Add: 3.5.3 The Contractor shall guarantee and maintain the stability of all work and materials and keep same in reasonable repair and condition for the period of one (1) year from the date of final acceptance of the Work but with respect to any part of the Work which the Owner takes possession of prior to final acceptance, the guarantee shall continue for a period of one year from the date the Owner takes possession. This is in addition to any manufacturer's warranty specified.

Add: 3.5.4 Defects of any kind, due to faulty work or materials appearing during the above-mentioned period must be promptly made good by the Contractor at his own expense to the entire satisfaction of the Owner and Architect. Any such construction and repairs shall include the costs of all damages to the finish or furnishings of the building resulting from the original defect or repairs to the building. Where equipment is required to be replaced, the one-year warranty shall be reinstated for that piece of equipment from the date of replacement.

Add: 3.5.5 The guarantee, as provided in paragraph 3.5.4, does not apply to injuries or damages occurring after final acceptance due to "acts of God," fire, violence, abuse, or carelessness of other Contractors or agents of the Owner; however, the Owner reserves the right to make temporary repairs as necessary to keep equipment in operating condition without voiding the Contractor's guarantee nor relieving the Contractor of the Contractor's responsibilities during the guarantee period.

Add: 3.5.6 The guarantee, as provided in paragraph 3.5.4, shall be extended if other guarantees for different lengths of time are specifically called for in the Contract Documents or if manufacturer's standard warranties extend for a longer period.

3.7 Permits, Fees, Notices and Compliance with Laws

3.7.1 Change the word "...Contractor..." to read "...General Contractor..."

Add: 3.7.2.1 When the Contract Documents require Work better than that required by statute, the Contract Documents shall govern.

3.12 Shop Drawings, Product Data and Samples

Add: 3.12.6.1 If the Contractor or any Subcontractor uses a material, product or piece of equipment which requires modification(s) to any other portion of the Work, including mechanical and electrical Work, the Contractor or Subcontractor using that material, product or piece of equipment shall be responsible for coordinating all required modifications and shall bear the full cost of such modifications.

ARTICLE 4 ARCHITECT

4.2 Administration of the Contract

4.2.3 Add to the end of paragraph: The Architect will not be responsible for the acts or omissions of the Owner.

ARTICLE 5 SUBCONTRACTORS

5.1 Definitions

Add: 5.1.3 All Subcontractors are bound to the terms of the General and Supplementary Conditions.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

No supplement.

ARTICLE 7 CHANGES IN THE WORK

7.1 General

Add: 7.1.4 All proposals shall, at a minimum, include detailed breakdown and indicate the terms enumerated below. Item (a) constitutes the cost of labor, and items (a), (b), and (c) constitute the basic costs referred to under this Article 7.

(a) Labor costs, itemized by each trade involved, showing the hourly rates for each, and the hours required for the change. Labor rates shall be the same for extra and credit computations and shall be the actual rate paid the workmen, plus contractor's burden on labor, which shall be only the actual costs of fringe benefits, taxes on labor, worker's or workmen's compensation, insurance on labor as affected by payroll, unemployment taxes and insurance, including FICA and FUTA.

(b) Quantities of materials, equipment and supplies, at their actual cost, with unit costs indicated, plus applicable sales tax.

(c) The cost of subcontracted work, computed in the same way as provided for under this subparagraph.

(d) Overhead, profit or commission added after the above computations are complete. Such overhead, profit or commission shall be computed in accordance with the provisions of subparagraph 7.1.5.

Add: 7.1.5 Maximum allowances for Subcontractor's/Contractor's overhead and profit shall be as follows, expressed as a percentage of the basic cost of the change:

For Subcontractors:	a. 15% of the net cost of the additional Work.
For Contractor:	b. 5% of the net cost of the additional Work performed by Subcontractors
	c. 15% of the net cost of the work performed by Contractor's own forces.
	Add 5% to a and c for all changes of less than \$500.00; deduct 5% from a and c for all changes over \$10,000.00.

Overhead and profit shall include all bond premiums (if applicable), and will not be allowed on labor costs if overhead and profit is already included in hourly billing rate.

Add: 7.1.6 For proposed changes in the Work on the lump sum or time and material methods, the costs shall be determined as provided in this subparagraph. The Contractor shall submit an itemized list of quantities with the applicable unit costs and extended price for each, in such form and detail as required by the Architect.

7.2 Change Orders

7.2.2 Neither the Owner nor the Architect are responsible to give Notice of Change Orders to the surety.

7.3 Construction Change Directives

7.3.2 At the end of the sentence, Add: "or as deemed necessary by the Architect".

7.3.4 At the end of the first sentence replace "a reasonable allowance for overhead and profit." with "allowances for overhead and profit as indicated in 7.1.5."

ARTICLE 8 TIME

8.1 Definitions

Add: 8.1.3.1 Minor corrective Work and the replacement of defective Work or materials, and the adjustment of control apparatus, will not delay the determination that the Contract is Substantially Complete.

Add: 8.1.3.2 The date of Final Completion is the date certified by the Architect in accordance with Paragraph 9.10.2.

8.2 Progress and Completion

Add: 8.2.1.1 The Date of Substantial Completion and the Date of Final Completion are as specified in Section 00 2113 - Instructions to Bidders. If the Work is not Substantially Complete on or before the date specified or other date as granted by Change Order, the Contractor shall pay to the Owner as liquidated damages the sum of **\$500** for each calendar day of delay. If the Work has not achieved Final Completion by the date specified or other date as granted by Change Order, the Contractor shall pay to the Owner as liquidated damages the sum of **\$500** for each calendar day of delay. Any monies due to the Owner as liquidated damages will be deducted from any monies due or to become due to the Contractor under the Contract, or will be collected from the Contractor's surety. These sums are not to be construed in any sense as a penalty.

8.3 Delays and Extensions of Time

Add: 8.3.1.1 The following will not be considered justifications for extension of time unless due to one of the causes stated within Article 8:

- a) Delay caused by Subcontractors or Supplier except if the Supplier goes out of business and another Supplier cannot be found in time to meet the schedule.
- b) Shortage of workers.

Add: 8.3.1.2 Change Orders for extension of Contract Time shall be considered only under the following conditions or circumstances:

- .1 As indicated in Paragraph 8.3.1. The burden of proof to substantiate the extension of time shall rest with the Contractor, including evidence that the cause was beyond their control. The Contractor shall be deemed to have had control of the supply of labor (except in the case of organized labor disputes), materials, equipment, methods, and techniques, and of the Subcontractors.
- .2 A delay in the progress of the Work actually occurred as a result of one of the valid causes for time extension.
- .3 Unusual delay in delivery solely due to a delay in transportation. An extension of time shall not be considered when delay in delivery is due to improperly scheduled delivery, or when an order has not been promptly and properly placed.
- .4 Abnormal weather conditions. The Contractor shall consider the location of the Project, and shall recognize the existence of variations from severe deviations from average climatic conditions. Foul weather in and of itself shall not be a valid cause for a time extension. Time extensions resulting from abnormal weather shall not be considered unless a significant deviation from average seasonal climatic conditions occurred for an extended period of time, and the progress of the Work was delayed to a significant extent. The climatic conditions before and after the period for which the delay is sought shall be evaluated.
- .5 Changes in the Work which significantly affect the progress of the Work. When the anticipated delay can be determined the extension will be made when the Change in Work is authorized by the Owner. When the anticipated delay cannot be determined, the Contractor shall estimate the additional time required, and a mechanism for all parties to determine the allowable delay. In such a case, the Architect will determine the time extension and the Contract Time adjusted accordingly by Change Order. For changes in the Work which affect only a portion or Phase of the entire project, the Owner reserves the right to grant a time extension only for that portion or Phase affected by the Change.
- .6 Labor disputes except for lockouts over which the Contractor has control. The amount of time extension shall not be longer than the actual dispute period plus a reasonable time for mobilization, and such extension may be less than the actual dispute period depending on the effect the dispute had upon the progress of the Work.
- .7 Unavoidable delays such as damage caused by severe weather, fire or other casualty to the Work; remediation of contaminants, pollutants, or hazardous materials or substances discovered after award of the Contract; litigation including without limitation bankruptcy proceedings; the acts of any federal, state or local government unit that directly result in delays; and other delays outside the control of the Party claiming the delay.
- .8 Delays caused by Subcontractors shall be considered only under the conditions noted above.
- .9 Time extensions may be granted through a change order for substantiated abnormal weather conditions, however, no change to the contract price will be granted.

Add: 8.3.1.3 Time extensions shall not be granted as a result of delays caused by improper scheduling, or by failure of the Contractor to have Shop Drawings or other required submittals submitted in sufficient time for review.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 Contract Sum

9.1.2 Add sentence at end: "The costs for overhead, profit and commission shall be determined in accordance with the provisions of subparagraph 7.1.5."

9.3 Applications for Payment

9.3.1 In the first sentence replace: "At least ten days before the date established for each progress payment," with: "Not more than once a month,".

9.3.2 Replace the text with: Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered to and suitably stored at the site for subsequent incorporation into the Work. Contractor shall not receive payment for materials and equipment stored off site. Payment for materials and equipment stored on the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment, or otherwise protect the Owner's interest, including applicable insurance.

Add 9.3.4 Progress payments shall be made monthly upon application, in the amount of 90% of the Work completed and materials described under 9.3.2. For a Contract of over \$100 thousand, the Architect will authorize the payment of 100% of the amount completed after a total of 5% of the Contract amount has been retained, providing progress on the Work is in accordance with or ahead of the Contractor's construction schedule and is satisfactory to the Architect and if the Contractor has filed a Consent of Surety with the Architect.

9.8 Substantial Completion

9.8.1 At the end of the paragraph Add: In all cases, the date of the Substantial Completion may not be earlier than the Certificate of Occupancy issued by the authority having jurisdiction. Minor corrective Work, the replacement of defective Work or materials, and the adjustment of control apparatus will not delay the determination of Substantial Completion. See paragraph 12.2.2.

9.8.2 At the end of the paragraph Add: Minor punch list items that do not interfere with using the Work as intended may be corrected between Substantial Completion and Final Completion.

9.10 Final Completion and Final Payment

9.10.2 After "warranties or specific Subcontractor warranties," DELETE "and (6)" and REPLACE WITH ", (6) written certification from Contractor in accordance with Final Inspection requirements of Section 01 7800, (7) all Contract Closeout submittals required by Section 01 7800, each submittal having been approved by the Architect, and (8)".

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.3 Hazardous Materials and Substances

10.3.1 In the second sentence after: "asbestos", Add: ", lead-containing materials,"

ARTICLE 11 INSURANCE AND BONDS

11.1 Contractor's Insurance and Bonds

11.1.1 Modify the third sentence by adding "the State of North Dakota including its agencies and officers," after "The Owner," and by deleting "policy" and replacing it with "and automobile liability policies".

11.1.2 Replace the first sentence with: The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required in the Agreement or elsewhere in the Contract Documents, covering the faithful performance of the Contract and the payments of all obligations arising thereunder.

11.1.3 Replace paragraph with: The Contract will not be executed by the Owner until the Owner has received, from the Contractor, the properly executed surety bonds specified in AIA A101-2017 Exhibit A Insurance and Bonds.

11.5 Adjustment and Settlement of Insured Loss

11.5.1 At the end of the first sentence add: "except when the fiduciary consents to allow a party with a claim to settle directly with the insurer."

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

No supplement.

ARTICLE 13 MISCELLANEOUS PROVISIONS

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

14.2 Termination by the Owner for Cause

14.2.1.2 At the end of the Subparagraph Add "or in accordance with the Contract Documents".

Add: 14.2.1.5 files a bankruptcy petition or has a bankruptcy action commenced against it that is not discharged within 30 days of commencement of same, makes an assignment for the benefit of its creditors, has a receiver appointed to manage the Contractor's assets or otherwise becomes insolvent;

Add: 14.2.1.6 fails to maintain schedules as required by the Contract Documents, or fails to comply in a material way with design requirements of the Contract Documents, or persistently fails to perform the Work in accordance with the Contract Documents.

14.2.4 Replace the text with: If the unpaid balance of the Contract Sum exceeds the direct and indirect consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs), and other damages incurred by the Owner, such excess will be paid to the Contractor. If such costs and damages exceed such unpaid balance, the Contractor shall pay the difference to the Owner. Such costs incurred by the Owner will be approved as to reasonableness by the Architect, but when exercising any rights or remedies under this paragraph, the Owner shall not be required to obtain the lowest price for the Work performed. This obligation to payment shall survive termination of the Contract.

ARTICLE 15 CLAIMS AND DISPUTES

15.1.6 Claims for Additional Time

Add: 15.1.6.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work, and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.

Add: 15.1.6.4 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor

AIA DOCUMENT A101-2017 EXHIBIT A

ARTICLE A.1 - GENERAL

Add: Reference to "all-risks" in this document shall mean builder's risk policy.

ARTICLE A.2 - OWNER'S INSURANCE

A.2.3 Required Property Insurance

A.2.3.1 Modify paragraph to read: Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies

lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3,1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Architect. Engineers Contractor, Subcontractors, and Sub subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees. This insurance is not intended to cover machinery, tools or equipment owned or rented by the Contractor that are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor shall, at the Contractor's own expense, provide insurance coverage per Article A.3.3.2.5 for owned or rented machinery, tools or equipment which shall be subject to the provisions of the General Conditions, Article 11.3 Waivers of Subrogation.

ARTICLE A.3 - CONTRACTOR'S INSURANCE AND BONDS

A.3.1 General

A.3.1.1 Replace the third sentence with: The certificates will show the Owner and Architect as additional insured on the Contractor's Commercial General Liability and umbrella liability policy or policies.

A.3.1.1 Replace the third sentence with: The certificates will show the Owner, the State of North Dakota including its agencies and officers, and Architect as additional insured on the Contractor's General Liability and umbrella liability and automotive liability policies.

Add: A.3.1.1.2 In addition to the requirements above, the Contractor shall furnish Certificates of Insurance and copies of the additional insured endorsements prior to execution of the Contract. Endorsements shall contain a "Waiver of Subrogation," waiving any right of recovery the insurance companies may have against the State as well as provisions that the policies and/or endorsements may not be canceled or modified without a thirty (30) day written notice to the Owner, and that any attorney who represents the State under the policy must first qualify and be appointed by the North Dakota Attorney General as required under NDCC Section 54-12-08.

Add: A.3.1.1.3 The Contractor will receive an Exhibit "E" Waiver of Subrogation Form at the time the contract is sent out, and they shall complete and return said form with the Contract and insurance certificate(s).

A.3.1.3 Modify the first sentence by adding ", the State of North Dakota including its agencies and officers," after "... (1) the Owner" and after "... (2) the Owner".

A.3.2 Contractor's Required Insurance Coverage

A.3.2.1 Add to end of paragraph: The Architect and Owner assume no responsibility in the event that the limits set below are not adequate.

A.3.3 Contractor's Other Insurance Coverage

A.3.3.2.1 In fifth sentence replace "Owner" with "[General] Contractor". See Article 11.5 of both the General Conditions and Section 00 7300 Supplementary Conditions for additional information.

Add: A.3.3.2.1.1 If the Owner is damaged by the failure of the [General] Contractor to maintain this insurance, then the [General] Contractor shall bear all reasonable costs properly attributable thereto.

A.3.3.2.4 Add to end of paragraph: The Contractor shall provide this insurance if storing materials and equipment off-site. See article 9.3.2 of the General Conditions and Section 00 7300 Supplementary Conditions for additional requirements relating to materials or equipment stored off-site.

A.3.4 Performance Bond and Payment Bond

Delete second paragraph beginning "Payment and Performance Bonds..."

Add: A.3.4.1 Where there are State, Federal or other jurisdictional bond forms required by statute or regulation, the bond or bonds shall be on those forms, in the amount of 100% of the Contract amount. Where no such requirements exist, the Contractor shall furnish both AIA A312 Performance and AIA A312 Labor and Material Payment Bond, current as of the date of the agreement. Each bond, Performance and Payment shall be in the amount of 100% of the Contract amount.

Add: A.3.4.2 The Contractor shall require the attorney-in-fact who executes the required surety bonds on behalf of the surety to affix thereto a certified and correct copy of the power of attorney.

Add: A.3.4.3 Bond amounts shall not exceed the single bond limit for the Contractor's bonding company as set forth in the Federal Register current as of the bid date.

END OF SECTION

SPECIAL TERMS

ADDENDUM #1

This Addendum is entered into between the State of North Dakota acting through the North Dakota Game and Fish Department and _____ (Contractor) to amend the Document entitled "Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum."

Contractor and Owner, the Parties, in mutual recognition that Owner is a state agency of the State of North Dakota, agree that this Special Terms Addendum and its terms are fully incorporated into and are fully part of the Document entitled "Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum."

The parties agree to the following terms and conditions and expressly agree that if any of the following terms and conditions are in conflict with any of the terms and conditions of the Contract, then, notwithstanding any term in the Contract, the following terms and conditions govern and control the rights and obligations of the parties and any other related conflicting or potentially conflicting paragraphs or provisions within this Agreement. Any amendments to the Contract, this Addendum, or any other amendments, must be in writing and executed by both parties.

The following paragraphs are added to or amended as follows within the document entitled "Specifications for Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum." :

SPECIAL PROVISION NO. 1

Contractor's Insurance

The liability insurance required by Article 11 shall be written for not less than \$2,000,000 per occurrence."

Failure to provide insurance as required in this agreement is a material breach of contract entitling State to terminate this agreement immediately. All endorsements shall be provided as soon as practicable."

The insurance coverages listed above must meet the following additional requirements.

- a. Any deductible or self-insured retention amount or other similar obligation under the policies shall be the sole responsibility of the Contractor. The amount of any deductible or self-retention is subject to approval by the State.
- b. This insurance may be in policy or policies of insurance, primary and excess, including the so-called umbrella or catastrophe form, and must be placed with insurers rated "A-" or better by the A.M. Best Company, Inc., provided any excess policy follows form for coverage. Less than an "A-" rating must be approved by the State. The policies shall be in form and terms approved by the State.
- c. The State will be defended, indemnified, and held harmless to the full extent of any coverage actually secured by the Contractor in excess of the minimum requirements set forth above. The duty to indemnify the State under this agreement shall not be limited by the insurance required in this agreement.

- d. A provision that any attorney who represents the State under this policy must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. § 54-12-08;
- e. A provision that Contractor's insurance coverage shall be primary (i.e., pay first) as respects any insurance, self-insurance or self-retention maintained by the State and that any insurance, self-insurance or self-retention maintained by the State shall be in excess of the Contractor's insurance and shall not contribute with it.
- f. Cross liability and severability of interest for all policies and endorsements."

SPECIAL PROVISION NO. 2

Indemnity Agreement

The Contractor shall hold and save the Owner, its officers, employees and agents, free and harmless from liability of any nature occasioned by Contractor's operations on the site.

Contractor agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies, officers and employees (State), from claims resulting from the performance of the Contractor or its agent, including all costs, expenses and attorneys' fees, which may in any manner result from or arise out of this agreement. The legal defense provided by Contractor to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Contractor also agrees to defend, indemnify, and hold the State harmless for all costs, expenses and attorneys' fees incurred in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement."

Notwithstanding anything to the contrary in this Agreement, Contractor agrees to assume its own liability for any and all claims of any nature including all costs, expenses and attorney fees which may in any manner result from or arise out of this Agreement. In no event does any obligation of Owner to indemnify exceed Owner's proportionate level of fault.

ADDITIONAL SPECIAL PROVISIONS

General Provisions

The following additional special terms are added to or amended within the document entitled "Specifications for Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum.":

- 1) Notwithstanding anything to the contrary in this Agreement, this Agreement is governed by and construed in accordance with the laws of the State of North Dakota. Any action to enforce this Agreement must be adjudicated exclusively in the state District Court of Burleigh County, North Dakota. Each party consents to the exclusive jurisdiction of such court and waives any claim of lack of jurisdiction or *forum non conveniens*.
- 2) Notwithstanding anything to the contrary in this Agreement, Contractor agrees that Owner is subject to the North Dakota, Office of Management and Budget, Risk Management Fund (ND RMG). The Parties agree that the ND RMG is sufficiently comparable to Owner self-insurance and that the ND RMF fulfills Owner's insurance requirements as stated within this

Agreement. Owner's obligations under this Agreement with respect to insurance and liability are subject to and shall not constitute a waiver of the protection or limits of liability under the Act entitled "Claims Against the State", North Dakota Century Code (NDCC) Chapter 32.12.2.

Contractor acknowledges the coverage provided Owner under NDCC Chapter 32-12.2 and agrees to the manner in which this Chapter and the ND RMF self-insures Owner in relation to this Agreement, specifically that there is no coverage or provision for the defense of Contractor nor indemnity to Contractor for damages caused by Contractor. It is understood that the obligations assumed in this Agreement by Owner are an obligation of Owner (the North Dakota Department of Game and Fish) and do not create a general obligation of the State of North Dakota.

3) Notwithstanding anything to the contrary in this Agreement, Owner is tax exempt and Contractor agrees not to charge Owner, nor seek reimbursement from Owner for, any taxes.

4) Notwithstanding anything to the contrary in this agreement, the Parties agree that neither Party is subject to, nor required to submit to, any form of arbitration, mediation, or other forms of mandatory alternative dispute resolution. Each Party has the right to legal action to enforce available remedies. Owner does not waive any right to a jury trial.

5) Limitations on Appropriations and Spending Authority. Continuation of this Contract beyond June 30 of any odd-numbered year is contingent on continued legislative appropriation of funds for the purposes of this Contract. If those appropriations are not forthcoming, the State will notify the Contractor as soon as possible and the Contract will terminate on June 30 of that year. The State will not be penalized nor incur any liability because of termination of the Contract as provided above.

6) Termination. The State may terminate this Contract effective on delivery of written notice to the Contractor, or on any later date stated in the notice, if funding from federal, state, or other sources is not obtained and continued at levels sufficient to allow for the purchase of the commodities or services provided for in the Contract, if federal or state laws or rules are modified or interpreted in a way that the services or commodities are no longer allowable or appropriate for purchase under this Contract or no longer eligible for the funding proposed for payment of this Contract, or if any license, permit, or certificate required by law or rule, or the terms of the Contract, is for any reason denied, revoked, suspended, or not renewed.

7) Severability. If any term or provision of this Contract is declared by a court having jurisdiction to be illegal or unenforceable, the validity of the remaining terms and provisions shall not be affected, and, if possible, the rights and obligations of the parties are to be construed and enforced as if the Contract did not contain that term or provision.

8) Applicable Law and Venue. This Contract is governed by and construed in accordance with the laws of the State of North Dakota. Any action commenced to enforce this Contract must be brought and solely litigated in the District Court of Burleigh County, North Dakota.

9) Time of Completion. The parties agree that TIME IS OF THE ESSENCE this project.

10) Spoliation. Contractor shall promptly notify State of all potential claims that arise from or result from this Contract. Contractor shall also take all reasonable steps to preserve all physical evidence and information that may be relevant to the circumstances surrounding a

potential claim, while maintaining public safety, and grants to the State the opportunity to review and inspect the evidence, including the scene of an accident.

11) Contractor's Certificate. The Contractor, as part of the basic services provided under this agreement, will prepare and provide the Owner and to the state agencies required by law or rule to receive it, the Contractor's certificate required under N.D.C.C. § 48-01.2-24 and § 54-21.3-04.1, that in the Contractor's professional judgment, the plans and specifications prepared by the Contractor under this agreement are in conformance with the Americans with Disabilities Act accessibility guidelines for buildings and facilities as contained in the appendix to Title 28 of the Code of Federal Regulations, part 36 (C.F.R. 36).

12) Performance & Payment Bond. Pursuant to N.D.C.C. § 48-01.2-10, Contractor must obtain a Performance & Payment Bond. The bond must be for an amount equal at least to the price stated in the contract. The bond must be conditioned to be void if the Contractor and all subcontractors fully perform all terms, conditions, and provisions of the contract and pay all bills or claims on account of labor and materials including supplies used for machinery and equipment, performed, furnished, and used in the performance of the contract, including all demands of subcontractors. The requirement that bills and claims be paid must include the requirement that interest of the amount authorized under N.D.C.C. § 13-01-14 be paid on bills and claims not paid within ninety days. The bond is security for all bills, claims, and demands until fully paid, with preference to labor and material suppliers as to payment. The bond must run to the State, but any person having a lawful claim against the Contractor, or any subcontractor, as provided in this N.D.C.C. ch. 48-01.2, may sue on the bond.

13) Alternative Dispute Resolution – Jury Trial. The State does not agree to any form of binding arbitration, mediation, or other forms of mandatory alternative dispute resolution. The parties have the right to legal action to enforce available remedies. The State does not waive any right to a jury trial.

14) Confidentiality. Contractor agrees not to use or disclose any information it receives from the State under this Contract that the State has previously identified as confidential or exempt from mandatory public disclosure except as necessary to carry out the purposes of this Contract or as authorized in advance by the State. The State agrees not to disclose any information it receives from Contractor that the Contractor has previously identified as confidential and which the State determines in its sole discretion is protected from mandatory public disclosure under a specific exception to the North Dakota open records law, N.D.C.C. ch. 44-04. The duty of State and Contractor to maintain confidentiality of information under this section continues beyond the term of this Contract, or any extensions or renewals of it.

15) Compliance with Public Records Act. Contractor understands that, except for disclosures prohibited in Paragraph 16.10 above, the State must disclose to the public upon request any records it receives from Contractor under this Contract. Contractor further understands that any records that are obtained or generated by the Contractor under this Contract, except for records that are confidential under Section 14, may, under certain circumstances, be open to the public upon request under the North Dakota open records law. Contractor agrees to contact the State immediately upon receiving a request for information under the open records law and to comply with the State's instructions on how to respond to the request.

16) Work Product. All work product, equipment or materials created or purchased under this Contract belong to the State and must be delivered to State at State's request upon termination

of this Contract. Contractor agrees that all materials prepared under this Contract are “works for hire” within the meaning of the copyright laws of the United States and assigns to State all rights and interests Contractor may have in the materials it prepares under this Contract, including any right to derivative use of the material.

17) Independent Entity. Contractor shall perform as an independent entity under this Contract and not as an employee of the State for any purpose, including but not limited to the application of the Social Security Act, the Fair Labor Standards Act, the Federal Insurance Contribution Act, the North Dakota Unemployment Compensation Law and the North Dakota Workers’ Compensation Act. Contractor will retain sole and absolute discretion in the manner and means of carrying out the Contractor’s activities and responsibilities under this Contract, except to the extent specified in this Contract.

18) Hiring Preference. Pursuant to N.D.C.C. § 43-07-20, the Contractor must give preference to the employment of bona fide North Dakota residents, as determined by N.D.C.C. § 54-01-26, with preference given first to honorably discharged disabled veterans and veterans of the armed forces of the United States, as defined in N.D.C.C. § 37-19.1-01, who are deemed to be qualified in the performance of that work. The preference shall not apply to engineering, superintendence, management, or office or clerical work.

19) Americans With Disabilities Act (Ada) - Nondiscrimination And Compliance With Laws. CONTRACTOR agrees to comply with all applicable federal and state laws, rules, and policies, including those relating to nondiscrimination, accessibility and civil rights. (See N.D.C.C. Title 34 – Labor and Employment, specifically N.D.C.C. ch. 34-06.1 Equal Pay for Men and Women.)

ADA Compliance –CONTRACTOR shall ensure that all user-facing components of the solution comply with the Americans with Disabilities Act (ADA) and at a minimum, conform to 28 CFR § 35.200 federal Requirements for Web and Mobile Accessibility; available at: 28 CFR § 35.200. CONTRACTOR shall verify accessibility compliance through automated and manual testing prior to delivery and shall provide reports to STATE quarterly or as mutually agreed by STATE and CONTRACTOR.

CONTRACTOR is responsible for maintaining accessibility compliance of the solution throughout the Term of the Contract, including all renewals and extensions. If a compliance issue is discovered, CONTRACTOR shall provide a remediation plan, including timelines and impacts, to STATE. CONTRACTOR shall indemnify STATE for any and all claims, including penalties, costs, and expenses, related to accessibility claims under the ADA related to the solution.

CONTRACTOR shall file all required reports timely, make required payroll deductions, and pay all taxes and premiums owed timely, including sales and use taxes, and unemployment compensation and workers' compensation premiums.

CONTRACTOR shall have and keep current all licenses and permits required by law during the Term of this Contract.

CONTRACTOR is prohibited from boycotting Israel for the duration of this Contract. (See N.D.C.C § 54-44.4-15.) CONTRACTOR represents that it does not and will not engage in a boycotting Israel during the term of this Contract. If STATE receives evidence that CONTRACTOR boycotts Israel, STATE shall determine whether the company boycotts Israel.

The foregoing does not apply to contracts with a total value of less than \$100,000 or if CONTRACTOR has fewer than ten (10) full-time employees.

CONTRACTOR's failure to comply with this section may be deemed a material breach by CONTRACTOR entitling STATE to terminate in accordance with the Termination for Cause section of this Contract.

20) Contractor's Payment of Taxes. Pursuant to N.D.C.C. § 43-07-11.1, Contractor must file a certificate showing the Contractor has paid all applicable state taxes.

21) Licensed Contractor. Pursuant to N.D.C.C. § 43-07-02, the Contractor must be a licensed contractor.

22) State Audit. Pursuant to N.D.C.C. § 54-10-19, all records, regardless of physical form, and the accounting practices and procedures of CONTRACTOR relevant to this Contract are subject to examination by the North Dakota State Auditor, the Auditor's designee, or Federal auditors, if required. CONTRACTOR shall maintain these records for at least three (3) years following completion of this Contract and be able to provide them upon reasonable notice. STATE, State Auditor, or Auditor's designee shall provide reasonable notice to CONTRACTOR prior to conducting examination.

23) Prepayment. The State will not make any advance payments before performance by the Contractor under this Contract.

24) Payment of Taxes by State. State is not responsible for and will not pay local, state, or federal taxes. State sales tax exemption number is E-2001, and certificates will be furnished upon request by the purchasing agency.

25) Taxpayer Identification. The Contractor's federal employer ID number is:

_____.

SECTION 01 1000 - SUMMARY

PART 1 GENERAL

1.01 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 5000 - Contracting Forms and Supplements.

1.02 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 4100.

1.03 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. Owner intends to occupy the Project upon Substantial Completion.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

1.04 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- 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. Existing building spaces may not be used for storage.
- 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

SECTION 01 2000 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Procedures for preparation and submittal of application for final payment.

1.02 RELATED REQUIREMENTS

- A. Section 00 5000 - Contracting Forms and Supplements: Forms to be used.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values to the Architect at the earliest feasible date, but in no case later than seven days before the date scheduled for submittal of the initial application for payment.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section.
 - 1. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports.
 - 2. Break principle subcontract amounts down into several line items.
 - 3. Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.
 - 4. For each part of the Work where an Application for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 5. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Application for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.
 - 6. At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.
- E. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - 1. Contractor's construction schedule.
 - 2. Application for Payment form.
 - 3. List of subcontractors.
 - 4. List of principal suppliers and fabricators.
- F. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Forms filled out by hand will not be accepted.
- C. Execute certification by signature of authorized officer.
- D. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

- E. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- F. Submit three copies of each Application for Payment to the Architect by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien, payroll reports, and/or similar attachments, when required.
 - 1. One approved copy will be retained by the Architect, one will be returned to the Contractor, and one forwarded to the Owner for their use in issuing payment.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:
 - 1. List of subcontractors: AIA G705.
 - 2. List of principle suppliers and fabricators.
 - 3. Schedule of Values: AIA G703.
 - 4. Submittal schedule.
 - 5. Contractor's Construction Schedule (preliminary if not final).
 - 6. Schedule of principal products.
 - 7. List of Contractor's staff assignments.
 - 8. Certificates of insurance and insurance policies.
 - 9. Performance and payment bonds: AIA A312.
- H. Include the following with each application:
 - 1. Waivers of Mechanics Lien: Submit waivers of mechanics lien from every entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.
 - 2. Construction progress schedule, revised and current as specified in Section 01 3216.
 - 3. Affidavits attesting to off-site stored products.
- I. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
 - 1. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals.
 - b. Warranties (guarantees) and maintenance agreements.
 - c. Testing, adjusting, and balancing reports.
 - d. Maintenance instructions.
 - e. Start-up performance reports.
 - f. Change-over information related to Owner's occupancy, use, operation, and maintenance.
 - g. Final cleaning.
 - h. Application for reduction of retainage, and consent of surety.
 - i. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

1.05 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue Supplemental Instructions on AIA form G710 directly to Contractor.
- B. Change Orders: For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
 - 1. Owner-Initiated Proposal Requests: Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the Architect, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.

- a. Proposal requests issued by the Architect are for information only. Do not consider Proposal Requests as an instruction either to stop work in progress, or to execute the proposed change.
 - b. Unless otherwise indicated in the proposal request, within 5 days of receipt of the proposal request, submit to the Architect for the Owner's review an estimate of cost necessary to execute the proposed change.
 - c. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - d. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - e. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- 2. Contractor-Initiated Change Order Proposal Requests: When latent or other unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
 - a. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
 - b. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - c. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - d. Comply with requirements in Section "Product Substitutions" if the proposed change in the Work requires the substitution of a product or system for a product or system specified.
- 3. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests.
- C. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Change Order Proposal Request, the Architect may issue a Construction Change Directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. The Construction Change Directive will contain a complete description of the change in the Work and designate the method to be followed to determine change in the Contract Sum or Contract Time.
 - 2. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 3. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. Maximum allowances for Subcontractor's/Contractor's overhead and profit as expressed as a percentage of the basic cost of the change:
 - a. Subcontractors: 15% of the net cost of the additional Work.
 - b. Contractors: 5% of the net cost of the additional Work performed by subcontractors.
 - c. Contractors: 15% of the net cost of work performed by the contractor's own forces.
 - d. Add 5% to above allowances for changes of less than \$500.00.
 - e. Deduct 5% from above allowances for changes greater than \$10,000.00.
 - f. Overhead and profit shall include all bond premiums (if applicable), and will not be allowed on labor costs if overhead and profit is already included in hourly billing rate.
- E. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

- F. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- G. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- H. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 7000.
 - 2. Completion of items specified for completion after Substantial Completion (punchlists).
 - 3. Assurance that unsettled claims will be settled.
 - 4. Assurance that Work not complete and accepted will be completed without undue delay..
 - 5. Transmittal of required construction records to Owner.
 - 6. Proof taxes, fees, and similar obligations have been paid.
 - 7. Removal of temporary facilities and services.
 - 8. Removal of surplus materials, rubbish, and similar elements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2300 - ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of Alternates.
- B. Procedures for pricing Alternates.
- C. Documentation of changes to Contract Sum and Contract Time.

1.02 DEFINITIONS

- A. Alternate: An alternate is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.
- C. Work Included Under Each Alternate: Make modifications to work required by each alternate selected at no additional cost to the Owner other than as proposed on the Bid Form. Bidders shall be responsible for alternates and shall see that all changes are covered under their related sections, whether specifically called out or not. Extra costs incurred due to modifications to or deviations from the Drawings or Specifications caused directly or indirectly by each alternate shall be included in each alternate bid.

1.04 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Overhead Doors
 - 1. State the amount to be ADDED to the Base Bid to provide all materials, labor & equipment required for replacing the Overhead Doors, in lieu of repainting the existing panels, as indicated in the drawings and specifications.

NOTE: Existing track, springs, hardware and operator to remain.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2500 - SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 00 2600 - Procurement Substitution Procedures: Required form for substitutions requests made before the end of bidding (during procurement).
- B. Section 01 3000 - Administrative Requirements: Submittal procedures, coordination.
- C. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.03 REFERENCE STANDARDS

- A. CSI/CSC Form 13.1A - Substitution Request (After the Bidding/Negotiating Phase); Current Edition.

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.
 - 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- 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. Forms included in the Project Manual are adequate for this purpose, and must be used.
- 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 PROCUREMENT

- A. Section 00 2600 - Procurement Substitution Procedures specifies time restrictions for submitting requests for substitutions during the bidding period, and the documents required.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):
 - 1. Submit substitution requests by completing CSI/CSC Form 13.1A - Substitution Request (After Bidding/Negotiating). See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

- B. Architect will consider requests for substitutions only within 30 days after date of Agreement. Requests for substitutions after the bids have been received are done so at the risk of the Contractor. Substitutions may not be granted.
- C. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- D. 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.

3.04 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.

3.05 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

SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Submittals for review, information, and project closeout.
- E. Number of copies of submittals.
- F. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 6000 - Product Requirements: General product requirements.

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.
 - 4. Major subcontractors.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 6. Scheduling.
 - a. Contractor's schedule.
 - b. Start of on-site work.
 - c. Completion date.
 - d. Coordination with on-site Owner's representatives.
 - e. Sequence of work.
 - f. Full or partial Owner occupancy as applicable.
 - 7. Shop drawings and sample distribution.
 - 8. Mockups.
 - 9. Critical products for the project timeline.
 - 10. Material deliveries.
 - 11. Procedures to be followed when working on site.
 - 12. Address items prior to on-site work.
 - a. Parking.
 - b. Security.
 - c. Temporary Facilities including heat, electricity and water.
 - d. Noise and general safety.

- e. Site fencing.
 - f. Use of the site.
- 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 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum monthly 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.
 - 5. Major subcontractors.
- 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 off-site fabrication and delivery schedules.
 - 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.

3.03 CLOSEOUT MEETING

- A. Schedule and administer meetings throughout progress of the work at maximum monthly 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. Applicable subcontractors.
- D. Agenda:
 - 1. Starting Systems and Owner Training.
 - a. Mechanical.
 - b. Electrical.
 - c. Specialty Systems, i.e. Elevator.
 - d. Testing, adjusting and balancing.
 - e. Startup logs.
 - 2. Project Record Drawings.
 - 3. Record Project Manuals.
 - 4. Project Record Submittals.
 - 5. Warranties and Special Warranties.

6. Spare parts, extra stock materials.
 7. Contractors initial punchlist.
 8. Architects review of punchlist.
 9. Certificate of Occupancy.
 - a. Partial Occupancy.
 - b. Temporary Occupancy.
 10. Consent of Surety of Final Payment.
 11. Final Payment and Retainage Reduction.
 12. Affidavit of Liens and Waivers.
 13. Insurance Coverages.
 - a. Property.
 - b. Liability.
 14. 11 Month Warranty.
- 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 REQUESTS FOR INFORMATION (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.
 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- 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. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.

4. 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.
 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 2. Owner's, Architect's, and Contractor's names.
 3. Discrete and consecutive RFI number, and descriptive subject/title.
 4. Issue date, and requested reply date.
 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. 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.
 5. Identify and include improper or frivolous RFIs.
- 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. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 2. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.

3.05 SUBMITTAL SCHEDULE

- A. Submit to Architect for review a schedule for submittals in tabular format.
 1. Coordinate with Contractor's construction schedule and schedule of values.
 2. Format schedule to allow tracking of status of submittals throughout duration of construction.
 3. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
 4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
 - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

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 and for record documents purposes described in Section 01 7800 - Closeout Submittals.

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.
 - 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 separate transmittal for each item.
 - 2. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 3. 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.

- a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
- 4. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
- 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.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
 - c. Color selections will not be reviewed or approved until all related products are submitted to ensure a cohesive palette.
 - d. Products that make up a system, assembly, or that are directly related to each other often must be reviewed together. Review will not begin until all components are submitted.
 - e. Coordinate with Architect and/or Construction Manager, as applicable, where schedule dictates an expedited review of products.
- 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.
- 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.
- D. Samples Procedures:
 - 1. Transmit related items together as single package.
 - 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
- E. Do not use shop drawings without an appropriate final stamp indicating action taken in connection with construction.

3.11 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.

END OF SECTION

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. Contractor's design-related professional design services.
- E. Control of installation.
- F. Tolerances.
- G. Manufacturers' field services.
- H. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.
- B. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
- C. Scope of Contractor's Professional Design Services: Provide for the following items of work:

1.04 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 report in duplicate within 30 days of observation to Architect for information.
 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
- G. Erection Drawings: Submit drawings 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.

1.05 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.

1.06 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Owner will 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.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

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

3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 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.
 - 9. Submit a written report in binder form with an index at the conclusion of the work required by the Testing Agency. The report shall be submitted as a permanent record to the Owner, through the Structural Engineer, of all tests, logs, comments and written reports.
- 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 delivery of samples to testing laboratories.
 - e. 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. Each Prime Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.
 - 6. Each Prime Contractor and each agency engaged to perform inspections, tests, and similar services shall coordinate the sequence of activities to accommodate required services with minimal delay.
 - 7. Each Prime Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

- 8. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- 9. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing: The Contractor is responsible for re-testing where results of required inspections, tests, or similar services prove unsatisfactory or do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.
- F. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- G. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.
- H. The Contractor shall cooperate with agencies performing required inspections, tests, and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel.

3.04 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect 30 days in advance of required observations.
 - 1. Observer subject to approval of Architect.
 - 2. Observer subject to approval of Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

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

END OF SECTION

SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018.
- B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).

1.03 QUALITY ASSURANCE

- A. Regulations: All contractors, sub-contractors, and suppliers shall comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police Department, Fire Department, and Rescue Squad rules.
 - 5. Environmental protection regulations.
 - a. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.
- B. Standards: All contractors, sub-contractors, and suppliers shall comply with NFPA Code 241, "Building Construction and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
- C. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services," prepared by AGC and ASC for industry recommendations.
- D. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions.
- E. All contractors, sub-contractors, and suppliers shall provide new materials; if acceptable to the Architect, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.
- F. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.
- G. Lumber and Plywood: Comply with requirements in Section 06 1000 - Rough Carpentry.
- H. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electrical service. Install service in compliance with the National Electrical Code (NFPA 70).
- I. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures, construction operations, and similar elements.
- J. Protection: Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

1.04 TEMPORARY UTILITIES

- A. Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.
- B. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.
- C. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
- D. Obtain easements to bring utilities to the site, where the Owner's easements cannot be used for that purpose.
- E. Cost or use charges for temporary facilities are not chargeable to the Owner or Architect; Prime Contractor's cost or use charges for temporary services or facilities will not be accepted as a basis of claim for an adjustment in the Contract Sum or Contract Time.
- F. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- G. Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Sitework Divisions and Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.
- H. Water: Provide potable water approved by local health authorities.
 - 1. Water service and distribution: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.
 - 2. Sterilization: Sterilize temporary water piping prior to use.
 - 3. Water supply may only be interrupted on a weekend for changing over to the new service.
- I. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off the site in a lawful manner.
 - 1. Connect temporary sewers to the municipal system as directed by the sewer department officials.
 - 2. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
 - 3. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 - 4. Temporary holding tanks and pumps will be required for both storm and sanitary sewer where existing services exit the present building in to the construction zone.
- J. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.
- K. Temporary Heat:
 - 1. Provide temporary heat required by construction activities, for curing or drying of completed installations, or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
 - 2. Temporary heat shall not be directly fired into the space, or have exhaust gases discharged into the tempered space. The contractor providing temporary heating facilities shall be responsible for complying with all workplace health requirements. Use of gasoline-burning space heaters, or open burning or salamander type heating units is prohibited.
- L. Heating Facilities: Provide properly vented self-contained LP gas or fuel oil heaters with individual space thermostatic control. Combustion gases shall be vented to the exterior. The permanent system shall not be used for temporary heat.
- M. Temporary Electric Power:

1. Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.
 2. Power panels shall be 100A, 120/240V loadcenter or panelboards with NEMA AB1 type molded case circuit breakers. Panelboards shall be provided for use by all trades. Receptacles shall be equivalent to those specified in Division 26 Sections. Provide properly configured NEMA polarized outlets to prevent insertion of 125 volt AC plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment. Power receptacles shall include three duplex 20A, 125V, single phase, and one 50A 125/250V, single phase located on a plywood backboard with the temporary panel. Receptacles shall be provided at intervals and locations as required for legal use of extension cords.
- N. Temporary Electric Lights:
1. Whenever an overhead floor or roof deck has been installed, install temporary lighting with local switching.
 2. Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire lighting system, and will provide adequate illumination for construction operations and traffic conditions.
 3. Contractor shall provide and maintain the equivalent illumination of one 100 watt incandescent fixture per 150 square feet of space (minimum one), as strings of lighting with guards, the full length of each corridor or interior construction route, and floodlighting for all exterior excavation areas. Every other stringer fixture and floodlighting shall be circuited and controlled by circuit breakers located in temporary power panels.
 4. Lamps and Light Fixtures: Provide rough service lamps. Provide guard cages or tempered glass enclosures. Provide weatherproof quartz exterior fixtures.
 5. Under no conditions shall the permanent lighting fixtures be used for temporary lighting, unless approved in writing obtained from the Architect/Engineer upon consultation with the Owner.

1.05 TELECOMMUNICATIONS SERVICES

- A. Each Contractor is responsible for their own cellular phone service.
- B. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.

1.06 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.
- C. Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Projects's needs.
- D. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility.

1.07 BARRIERS

- A. 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. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public, of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- D. Provide protection for plants designated to remain. Replace damaged plants.

- E. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.08 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
- B. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hours a day basis where required to achieve indicated results and to avoid possibility of damage.

1.09 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:
 - 1. Insulated to R 12 (RSI 2.1).
 - 2. STC rating of 35 in accordance with ASTM E90.
 - 3. Maximum flame spread rating of 25 in accordance with ASTM E84.
 - 4. Interior protection barriers and walls shall be constructed using 5/8" type X gypsum board each side of 3-5/8 inch minimum thickness metal stud framing.
 - 5. Doors between construction and occupied spaces shall be self closing, and self latching.

1.10 SECURITY AND SAFETY

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.
- C. First Aid Supplies: Comply with regulation of authorities having jurisdiction.
- D. Temporary Fire Protection
 - 1. Fire Extinguishers: Provide hand-carried, portable, UL-rated, class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, class ABC dry chemical extinguishers, or a combination of extinguishers of NFPA recommended types for the exposures.
 - 2. Comply with NFPA 10 and 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
 - 3. Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
 - 4. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
- E. Store combustible materials in containers in fire-safe locations. Remove from construction site daily.
- F. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.
- G. Provide continuous supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
- H. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer as requested by the Architect.

- I. Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar materials so finishes will be undamaged at the time of acceptance.

1.11 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. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic.
- F. Coordinate temporary parking areas to accommodate construction personnel with Owner. When site space is not adequate, provide additional off-site parking.

1.12 WASTE REMOVAL

- A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site periodically.
- D. 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.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- F. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste.

1.13 FIELD OFFICES

- A. Maintain field offices and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities under conditions acceptable to the Owner.
- B. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture .
- C. Provide space for Project meetings, with table and chairs to accommodate 6 persons.
- D. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Termination and Removal: Unless the Architect requests it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, but no later than Substantial Completion. Complete, or if necessary restore, permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace Work which cannot be satisfactorily repaired.
- E. Materials and facilities that constitute temporary facilities are property of each prime Contractor.
- F. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
 - 1. Replace air filters and clean inside of ductworks and housings.

2. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
 3. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.
- G. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Substitution limitations.
- F. Procedures for Owner-supplied products.
- G. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 00 2600 - Procurement Substitution Requirements: Requests for substitution during the bidding process.
- B. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- C. Section 01 4000 - Quality Requirements: Product quality monitoring.
- D. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- E. Section 01 7419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 2. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
 - 3. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work.
 - 4. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.04 REFERENCE STANDARDS

- A. EN 15804 - Sustainability of Construction Works - Environmental Product Declarations - Core Rules for the Product Category of Construction Products; 2022 (Corrigendum 2021).
- B. ISO 14025 - Environmental Statements and Programmes for Products - Environmental Product Declarations (EPDs); 2026.
- C. ISO 14040 - Environmental Management - Life Cycle Assessment - Principles and Framework; 2006, with Amendment (2020).
- D. ISO 14044 - Environmental Management - Life Cycle Assessment - Requirements and Guidelines; 2006, with Amendment (2020).
- E. ISO 21930 - Sustainability in Buildings and Civil Engineering Works — Core Rules for Environmental Product Declarations of Construction Products and Services; 2017.

1.05 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 30 days after date of Agreement.
 - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.
- E. Sustainable Design Submittals: Items necessary to document use of sustainable construction materials, products, and practices.

1.06 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
 - 1. Each prime Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate Contractors.
 - 2. If a dispute arises between prime Contractors over concurrently selectable, but incompatible products, the Architect will determine which products shall be retained and which are incompatible and must be replaced.
- C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.
- D. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
- E. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - 1. Name of product and manufacturer.
 - 2. Model and serial number.
 - 3. Capacity.
 - 4. Speed.
 - 5. Ratings.
- F. Environmental Product Declaration (EPD): Publicly available, critically reviewed life cycle analysis having at least a cradle-to-gate scope.
 - 1. Good: Product-specific; compliant with ISO 14044.
 - 2. Better: Industry-wide, generic; compliant with ISO 21930, or with ISO 14044, ISO 14040, ISO 14025, and EN 15804; Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.

3. Best: Commercial-product-specific; compliant with ISO 21930, or with ISO 14044, ISO 14040, ISO 14025, and EN 15804; Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.
 4. Where demonstration of impact reduction below industry average is required, submit both industry-wide and commercial-product-specific declarations; or submit at least 5 declarations for products of the same type by other manufacturers in the same industry.
- G. Health Product Declarations (HPD): Complete, published declaration with full disclosure of known hazards, prepared using one of the HPDC (HPD-OLT) online tools.
- H. Sustainably Harvested Wood: Solid wood, wood chips, and wood fiber sourced and labeled by an organization accredited by one of the following:
1. Wood sourced from a sustainable harvested location. Submit any documentation available.
 2. Chain of Custody documents are not required.

PART 2 PRODUCTS

2.01 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.
1. Provide products complete with all accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and for the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:
1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.
 2. Semi proprietary Specification Requirements: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.
 - a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract Documents provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 3. Descriptive Specification Requirements: Where specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
 - a. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
 5. Compliance with Standards, Codes, and Regulations: Where the Specifications only require compliance with an imposed code, standard, or regulation select a product that complies with the standards, codes, or regulations specified.
 6. Visual Matching: Where Specifications require matching an established Sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.
 7. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern, and texture from the product line selected.

2.02 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.03 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
 - 1. Made using or containing CFC's or HCFC's.
 - 2. Made of wood from newly cut old growth timber.
 - 3. Containing lead, cadmium, or asbestos.
- C. Where other criteria are met, Contractor shall give preference to products that:
 - 1. If used on interior, have lower emissions, as defined in Section 01 6116.
 - 2. If wet-applied, have lower VOC content, as defined in Section 01 6116.
 - 3. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 4. Have longer documented life span under normal use.
 - 5. Result in less construction waste. See Section 01 7419
 - 6. Are made of vegetable materials that are rapidly renewable.
 - 7. Are made of recycled materials.
 - 8. If made of wood, are made of sustainably harvested wood, wood chips, or wood fiber.
 - 9. Have a published Environmental Product Declaration (EPD).
 - 10. Have a published Health Product Declaration (HPD).
 - 11. Are Living Building Challenge Red List Free.
 - 12. Have a published Declare Label.

2.04 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.05 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 OWNER-SUPPLIED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
 - 2. Arrange and pay for product delivery to site.

3. On delivery, inspect products jointly with Contractor.
 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
1. Review Owner reviewed shop drawings, product data, and samples.
 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
 3. Handle, store, install and finish products.
 4. Repair or replace items damaged after receipt.

3.03 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.

3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 7419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Do not store products directly on the ground.
- J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- K. Prevent contact with material that may cause corrosion, discoloration, or staining.
- L. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

3.05 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

- B. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION

SECTION 01 6116 - VOLATILE ORGANIC COMPOUND (VOC) CONTENT

RESTRICTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements for Indoor-Emissions-Restricted products.
- B. Requirements for VOC-Content-Restricted products.

1.02 RELATED REQUIREMENTS

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.
- B. Section 01 4000 - Quality Requirements: Procedures for testing and certifications.
- C. Section 01 6000 - Product Requirements: Fundamental product requirements, substitutions and product options, delivery, storage, and handling.

1.03 DEFINITIONS

- A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
 - 1. Interior paints and coatings applied on site.
 - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
 - 3. Flooring.
 - 4. Composite wood.
 - 5. Products making up wall and ceiling assemblies.
 - 6. Other products when specifically stated in the specifications.
- B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
 - 1. Interior paints and coatings applied on site.
 - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
 - 3. Wet-applied roofing and waterproofing.
 - 4. Other products when specifically stated in the specifications.
- C. Interior of Building: Anywhere inside the exterior weather barrier.
- D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.
- F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
 - 1. Metals that are plated, anodized, or powder-coated.
 - 2. Glass.

1.04 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 D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2025.
- C. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers Version 1.2; 2017.
- D. CARB (ATCM) - Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products; Current Edition.

- E. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2020.
- F. CHPS (HPPD) - High Performance Products Database; Current Edition.
- G. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Current Edition.
- H. SCAQMD 1113 - Architectural Coatings; 1977, with Amendment (2016).
- I. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).
- J. SCS (CPD) - SCS Certified Products; Current Edition.
- K. UL (GGG) - GREENGUARD Gold Certified Products; Current Edition.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

1.06 QUALITY ASSURANCE

- A. Indoor Emissions Standard and Test Method: CAL (CDPH SM), using Standard Private Office exposure scenario and the allowable concentrations specified in the method, and range of total VOC's after 14 days.
 - 1. Wet-Applied Products: State amount applied in mass per surface area.
 - 2. Paints and Coatings: Test tinted products, not just tinting bases.
 - 3. Evidence of Compliance: Acceptable types of evidence are the following;
 - a. Current UL (GGG) certification.
 - b. Current SCS (CPD) Floorscore certification.
 - c. Current SCS (CPD) Indoor Advantage Gold certification.
 - d. Current listing in CHPS (HPPD) as a low-emitting product.
 - e. Current CRI (GLP) certification.
 - f. Test report showing compliance and stating exposure scenario used.
 - 4. Product data submittal showing VOC content is NOT acceptable evidence.
 - 5. Manufacturer's certification without test report by independent agency is NOT acceptable evidence.
- B. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Report of laboratory testing performed in accordance with requirements.
 - b. Published product data showing compliance with requirements.
- C. Composite Wood Emissions Standard: CARB (ATCM) for ultra-low emitting formaldehyde (ULEF) resins.
 - 1. Evidence of Compliance: Acceptable types of evidence are:
 - a. Current SCS "No Added Formaldehyde (NAF)" certification; www.scs-certified.com.
 - b. Report of laboratory testing performed in accordance with requirements.
 - c. Published product data showing compliance with requirements.
- D. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. Indoor-Emissions-Restricted Products: Comply with Indoor Emissions Standard and Test Method, except for:
 - 1. Composite Wood, Wood Fiber, and Wood Chip Products: Comply with Composite Wood Emissions Standard or contain no added formaldehyde resins.

2. Inherently Non-Emitting Materials.
- C. VOC-Content-Restricted Products: VOC content not greater than required by the following:
 1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
 2. Joint Sealants: SCAQMD 1168 Rule.
 3. Paints and Coatings: Each color; most stringent of the following:
 - a. 40 CFR 59, Subpart D.
 - b. SCAQMD 1113 Rule.
 - c. CARB (SCM).
 4. Wet-Applied Roofing and Waterproofing: Comply with requirements for paints and coatings.

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

END OF SECTION

SECTION 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures.
- C. Section 01 4000 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

1.03 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2027.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. 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.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.05 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- D. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

1.06 COORDINATION

- A. See Section 01 1000 for occupancy-related requirements.
- B. 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.

- C. Notify affected utility companies and comply with their requirements.
- D. 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.
- E. 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.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. 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 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:

1. Review conditions of examination, preparation and installation procedures.
 2. Review coordination with related 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 LAYING OUT THE WORK

- A. Promptly notify Architect of any discrepancies discovered.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. 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.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as indicated.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- C. Remove existing work as indicated and as required to accomplish new work.
 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 2. Remove items indicated on drawings.
 3. Relocate items indicated on drawings.
 4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.

- b. See Section 01 1000 for other limitations on outages and required notifications.
 - c. Provide temporary connections as required to maintain existing systems in service.
- 4. Verify that abandoned services serve only abandoned facilities.
- 5. Remove abandoned pipe, ducts, conduits, and equipment , including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
 - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
 - 2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
 - 3. Where a change of plane of 1/4 inch (6 mm) or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
 - 4. Trim existing wood doors as necessary to clear new floor finish. Refinish trim as required.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
 - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. 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.
- D. 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.
- E. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. 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.
- J. 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.

3.08 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.

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

3.10 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.

3.11 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of Owner's personnel.
- E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

3.12 ADJUSTING

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

3.13 FINAL CLEANING

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

3.14 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- 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.

3.15 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

SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Required Recycling, Salvage, and Reuse: The following may not be disposed of in landfills or by incineration:
 - 1. Aluminum and plastic beverage containers.
 - 2. Corrugated cardboard.
 - 3. Wood pallets.
 - 4. Clean dimensional wood: May be used as blocking or furring.
 - 5. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
- E. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- F. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: List of items to be salvaged from the existing building for relocation in project or for Owner.
- B. Section 01 2500 - Substitution Procedures.
- C. Section 01 3000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- D. Section 01 5000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- E. Section 01 6000 - Product Requirements: Waste prevention requirements related to product substitutions.
- F. Section 01 6000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- G. Section 01 7000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.

- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 SUBMITTALS

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

PART 2 PRODUCTS

2.01 PRODUCT SUBSTITUTIONS

- A. See Section 01 6000 and Section 01 2500.
- B. For each proposed product substitution, submit the following information in addition to requirements specified in Section 01 6000:
 - 1. Relative amount of waste produced, compared to specified product.
 - 2. Cost savings on waste disposal, compared to specified product, to be deducted from the Contract Sum.
 - 3. Proposed disposal method for waste product.
 - 4. Markets for recycled waste product.

PART 3 EXECUTION

3.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01 3000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01 6000 for waste prevention requirements related to delivery, storage, and handling.
- C. See Section 01 7000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

END OF SECTION

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. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. 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.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- 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.
 - 2. Information for re-ordering custom manufactured products.
- 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 (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) 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.
- 4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

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 (216 by 279 mm) 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

SECTION 02 4100 - DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- C. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2027.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with requirements in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Use of explosives is not permitted.
 - 4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 5. Provide, erect, and maintain temporary barriers and security devices.
 - 6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 8. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
 - 9. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
 - 10. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Protect existing structures and other elements to remain in place and not removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- F. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

- G. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - 1. Comply with requirements of Section 01 7419 - Construction Waste Management and Disposal.
 - 2. Dismantle existing construction and separate materials.
 - 3. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.02 EXISTING UTILITIES

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
 - 1. Verify construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from areas that remain occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction indicated on drawings .
- C. Maintain weatherproof exterior building enclosure, except for interruptions required for replacement or modifications; prevent water and humidity damage.
- D. Remove existing work as indicated and required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction indicated.
 - 2. Remove items indicated on drawings.
- E. Protect existing work to remain.
 - 1. Prevent movement of structure. Provide shoring and bracing as required.
 - 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch to match new work.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Remove materials not to be reused on site; comply with requirements of Section 01 7419 - Waste Management.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 05 5000 - METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.
- B. Section 04 2000 - Unit Masonry: Placement of metal fabrications in masonry.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2024.
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2024.
- E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.
- F. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.
- G. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2025.
- I. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.
- J. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025, with Amendment (2026).
- K. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.
- L. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.
- M. SSPC-SP 2 - Hand Tool Cleaning; 2024.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A36/A36M.
- B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.
- C. Plates: ASTM A283/A283M.
- D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- E. Slotted Channel Framing: ASTM A653/A653M, Grade 33.
- F. Slotted Channel Fittings: ASTM A1011/A1011M.
- G. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.

- H. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- I. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- J. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- E. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Bollards (MET FAB-2): Steel pipe, concrete filled, crowned cap, as detailed. Provide an HDPE cover with coved top over the steel bollard. Color as selected by Architect.

2.04 FINISHES - STEEL

- A. Prime paint steel items.
 - 1. Exceptions: Galvanize items to be embedded in concrete and items to be embedded in masonry.
- B. Prepare surfaces to be primed in accordance with SSPC-SP2.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat.
- E. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

2.05 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).
- C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).
- D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).
- E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.

3.03 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components as indicated on drawings.
- D. Perform field welding in accordance with AWS D1.1/D1.1M.
- E. Obtain approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
- C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION

SECTION 06 1000 - ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concealed wood blocking, nailers, and supports.

1.02 RELATED REQUIREMENTS

- A. Section 09 2116 - Gypsum Board Assemblies: Gypsum-based sheathing.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018.
- C. AWPA M4 - Standard for the Handling, Storage, Field Fabrication and Field Treatment of Preservative-Treated Wood Products; 2026.
- D. AWPA U1 - Use Category System: User Specification for Treated Wood; 2017.
- E. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. ITS (DIR) - Directory of Listed Products; current edition.
- G. PS 2 - Performance Standard for Wood Structural Panels; 2019.
- H. PS 20 - American Softwood Lumber Standard; 2025.
- I. SPIB (GR) - Grading Rules; 2014.
- J. UL (DIR) - Online Certifications Directory; Current Edition.

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.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

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

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring (WD BLKG):
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 FIRE-RETARDANT TREATMENT (FRT)

- A. Products:
 - 1. Arxada; Dricon FS: www.arxada.com.
 - 2. Hoover Treated Wood Products, Inc: www.frtw.com.

3. Koppers, Inc: www.koppersperformancechemicals.com.
 4. T2EARTH, LLC; OnWood: www.t2earth.com.
 5. UFP Industries; ProWood FR Lumber: www.ufpi.com.
 6. Viance, LLC; D-Blaze: www.treatedwood.com.
 7. Substitutions: See Section 01 6000 - Product Requirements.
- B. Factory-treat wood members in accordance with AWP A U1 and use category indicated.
 - C. Fire Retardant Treatment: Interior Type A, Use Category UCFA (LT), Low-Temperature (low hygroscopic).
 1. Treat blocking and other wood members concealed in noncombustible construction.
 2. Treat electrical and communications panel backer boards.
 3. Treat wood in locations indicated on drawings or specifically indicated in this Section.
 - D. Kiln-dry after treatment (KDAT) to maximum moisture content of 19 percent for sawn material and 15 percent for plywood.
 - E. Fabrication of FRT Wood:
 1. Ripping or milling of boards, lumber, and timber after treatment is not permitted.
 2. Field cutting to length and drilling of holes in boards, lumber, and timber are permitted without additional treatment.
 3. Field cutting and drilling of holes in plywood are permitted.
 - F. Label or brand FRT wood with classification mark of UL (DIR) or ITS (DIR) or other approved inspection agency, the treatment plant, name of treatment, species of wood, flame spread and smoke developed index, method of drying after treatment, and treating standard.

2.04 PRESSURE-PRESERVATIVE TREATMENT (PPT)

- A. Manufacturers:
 1. Arxada; Wolman E: www.arxada.com.
 2. Koppers Performance Chemicals, Inc: www.koppersperformancechemicals.com.
 3. Viance, LLC; Preserve ACQ: www.treatedwood.com.
 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Factory-treat wood members in accordance with AWP A U1 and use category indicated.
- C. Applications - Treat the Following:
 1. Wood framing in contact with exterior foundation walls where member is less than 8 inches (200 mm) from exposed earth: Use Category UC1, above ground, interior, dry.
 2. Wood framing members in direct contact with interior of exterior masonry or concrete walls below grade: Use Category UC1, above ground, interior, dry.
 3. Wood wall sheathing in contact with exterior foundation walls where sheathing is less than 8 inches (200 mm) from exposed earth: Use Category UC4A, ground contact, general use.
 4. Other locations indicated.
- D. Kiln-dry wood after treatment with waterborne preservative to maximum moisture content of 19 percent for lumber and 15 percent for plywood.
- E. Fabricate to maximum extent possible before treatment.
- F. Label preservative-treated wood with marking as required by AWP A U1 and ICC (IBC). Unless otherwise permitted by standard U1 and building code, include the following markings: AWP A U1, accredited inspection agency mark, treating plant identification, type of preservative, preservative retention, and permitted end use.
- G. Field Treatment for Cuts and Holes in Preservative-Treated Wood: Comply with AWP A M4.

2.05 ACCESSORIES

- A. Metal and Finish of Fasteners:
 1. Fire-Retardant-Treated Wood:
 - a. Nails, timber rivets, wood screws, and lag screws: Hot-dip galvanized steel complying with ASTM A153/A153M Class D.

2. Preservative-Treated Wood:
 - a. Nails, timber rivets, wood screws, and lag screws - general use: Hot-dip galvanized steel complying with ASTM A153/A153M Class D.
3. High Humidity Wood Locations: Hot-dip galvanized steel complying with ASTM A153/A153M.
4. Untreated Wood: Unfinished steel.
- B. Sill Gasket on Top of Foundation Wall: 3/8 inch (9.5 mm) thick, closed-cell plastic foam.
 1. Width: 3-1/2 inches (89 mm).
 2. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 30 days of weather exposure.

PART 3 EXECUTION

3.01 PREPARATION

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches (100 mm) and seal.
- B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

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.

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to authorities having jurisdiction may be used in lieu of solid wood blocking.
- C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

3.04 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

SECTION 07 2100 - THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Batt insulation in exterior wall, ceiling, and roof construction.
- B. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS

- A. Section 07 2600 - Vapor Retarders: Separate vapor retarder materials.
- B. Section 09 2116 - Gypsum Board Assemblies: Acoustic insulation inside walls and partitions.

1.03 REFERENCE STANDARDS

- A. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2024.
- B. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation; 2025.
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.
- D. ASTM C726 - Standard Specification for Mineral Wool Roof Insulation Board; 2024.
- E. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2025.
- F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018.
- G. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2026.
- H. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components; 2025.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
- C. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

1.05 FIELD CONDITIONS

- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 FIBER BLANKET INSULATION MATERIALS

- A. Glass Fiber Batt Insulation (INSUL-21): Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
 - 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 50 or less, when tested in accordance with ASTM E84.
 - 3. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
 - 4. Formaldehyde Content: Zero.
 - 5. Facing: Unfaced.
 - 6. Sustainability Requirements: Manufacturer's must be able to provide the following, or equivalent, product documentations:
 - a. Environmental Product Declaration (EPD) or Declare Label.
 - b. Health Product Declaration (HPD).

7. Basis of Design: Owens Corning Corporation; EcoTouch Flame Spread 25 Fiberglas: www.ocbuildingspec.com.
8. Other Acceptable Products provided they meet or exceed the Basis of Design performance requirements:
 - a. CertainTeed Corporation Sustainable Fiberglass Building Insulation: www.certainteed.com.
 - b. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ACCESSORIES

- A. Tape joints of rigid insulation in accordance with roofing and insulation manufacturers' instructions.
- B. Insulation Fasteners: Appropriate for purpose intended.
- C. Adhesive: Type recommended by insulation manufacturer for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
- E. Coordinate work of this section with requirements for vapor retarder, see Section 07 2600.
- F. Coordinate work of this section with construction of air barrier seal, see Section 07 2700.

3.03 PROTECTION

- A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

SECTION 07 6200 - SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, and exterior penetrations.
- B. Sealants for joints within sheet metal fabrications.

1.02 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- B. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- D. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement; 2025.
- E. CDA A4050 - Copper in Architecture - Handbook; Current Edition.
- F. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
- B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with five years of documented experience.
- C. Exposed sheet metal work shall be fabricated and installed to provide a continuous, uniform appearance without visible patching, seam covers, or irregular joints.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 PREFINISHED ALUMINUM SHEETS

- A. Description (SMF-2): Factory-applied topcoat systems applied to aluminum flat sheet substrates prior to fabrication by coil coating; topcoat systems consist of primers and organic topcoats on exposed side and backing coats on unexposed side.
- B. Aluminum Sheet Substrates: ASTM B209/B209M, alloy and temper as recommended by manufacturer for application.
- C. Superior Performance Organic Coating System: Comply with AAMA 2605 for aluminum preparation, pretreatment, primer and finish coat system; provide thermally cured 70-percent PVDF fluoropolymer systems; tested for weathering for 10 years with 5 delta units color change maximum.
- D. Drawing Detail: As indicated on drawings.
- E. Base Metal Thickness: 0.032 inch (0.81 mm), minimum.
- F. Color: As selected by Architect from manufacturer's standard colors.

2.02 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths. Where seams are unavoidable, coordinate location with Architect.
- C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- D. Form material with batten seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18-inch (450 mm) long legs; seam for rigidity, seal with sealant.
- F. Do not use surface applied seam covers, batten covers, or patch plates to conceal joints.
- G. Fabricate flashings to allow toe to extend 2 inches (50 mm) over roofing gravel. Return and brake edges.

2.03 GUTTERS AND DOWNSPOUTS

- A. Gutters (GUTTER-1): SMACNA (ASMM), Rectangular profile.
- B. Downspouts (DOWNSPOUT-1): Rectangular profile, open face.
- C. Accessories: Profiled to suit gutters and downspouts.
 - 1. Anchorage Devices: In accordance with SMACNA (ASMM) requirements.
- D. Splash Pads (SPLASH-1): Precast concrete type, of size and profiles indicated; minimum 3000 psi (21 MPa) at 28 days, with minimum 5 percent air entrainment.
- E. Seal metal joints.

2.04 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Primer Type: Zinc chromate.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- E. Asphalt Roof Cement: ASTM D4586/D4586M, Type I, asbestos-free.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted reglets true to lines and levels, and seal top of reglets with sealant.
- C. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil, 0.015 inch (0.38 mm).

3.03 INSTALLATION

- A. Insert flashings into reglets to form tight fit; secure in place with lead wedges; seal flashings into reglets with sealant.
- B. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.
- C. Apply plastic cement compound between metal flashings and felt flashings.
- D. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Do not face fasten exposed sheet metal, except where specifically detailed.

F. Seal metal joints watertight.

G. Secure gutters and downspouts in place with concealed fasteners.

END OF SECTION

SECTION 07 9200 - JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.
- B. Section 09 2116 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.

1.03 REFERENCE STANDARDS

- A. ASTM C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants; 2018 (Reapproved 2022).
- B. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).
- C. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2023.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.
- E. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015e1.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
- C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- D. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.
- E. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of experience.
- B. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
 - 1. Adhesion Testing: In accordance with ASTM C794.
 - 2. Compatibility Testing: In accordance with ASTM C1087.
 - 3. Allow sufficient time for testing to avoid delaying the work.
 - 4. Deliver sufficient samples to manufacturer for testing.
 - 5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Nonsag Sealants:
 - 1. Bostik Inc: www.bostik-us.com.
 - 2. Dow Chemical Company: consumer.dow.com/en-us/industry/ind-building-construction.html.
 - 3. Hilti, Inc: www.us.hilti.com.
 - 4. Momentive Performance Materials, Inc (formerly GE Silicones): www.momentive.com.
 - 5. Pecora Corporation: www.pecora.com.
 - 6. Sherwin-Williams Company: www.sherwin-williams.com.
 - 7. Sika Corporation: www.usa-sika.com.
 - 8. Specified Technologies Inc: www.stifirestop.com.
 - 9. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com.
 - 10. W.R. Meadows, Inc: www.wrmeadows.com.
 - 11. Substitutions: See Section 01 6000 - Product Requirements.
- B. Self-Leveling Sealants:
 - 1. Bostik Inc: www.bostik-us.com.
 - 2. Dow Chemical Company: consumer.dow.com/en-us/industry/ind-building-construction.html.
 - 3. Pecora Corporation: www.pecora.com.
 - 4. Sherwin-Williams Company: www.sherwin-williams.com.
 - 5. Sika Corporation: www.usa-sika.com.
 - 6. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com.
 - 7. W.R. Meadows, Inc: www.wrmeadows.com.
 - 8. Substitutions: See Section 01 6000 - Product Requirements.

2.02 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Exterior Joints:
 - a. Do not seal exterior joints unless indicated on drawings as sealed.
 - b. Seal open joints except open joints indicated on drawings as not sealed.
 - 2. Interior Joints:
 - a. Do not seal interior joints indicated on drawings as not sealed.
 - b. Do not seal gaps and openings in gypsum board and suspended ceilings
 - c. Do not seal through-penetrations in sound-rated assemblies that are also fire-rated assemblies.
 - d. Seal open joints except specific open joints indicated on drawings as not sealed.
 - 3. Do Not Seal:
 - a. Intentional weep holes in masonry.
 - b. Joints indicated to be covered with expansion joint cover assemblies.
 - c. Joints where sealant is specified to be furnished and installed by manufacturer of product to be sealed.
 - d. Joints where sealant installation is specified in other sections.
 - e. Joints between suspended ceilings and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
 - 1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
 - 1. Wall and Ceiling Joints in Wet Areas: Non-sag polyurethane sealant for continuous liquid immersion.

2. Floor Joints in Wet Areas: Non-sag polyurethane "non-traffic-grade" sealant suitable for continuous liquid immersion.
 3. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
 4. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
 5. Narrow Control Joints in Interior Concrete Slabs: Self-leveling epoxy sealant.
 6. Other Floor Joints: Self-leveling polyurethane "traffic-grade" sealant.
- D. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated, sound-rated, or acoustical.

2.03 JOINT SEALANTS - GENERAL

- A. Material ID's:
1. (SEALANT-1): Joint sealant or caulking with or without backer rod. Type as indicated above.

2.04 NONSAG JOINT SEALANTS

- A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
1. Color: To be selected by Architect from manufacturer's standard range.
 2. Cure Type: Multi-component, neutral curing.
 3. Service Temperature Range: Minus 20 to 180 degrees F (Minus 29 to 82 degrees C).
- B. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonstaining, nonbleeding, non-sagging; not intended for exterior use.
1. Color: To be selected by Architect from manufacturer's standard range.
 2. Grade: ASTM C834; Grade 0 Degrees F (Minus 18 Degrees C).

2.05 SELF-LEVELING JOINT SEALANTS

- A. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
1. Composition: Multicomponent, 100 percent solids by weight.
 2. Durometer Hardness: Minimum of 85 for Type A or 35 for Type D, after seven days when tested in accordance with ASTM D2240.
 3. Color: To be selected by Architect from manufacturer's standard colors.
 4. Joint Width, Minimum: 1/8 inch (3 mm).
 5. Joint Width, Maximum: 1/4 inch (6 mm).
 6. Joint Depth: Provide product suitable for joints from 1/8 inch (3 mm) to 2 inches (51 mm) in depth including space for backer rod.

2.06 ACCESSORIES

- A. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- B. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- C. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- D. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.
- E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in an inconspicuous area to verify that it does not stain or discolor slab.

3.03 INSTALLATION

- A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Provide joint sealant installations complying with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
- H. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

END OF SECTION

SECTION 08 3613 - SECTIONAL DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Overhead sectional doors, electrically operated.

1.02 RELATED REQUIREMENTS

- A. Section 07 9200 - Joint Sealants: Sealing joints between frames and adjacent construction.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- B. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2026.
- C. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- D. DASHA 102 - American National Standard Specifications for Sectional Doors; 2018.
- E. ITS (DIR) - Directory of Listed Products; current edition.
- F. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- C. Product Data: Show component construction, anchorage method, and hardware.
- D. Samples: Submit two panel finish samples, 6 x 6 inch (152 x 152 mm) in size, illustrating color and finish.
- E. Manufacturer's Installation Instructions: Include any special procedures required by project conditions.
- F. Operation Data: Include normal operation, troubleshooting, and adjusting.
- G. Maintenance Data: Include data for motor and transmission, shaft and gearing, lubrication frequency, spare part sources.

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 type specified and with at least three years documented experience.
- C. Comply with applicable code for motor and motor control requirements.
- D. Products Requiring Electrical Connection: Listed and classified by ITS (DIR), UL (DIR), or testing firm acceptable to authorities having jurisdiction, as suitable for purpose specified.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for warranty requirements.
- B. Extended Correction Period: Correct defective work within a 2-year period commencing on Date of Substantial Completion.
- C. Manufacturer Warranty: Provide 5-year manufacturer warranty for electric operating equipment. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sectional Doors:
 - 1. Clopay Building Products: www.clopaydoor.com.
 - 2. Midland Garage Door: www.midlandgaragedoor.com.
 - 3. Overhead Door Corporation: www.overheaddoor.com/#sle.
 - 4. Raynor Garage Doors: www.raynor.com.
 - 5. Wayne-Dalton, a Division of Overhead Door Corporation: www.wayne-dalton.com.
 - 6. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Performance: Withstand positive and negative wind loads equal to 1.5 times design wind loads specified by local code without damage or permanent set, when tested in accordance with ASTM E330/E330M, using 10 second duration of maximum load.
- B. Air Leakage Rate: Less than 0.40 cfm/sq ft (2 L/sec/sq m) when tested in accordance with ASTM E283/E283M at test pressure difference of 1.57 psf (75 Pa).
- C. Thermal Transmittance: U-factor (Usi-factor) of 0.31 Btu/hr sq ft degrees F (1.76 W/sq m K), maximum, in accordance with DASMA 102.

2.03 STEEL DOORS

- A. Doors: Flush steel, insulated; standard lift operating style with track and hardware; complying with DASMA 102, Commercial application.
 - 1. Basis of Design: Thermacore Model 596 by Overhead Door Corporation.
 - 2. Door Panels: Steel construction; outer steel sheet of 20 gauge, 0.0359 inch (0.91 mm) minimum thickness, flush profile; inner steel sheet of 27 gauge, 0.0164 inch (0.42 mm) minimum thickness, flat profile; core reinforcement sheet steel roll formed to channel shape, rabbeted weather joints at meeting rails; polyurethane insulation.
 - 3. Door Nominal Thickness: 2 inches (51 mm) thick.
 - 4. Exterior Finish:
 - a. Factory finished with acrylic baked enamel; color as selected by Architect.
 - 5. Interior Finish:
 - a. Factory finished with powder coated finish; color as selected from manufacturer's standard line.
 - 6. Exterior Surface: Smooth.
 - 7. End Stiles: 16 gauge with thermal break.
 - 8. R-Value: Minimum R-17.4.
 - 9. Electric Operation: Electric control station.

2.04 MATERIALS

- A. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G60/Z180 coating, plain surface.
- B. Float Glass: Provide float glass glazing, unless noted otherwise.
- C. Insulation: Foamed-in-place polyurethane, bonded to facing.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.

3.02 PREPARATION

- A. Prepare opening to permit correct installation of door unit to perimeter air and vapor barrier seal.
- B. Apply primer to wood frame.

3.03 INSTALLATION

- A. Install door unit assembly in accordance with manufacturer's instructions.
- B. Anchor assembly to wall construction and building framing without distortion or stress.
- C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- D. Fit and align door assembly including hardware.
- E. Install perimeter trim and closures.

3.04 TOLERANCES

- A. Maximum Variation from Plumb: 1/16 inch (1.5 mm).
- B. Maximum Variation from Level: 1/16 inch (1.5 mm).
- C. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch (3 mm) from 10 ft (3 m) straight edge.
- D. Maintain dimensional tolerances and alignment with adjacent work.

3.05 ADJUSTING

- A. Adjust door assembly for smooth operation and full contact with weatherstripping.
- B. Have manufacturer's field representative present to confirm proper operation and identify adjustments to door assembly for specified operation.

3.06 CLEANING

- A. Clean doors and frames and glazing.
- B. Remove temporary labels and visible markings.

3.07 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.
- B. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

END OF SECTION

SECTION 08 4313 - ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum-framed storefront, with vision glass.
- B. Aluminum doors and frames.
- C. Weatherstripping.

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 - Door Hardware: Hardware items other than specified in this section.
- B. Section 08 8000 - Glazing: Glass and glazing accessories.

1.03 REFERENCE STANDARDS

- A. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.
- B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- C. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- D. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site; 2026.
- E. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- F. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- H. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2013.
- I. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2026.
- J. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- K. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2016).
- L. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with installation of other components that comprise the exterior enclosure.
- B. Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.
- D. Design Data: Provide framing member structural and physical characteristics, engineering calculations, and dimensional limitations.
- E. Energy Performance Certification: For each aluminum framed storefront system and glazing combination provide NFRC CMAST Bid Report. Coordinate with Section 08 8000.

1.06 QUALITY ASSURANCE

- A. Designer Qualifications: Design structural support framing components under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State in which the Project is located.
- B. Manufacturer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

1.09 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.
- D. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

PART 2 PRODUCTS

2.01 BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING (ALSTOR-1)

- A. Center-Set Style, Thermally-Broken:
 - 1. 2 inch by 4-1/2 inch, nominal frame profile.
 - a. Basis of Design: Kawneer Company, Inc; Trifab VersaGlaze 451T; www.kawneer.com.
 - b. Other Acceptable Manufacturers provided they meet or exceed the Basis of Design performance requirements:
 - 1) EFCO Corporation; Series 403 Storefront Framing; www.apogeeearchmetals.com.
 - 2) Oldcastle Building Envelope; Series 3000 Thermal MultiPlane; obe.com.
 - 3) Tubelite Inc; T14000 Series; www.apogeeearchmetals.com.
 - 4) YKK AP America Inc; YES 45 TU; www.ykkap.com.

2.02 BASIS OF DESIGN -- SWINGING DOORS

- A. Wide Stile, Insulating Glazing, Thermally-Broken:
 - 1. Basis of Design: Kawneer Company, Inc; 560 Insulclad Thermal Entrances; www.kawneer.com.
 - 2. Other Acceptable Manufacturers provided they meet or exceed the Basis of Design performance requirements:
 - a. EFCO Corporation; Series D502 ThermaStile; www.apogeeearchmetals.com.
 - b. Oldcastle Building Envelope; WS-500TC Thermal Composite Door & Frame Entrances; obe.com.
 - c. Tubelite Inc; Thermal=Block Entrances; www.apogeeearchmetals.com.
 - d. YKK AP America Inc; MegaTherm 50T Thermally Broken Entrance Systems; www.ykkap.com.

2.03 ALUMINUM-FRAMED STOREFRONT

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
 - 1. Glazing Rabbet: For 1 inch (25 mm) insulating glazing.
 - 2. Finish Color: As selected by Architect.
 - 3. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
 - 4. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.
 - 5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
 - 6. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
 - 7. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
 - 8. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
 - 9. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with inside pane of glazing and heel bead of glazing compound.
- B. Performance Requirements
 - 1. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
 - a. Design Wind Loads: Comply with requirements of applicable code.
 - b. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
 - 2. Water Penetration Resistance: No uncontrolled water on interior face, when tested in accordance with ASTM E331 at pressure differential of 10 psf (480 Pa).
 - 3. Air Leakage: 0.06 cfm/sq ft (0.3 L/sec sq m) maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf (75 Pa) pressure difference.
 - 4. Condensation Resistance Factor of Framing: 60, minimum, measured in accordance with AAMA 1503.
 - 5. Overall U-value Including Glazing: 0.34 Btu/(hr sq ft deg F), maximum.

2.04 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
 - 1. Framing members for interior applications need not be thermally broken.
 - 2. Glazing Stops: Flush.
 - 3. Cross-Section: As indicated on drawings.
 - 4. Structurally Reinforced Members: Extruded aluminum with internal reinforcement of structural steel member.
- B. Glazing: See Section 08 8000.
- C. Swing Doors: Glazed aluminum.
 - 1. Top Rail: 5 inches (127 mm) wide, nominal.
 - 2. Vertical Stiles: 5 inches (127 mm) wide, nominal.
 - 3. Bottom Rail: 10 inches (254 mm) wide.

4. Glazing Stops: Square.
5. Finish: Same as storefront.

2.05 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Structural Steel Sections: ASTM A36/A36M; galvanized in accordance with requirements of ASTM A123/A123M.
- C. Fasteners: Stainless steel.
- D. Exposed Flashings: Aluminum sheet, 20 gauge, 0.032 inch (0.81 mm) minimum thickness; finish to match framing members.
- E. Concealed Flashings: Stainless steel, 26 gauge, 0.0187 inch (0.48 mm) minimum thickness.
- F. Sill Flashing Sealant: Elastomeric, silicone or polyurethane, compatible with flashing material.
- G. Sealant for Setting Thresholds: Non-curing butyl type.
- H. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.
- I. Touch-Up Primer for Galvanized Steel Surfaces: SSPC-Paint 20, zinc rich.

2.06 FINISHES

- A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils (0.018 mm) thick.
- B. Class I Color Anodized Finish: AAMA 611 AA-M12C22A42 Integrally colored anodic coating not less than 0.7 mils (0.018 mm) thick.

2.07 HARDWARE

- A. For each door, include weatherstripping.
- B. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that storefront wall openings and adjoining water-resistive and/or air barrier seal materials are ready to receive work of this section.

3.02 INSTALLATION

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Install hardware using templates provided.
- J. Install glass using glazing method required to achieve performance criteria; see Section 08 8000.
- K. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.03 TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inch per 3 feet (1.5 mm per m) non-cumulative or 0.06 inch per 10 feet (1.5 mm per 3 m), whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for general testing and inspection requirements.
- B. Repair or replace storefront components that have failed designated field testing, and retest to verify performance complies with specified requirements.

3.05 ADJUSTING

- A. Adjust operating hardware and sash for smooth operation.

3.06 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths, and take care to remove dirt from corners and to wipe surfaces clean.
- C. Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

3.07 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.

END OF SECTION

SECTION 08 7100 - DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for aluminum doors.
- B. Thresholds.
- C. Weatherstripping and gasketing.

1.02 RELATED REQUIREMENTS

- A. Section 08 4313 - Aluminum-Framed Storefronts: Door hardware, except as noted in section.

1.03 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. BHMA - Builders Hardware Manufacturers Association.
- C. DHI (H&S) - Sequence and Format for the Hardware Schedule; 2019.
- D. DHI (KSN) - Keying Systems and Nomenclature; 2019.
- E. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- F. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; attendance is required by affected installers and the following:
 - 1. Architect.
 - 2. Installer's Architectural Hardware Consultant (AHC).
 - 3. Hardware Installer.
 - 4. Owner's Security Consultant.
- C. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- D. After receipt of approved hardware schedule, Hardware supplier shall initiate a meeting including the owner's representative to determine keying requirements. Upon completion of the initial key meeting, hardware supplier shall prepare a proposed key schedule with symbols and abbreviations as set forth in the door and hardware institute's publication "Keying Procedures, Systems, and Nomenclature". Submit copies of owner approved key schedule for review and field use in quantities as required by Division 01 - General Conditions. Wiring diagrams shall be included in final submittals transmitted for distribution and field use.

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. Comply with DHI (H&S) using door numbers and hardware set numbers as indicated in construction documents.
 - a. Submit in vertical format.

3. List groups and suffixes in proper sequence.
4. Provide complete description for each door listed.
5. Provide manufacturer name, product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
6. Include account of abbreviations and symbols used in schedule.
- D. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
 1. Submit manufacturer's parts lists and templates.
 2. Bitting List: List of combinations as furnished.
- E. 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. Manufacturers and model numbers listed are to establish a standard of function and quality. Similar items by approved manufacturers that are equal in design, function, and quality, may be considered for prior approval of the architect, provided the required data and physical samples are submitted for approval as set forth in Division 01 - General Requirements.
- C. Obtain each type of hardware (hinges, latch & locksets, exit devices, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.
- D. All hardware items shall be manufactured no earlier than 6 months prior to delivery to site.
- E. Hardware supplier shall be factory trained and certified by the manufacturer to provide and support all computer managed locks and system components.
- F. Hardware supplier shall participate when reasonably requested to meet with the contractor and or architect to inspect any claim for incorrect or non-functioning materials; following such inspection, the hardware supplier shall provide a written statement documenting the cause and proposed remedy of any unresolved items.
- G. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.
- H. Supplier Qualifications: Company with certified Architectural Hardware Consultant (AHC) to assist in work of this section.

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. Locksets and Cylinders: Three years, minimum.
 3. 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. Listed and certified compliant with specified standards by BHMA (CPD).
- 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. Concealed Fasteners: Do not use through or sex bolt type fasteners on door panel sides indicated as concealed fastener locations, unless otherwise indicated.

2.02 MANUFACTURERS

- A. Provide manufacturers, products, and product lines listed within this Section and as indicated in Section 08 7105 - Hardware Groups.
- B. Substitutions: See Section 01 6000 - Product Requirements.

2.03 HINGES

- A. Acceptable manufacturers and respective catalog numbers:
 - 1. Butt Hinges
 - a. Heavy Weight, Ball Bearing, Non-Ferrous:
 - 1) Ives: 5BB1HW
 - 2) Stanley: FBB199
 - 3) Hager: BB1199
 - 4) McKinney: T4B3386
- B. Hinges: Comply with BHMA A156.1, Grade 1.
 - 1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.
 - a. Provide hinge width required to clear surrounding trim.
 - 2. Provide hinges on every swinging door.
 - 3. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
 - 4. Provide non-removable pins on exterior outswinging doors.
 - 5. Unless otherwise specified, furnish hinges for exterior doors, fabricated from brass, bronze, or stainless steel. Unless otherwise specified, hinges for interior doors may be fabricated from steel.
 - 6. Unless otherwise specified, furnish hinges in the following sizes:
 - a. 4-1/2" x 4-1/2" 1-3/4" thick doors
 - 7. Furnish hinges with sufficient width to accommodate trim and allow for 180-degree swing.
 - 8. Unless otherwise specified, furnish hinges with flat button tips with non-rising pins at interior doors, non-removable loose pins (NRP) at exterior and out-swinging interior doors.
 - 9. Unless otherwise specified, furnish all hinges to template standards.
 - 10. Unless otherwise specified, furnish hinge weight and type as follows:
 - a. Heavyweight: 4 ball bearing hinge 5BB1HWss for exterior openings unless otherwise listed in groups.
 - 11. Provide following quantity of butt hinges for each door:
 - a. Doors up to 60 inches (1.5 m) High: Two hinges.
 - b. Doors From 60 inches (1.5 m) High up to 90 inches (2.3 m) High: Three hinges.
 - c. Doors 90 inches (2.3 m) High up to 120 inches (3 m) High: Four hinges.
 - d. Doors over 42 inches wide: One additional hinge.

2.04 LOCK CYLINDERS

- A. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
 - 1. Provide full size interchangeable core (FSIC) type cylinders, Grade 1, with six-pin core in compliance with BHMA A156.5 at locations indicated.
 - 2. Provide cams and/or tailpieces as required for locking devices.
 - 3. Within specific Door Sections, when provisions for lock cylinder are being referenced to this Section, provide specified lock cylinder and keyed to building keying system, unless otherwise indicated.

2.05 AUXILIARY LOCKS (DEADLOCKS)

- A. Acceptable manufacturers and respective catalog numbers:
 - 1. Schlage B600 Series
 - 2. Sargent 480 Series
 - 3. Corbin DL3100 Series
 - 4. Best 83T Series
- B. Auxiliary Locks (Deadlocks): Comply with BHMA A156.36, Grade 1.
 - 1. Type: Bored (cylindrical).
 - 2. Application: Bored.
 - 3. Backset: 2-3/4 inch (70 mm), unless otherwise indicated.
 - 4. Bolt Throw: 1 inch (25 mm), with latch made of hardened steel.
 - 5. Provide strike that matches frame.

2.06 DOOR PULLS, PUSH PLATES AND PUSH BARS

- A. Acceptable manufacturers and respective catalog numbers:
 - 1. Offset Pull/Push Bar (1" dia. 10" ctc Pull):
 - a. Burns 422 x 39C
 - b. Hager 157
 - c. Rockwood BF15747
 - d. Ives 9190-0
- B. Door Pulls, Push Plates, and Push Bars: Complying with BHMA A156.6.
 - 1. Pull Type: Offset, unless otherwise indicated.
 - 2. Bar Type: Push bar, unless otherwise indicated.
 - 3. Material: Aluminum, unless otherwise indicated.
 - 4. Adjust dimensions of push plates to accommodate stile and rail dimensions, lite and louver cutouts, and adjacent hardware. Where required by adjacent hardware, push plates shall be factory drilled for cylinders or other mortised hardware. All push plates shall be beveled 4 sides and counter sunk.
 - 5. Where possible, provide back-to-back, and concealed mounting for pulls and push bars. Push bar length shall be 3" less door width, or center of stile to center of stile for stile & rail or full glass doors.

2.07 CLOSERS

- A. Acceptable manufacturers and respective catalog numbers:
 - 1. LCN 4050/4050 EDA
 - 2. Norton R7500/PR75
 - 3. Sargent 351/351P10
- B. Closers: Comply with BHMA A156.4, Grade 1.
 - 1. Type: Surface mounted to door.
 - 2. Obtain door closers from a single manufacturer, although several may be indicated as offering products complying with requirements.

3. Provide extra heavy duty arm (EDA / HD) when closer is to be installed using parallel arm mounting.
4. Hardware supplier shall coordinate with related trades to ensure aluminum frame profiles will accommodate specified door closers.
5. Closers shall use high strength cast cylinders, forged main arms, and 1 piece forged steel pistons.
6. Closers shall utilize a stable fluid withstanding temperature range of +120 deg F to -30 deg F without seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UL10C.
7. Unless otherwise specified, all door closers shall have full covers and separate adjusting valves for sweeps, latch, and backcheck.
8. Provide closers for all labeled doors. Provide closer series and type consistent with other closers for similar doors specified elsewhere on the project.
9. Provide closers with adjustable spring power. Size closers to ensure exterior and fire rated doors will consistently close and latch doors under existing conditions. Size all other door closers to allow for reduced opening force not to exceed 5 lbs.
10. Install closers on the room side of corridor doors, stair side of stairways and interior side of exterior doors.
11. Closers shall be furnished complete with all mounting brackets and cover plates as required by door and frame conditions, and by adjacent hardware.
12. Door closers shall be provided with a powder coat finish to provide superior protection against the effects of weathering. Powder coat finish shall successfully pass a 100 hour salt spray test.
13. Pressure Relief Valve, PRV, shall not be acceptable.

2.08 OVERHEAD STOPS AND HOLDERS

- A. Acceptable manufacturers and respective catalog numbers:
 1. Concealed Mount:
 - a. Glynn-Johnson GJ100 Series
 - b. Rixson 1 Series
 - c. Sargent 690
- B. Overhead Stops and Holders (Door Checks): Comply with BHMA A156.8, Grade 1.
 1. Overhead stops (including slide block and end caps) shall be fabricated from metal.
 2. Unless otherwise specified, furnish GJ900 series overhead stop for doors equipped with regular arm surface type closers that swing more than 140 degrees before striking a wall, for doors that open against equipment, casework, sidelights, or other objects that would make wall bumpers inappropriate, and as specified in hardware groups.
 3. Furnish sex bolt attachments for wood and mineral core doors unless doors are supplied with proper reinforcing blocks.
 4. Provide special stop only ("SE" suffix) overhead stops when used in conjunction with electronic hold open closers.
 5. Do not provide holder function for labeled doors.

2.09 THRESHOLDS

- A. Acceptable manufacturers and respective catalog numbers:
 1. Zero 8655
 2. Pemko 171
 3. National Guard Products 425
 4. Reese S205
- B. Thresholds: Comply with BHMA A156.21.
 1. Provide threshold at each exterior door, unless otherwise indicated.
 2. Material: Aluminum.
 3. Threshold Surface: Fluted horizontal grooves across full width.

4. Provide non-corroding fasteners at exterior locations.
5. Hardware supplier shall verify all finish floor conditions and coordinate proper threshold as required to insure a smooth transition between threshold and interior floor finish.
6. Threshold Types:
 - a. Unless otherwise specified, provide saddle threshold similar to Zero 8655 for all exterior openings with an interior floor finish less than or equal to 1/4" in height.
 - b. Unless otherwise specified, provide half saddle threshold similar to Zero 1674 for all exterior openings with an interior floor finish greater than 1/4" in height. Threshold height shall match thickness of interior floor finish.

2.10 WEATHERSTRIPPING AND GASKETING

- A. Acceptable manufacturers and respective catalog numbers:
 1. Sweeps with Drip:
 - a. Zero 8198
 - b. Pemko 345_N
 - c. National Guard Products C627
 - d. Reese 354
 2. Drip Cap:
 - a. Zero 142
 - b. Pemko 346
 - c. National Guard Products 16
 - d. Reese R201
- B. Weatherstripping and Gasketing: Comply with BHMA A156.22.
 1. Head and Jamb Type: Adjustable.
 2. Door Sweep Type: Encased in retainer.
 3. Material: Aluminum, with brush weatherstripping.
 4. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
 5. Provide door bottom sweep on each exterior door, unless otherwise indicated.

2.11 KEY CONTROL SYSTEMS

- A. Key Control Systems: Comply with guidelines of BHMA A156.28.
 1. Provide keying information in compliance with DHI (KSN) standards.
 2. Keying: Grand master keyed.
 3. Include control keying with removable core cylinders.
 4. Supply keys in following quantities:
 - a. 1 each Grand Master keys.
 - b. 2 each Control keys if new system.
 - c. 2 each Change keys for each keyed core.
 5. Deliver keys with identifying tags to Owner by security shipment direct from hardware supplier.
 6. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do Not Duplicate."
 7. Owner or Owner's agent install permanent cores and return construction cores to hardware supplier. Construction cores and keys to remain property of hardware supplier.

2.12 FINISHES

- A. Finishes: Provide door hardware of same finish, unless otherwise indicated.
 1. Primary Finish: 626; satin chromium plated over nickel, with brass or bronze base material (former US equivalent US26D); BHMA A156.18.

2. Secondary Finish: 630; satin stainless steel, with stainless steel 3000 series base material (former US equivalent US32D); BHMA A156.18.
 - a. Use secondary finish in kitchens, bathrooms, and other spaces containing chrome or stainless steel finished appliances, fittings, and equipment; provide primary finish on one side of door and secondary finish on other side if necessary.
 - b. Use secondary finish in exterior or high humidity locations.
3. Exceptions:
 - a. Where base material metal is specified to be different, provide finish that is an equivalent appearance in accordance with BHMA A156.18.
 - b. Door Closer Covers and Arms: Color as selected by Architect from manufacturer's standard colors unless otherwise indicated.
 - c. Aluminum Surface Trim and Gasket Housings: Anodized to match door panel finish, not other hardware, unless otherwise indicated.
 - d. Hardware for Aluminum Entrance Doors: Finished to match door panel finish, except at hand contact surfaces provide stainless steel with satin finish, unless otherwise indicated.

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.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. 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.
 1. For Aluminum-Framed Storefront Doors and Frames: See Section 08 4313.
 2. Mounting heights in compliance with ADA Standards:
 - a. Push Plates/Pull Bars: 42 inch (1067 mm).
 - b. Deadlocks (Deadbolts): 48 inch (1219 mm).
- D. 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 ADJUSTING

- A. Adjust work under provisions of Section 01 7000 - Execution and Closeout Requirements.
- B. Adjust hardware for smooth operation.
- C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.04 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.

3.05 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.

3.06 HARDWARE GROUP

- A. Group 314.0
 1. Hinges
 2. Deadbolt; key outside or thumbturn inside throws or retracts latchbolt

3. Surface closer
4. Push bar/offset pull
5. Overhead stop
6. Weatherstripping (by door manufacturer)
7. Rain drip
8. Threshold
9. Door sweep with drip

END OF SECTION

SECTION 08 8000 - GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Insulating glass units.
- B. Glazing units.
- C. Glazing compounds.

1.02 RELATED REQUIREMENTS

- A. Section 07 2600 - Vapor Retarders.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015.
- C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2026).
- D. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2012.
- E. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.
- F. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- G. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2024.
- H. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- I. BS EN 14179-1 - Glass in Building - Heat Soaked Thermally Toughened Soda Lime Silicate Safety Glass - Part 1: Definition and Description; 2016.
- J. GANA (SM) - GANA Sealant Manual; 2008.
- K. ITS (DIR) - Directory of Listed Products; current edition.
- L. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- M. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.
- N. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2026.
- O. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- D. Test results from heat soaking.
- E. 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. Perform Work in accordance with GANA (GM), GANA (SM), GANA (LGRM), and IGMA TM-3000 for glazing installation methods.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

1.06 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 40 degrees F (4 degrees C).
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.
- C. 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. Float Glass Manufacturers:
 - 1. Cardinal Glass Industries: www.cardinalcorp.com.
 - 2. Guardian Glass, LLC: www.guardianglass.com.
 - 3. Oldcastle Building Envelope: obe.com.
 - 4. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com.
 - 5. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Design Pressure: Calculated in accordance with applicable codes.
 - 2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
 - 3. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 - 4. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
 - 1. In conjunction with weather barrier related materials described in other sections, as follows:
 - a. Vapor Retarders: See Section 07 2600.
 - b. Air Barriers: See Section 07 2700.
 - 2. To utilize inner pane of multiple pane insulating glass units for continuity of vapor retarder and/or air barrier seal.
 - 3. To maintain a continuous vapor retarder and/or air barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
 - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
 - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
 - 3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated. All glazing shall be tempered as required by codes, and as required to meet thermal stress and wind loads.
 - 1. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
 - 2. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
 - 3. Heat-Soak Testing (HST): Provide HST of fully tempered glass used on all applications of project, to reduce risks of spontaneous breakage due to nickel sulfide (NiS) induced fractures in accordance with BS EN 14179-1.

2.04 INSULATING GLASS UNITS

- A. Manufacturers:
 - 1. Cardinal Glass Industries: www.cardinalcorp.com.
 - 2. Guardian Glass, LLC: www.guardianglass.com.
 - 3. Oldcastle Building Envelope: obe.com.
 - 4. Pilkington North America Inc: www.pilkington.com.
 - 5. Viracon: www.viracon.com.
 - 6. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com.
 - 7. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulating Glass Units: Types as indicated.
 - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 - 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
 - 3. Warm-Edge Spacers: Flexible silicone with polyisobutylene (PIB) primary seal.
 - 4. Spacer Color: Black.
 - 5. Edge Seal:
 - a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
 - 6. Color: Black.
 - 7. Purge interpane space with dry air, hermetically sealed.
- C. Insulating Glass Units (INSUL GL-1): Vision glass, double glazed.
 - 1. Thermal Transmittance (U-Value) Winter - Center of Glass: 0.24, maximum.
 - 2. Visible Light Transmittance (VLT): 62 percent, minimum.
 - 3. Solar Heat Gain Coefficient (SHGC): 0.26, maximum.
 - 4. Visible Light Reflectance, Outside: 11 percent, minimum.
 - 5. Visible Light Reflectance, Inside: 12 percent, minimum.
 - 6. Glazing Method: Dry glazing method, gasket glazing.

2.05 GLAZING UNITS

- A. Monolithic Safety Glazing: Non-fire-rated.
 - 1. Applications: Interior glazing, unless otherwise indicated.
 - a. Glazed lites in doors, except fire doors.
 - b. Glazed sidelights to doors, except in fire-rated walls and partitions.
 - c. Other locations required by applicable federal, state, and local codes and regulations.
 - d. Other locations indicated on drawings.
 - 2. Glass Type: Fully tempered float glass.
 - 3. Tint: Clear.
 - 4. Glass Type: Fully tempered safety glass as specified.

- a. Thickness:
 - 1) (GL-1): 1/4 inch (6.4 mm), nominal.
- 5. Tint: Clear.

2.06 GLAZING COMPOUNDS

- A. Manufacturers:
 - 1. Bostik Inc: www.bostik-us.com.
 - 2. Dow Corning Corporation: www.dowcorning.com/construction.
 - 3. Momentive Performance Materials, Inc: www.momentive.com.
 - 4. Pecora Corporation: www.pecora.com.
 - 5. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.
 - 6. Substitutions: See Section 01 6000 - Product Requirements.

2.07 ACCESSORIES

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch (75 mm) long by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.
- C. Verify that sealing between joints of glass framing members has been completed effectively.
- D. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 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. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.
- F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.05 CLEANING

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove non permanent 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.

3.06 PROTECTION

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.
- B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION

SECTION 09 9113 - EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished unless noted otherwise including, but not limited to, the following.
 - 1. Exposed surfaces of steel lintels and ledge angles.
 - 2. Mechanical and Electrical:
 - a. Exterior mechanical and electrical: Paint all mechanical and electrical pipes, conduits, etc that penetrate exterior building walls, except as indicated below in paragraph D.
- 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, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, zinc, and lead.
 - 6. Floors, unless specifically indicated.
 - 7. Glass.
 - 8. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Divisions 21 through 26: Identification for mechanical and electrical systems.

1.03 REFERENCE STANDARDS

- A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).
- B. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- C. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- D. SSPC-SP 2 - Hand Tool Cleaning; 2024.
- E. SSPC-SP 6/NACE No.3 - Commercial Blast Cleaning; 2006.

1.04 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. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) 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. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- E. Manufacturer's Instructions: Indicate special surface preparation procedures.
- F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- G. 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 Paint and Finish Materials: 1 gallon (4 L) of each color, sheen, type, sheen, surface texture, sheen, and sheen; from the same product run, store where directed.
 3. Label each container with color in addition to the manufacturer's label.

1.05 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 five years experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.
- 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 exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles (860 lx) 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. Benjamin Moore & Co: www.benjaminmoore.com.
 2. Diamond Vogel Paints: www.diamondvogel.com.
 3. PPG Paints: www.ppgpaints.com.
 4. Pratt & Lambert Paints: www.prattandlambert.com.
 5. Sherwin-Williams Company: www.sherwin-williams.com.
- 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 required 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 described explicitly in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content: Comply with Section 01 6116.
- C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- D. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.
 - 2. Allow for minimum of six colors for each system, unless otherwise indicated, without additional cost to Owner.
 - 3. Extend colors to surface edges; colors may change at any edge as directed by Architect.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete, concrete masonry units, primed wood, and primed metal.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
 - 3. Primer: As recommended by top coat manufacturer for specific substrate.

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 properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - 2. Prepare surface according to SSPC-SP 2.
- 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 in accordance with SSPC-SP 6/NACE No.3. Protect from corrosion until coated.
- H. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.
- I. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- C. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- 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.
- F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.
- G. Sand wood and metal surfaces lightly between coats to achieve required finish.
- H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- I. 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

SECTION 13 3419 - METAL BUILDING SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal wall panels including gutters and downspouts.

1.02 RELATED REQUIREMENTS

- A. Section 07 9200 - Joint Sealants: Sealing joints between accessory components and wall system.

1.03 REFERENCE STANDARDS

- A. AISC 360 - Specification for Structural Steel Buildings; 2022, with Errata (2025).
- B. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.
- C. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2024, with Editorial Revision (2025).
- D. MBMA (MBSM) - Metal Building Systems Manual; 2024.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on profiles, component dimensions, fasteners.
- C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections, attachments, openings, and loads; wall and roof system dimensions, panel layout, general construction details, anchors and methods of anchorage, and installation; framing anchor bolt settings, sizes, locations from datum, and foundation loads; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and signature.
- D. Submit certification verifying compliance with UL and FM Global requirements.
- E. Manufacturer's Instructions: Indicate preparation requirements, anchor bolt placement.
- F. Certification: Submit written "Certificate of design and manufacturing conformance" prepared and signed by a Professional Engineer, registered to practice in North Dakota verifying that the metal building system design and metal roof system design (including panels, clips, and support system components) meet indicated loading requirements and codes of authorities having jurisdiction.
 - 1. Certification shall reference specific dead loads, live loads, snow loads, wind loads/speeds, tributary area load reductions (if applicable), concentrated loads, collateral loads, seismic loads, end-use categories, governing code bodies, including year, and load applications.
- G. Manufacturer's qualifications.
- H. Erector's certification.
- I. Erection Drawings: Indicate members by label, assembly sequence, and temporary erection bracing.
- J. Project Record Documents: Record actual locations of concealed components and utilities.

1.05 QUALITY ASSURANCE

- A. Designer Qualifications: Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of this type of work.
 - 1. Design Engineer Qualifications: Licensed in the State in which the Project is located.
 - 2. Comply with applicable code for submission of design calculations as required for acquiring permits.
 - 3. Cooperate with regulatory agency or authorities having jurisdiction (AHJ), and provide data as requested.
- B. Perform work in accordance with AISC 360, MBMA (MBSM), AISC 360, and MBMA (MBSM).
- C. Manufacturer Qualifications: Company specializing in the manufacture of products similar to those required for this project.

1. Accredited by IAS in accordance with IAS AC472.
- D. Erector Qualifications: Company specializing in performing the work of this section with minimum five years experience.
 1. Erector shall be approved by building manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
 1. Store and handle materials in accordance with manufacturer's instructions.
 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
 3. Do not store materials directly on ground.
 4. Store materials on flat, level surface, raised above ground, with adequate support to prevent sagging.
 5. Protect materials and finish during storage, handling, and installation to prevent damage.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a two year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Buildings Systems:
 1. Basis of Design: Butler Manufacturing Company: www.butlermfg.com.

2.02 ASSEMBLIES

- A. Building Dimensions: Indicated on the Drawings.
 1. Horizontal Dimensions: Measure to inside face of wall sheets.
 2. Eave Height: Measure from top of finished floor to intersection of insides of roof and sidewall sheets.
 3. Clear Height Between Finished Floor and Bottom of Roof Steel: Indicated on the Drawings.

2.03 PERFORMANCE REQUIREMENTS

- A. Provide drainage to exterior for water entering or condensation occurring within wall or roof system.

2.04 METAL WALL SYSTEM

- A. Wall System Design: Design wall panels in accordance with AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
- B. Wall Panels (PEMB PNL-20):
 1. Basis of Design: Butler Manufacturing: Shadowwall.
 2. Roll-formed panels, 3 feet wide with 4 major corrugations, 1-7/16 inches high, 12 inches on center, with 2 minor corrugations between each of the major corrugations entire length of panel.
 3. One piece from base to building eave.
 4. Each Panel Corrugation: Fastener alignment groove to center fastener within corrugation.
 5. Exposed Panel Side Laps: Hemmed to eliminate raw cut panel edge.
 6. Upper End of Panels: Fabricate with mitered cut to match corrugations of "Butlerib®II" roof panels of 1/2 inch to 12 inches and square cut for all other roof panels and slopes.
 7. Factory punch or field drill wall panels at panel ends and match factory-punched or field-drilled holes in structural members for proper alignment.
 8. Color: As indicated on drawings.
- C. Panel Material and Finish:

1. 24-gauge painted Galvalume aluminum-zinc alloy (approximately 55 percent aluminum, 45 percent zinc), ASTM A 792.
2. Paint with exterior colors of "Butler-Cote™" finish system, full-strength, 70 percent "Kynar 500" or "Hylar 5000" fluoropolymer (PVDF) coating.
3. PVDF Coating Warranty: Metal building system manufacturer shall warrant coating for 25 years for the following.
 - a. Not to peel, crack, or chip.
 - b. Chalking: Not to exceed ASTM D 4214, #8 rating.
 - c. Fading: Not more than 5 color-difference units, ASTM D 2244.
- D. Fasteners:
 1. Wall Panel-to-Structural Connections: Torx-head "Scrubolt™" fasteners.
 2. Wall Panel-to-Panel Connections: Torx-head self-drilling screws.
 3. Fastener Locations: Indicated on erection drawings furnished by metal building system manufacturer.
 4. Exposed Fasteners: Factory painted to match wall color.
- E. Accessories:
 1. Accessories: Standard roof curbs, flashings, etc from metal building system manufacturer as required for a complete installation.
 2. Location of Standard Accessories: Indicated on erection drawings furnished by metal building system manufacturer.

2.05 FABRICATION - GUTTERS AND DOWNSPOUTS

- A. Fabricate of same material and finish as roofing metal.
- B. Form gutters and downspouts of profile and size indicated on the Drawings to collect and remove water. Fabricate with connection pieces.
- C. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion at joints.
- D. Fabricate support straps of same material and finish as roofing metal, color as selected.

2.06 FINISHES

- A. Framing Members: Clean, prepare, and shop prime. Do not prime surfaces to be field welded.
 1. General:
 - a. Structural Steel: Prime paint as temporary protection against ordinary atmospheric conditions.
 - b. Perform subsequent finish painting, if required, in field as specified in the painting section.
 - c. Before painting, clean steel of loose rust, loose mill scale, dirt, and other foreign materials.
 2. Primary Frames:
 - a. Clean steel in accordance with SSPC-SP2.
 - b. Factory cover steel with 1 coat of gray water-reducible alkyd primer paint formulated to equal or exceed performance requirements SSPC-Paint 15.
 - c. Minimum Coating Thickness: 2.0 mil.
 3. Secondary Structural Members - Roll-Formed:
 - a. Hot-dipped zinc coating, ASTM A 653, G30; followed by 1 coat of clear acrylic finish.
 - b. Acrylic-Coated G30 Galvanized Steel: Equal or exceed performance requirements of SSPC Paint-15.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position

3.02 ERECTION - FRAMING

- A. Erect framing in accordance with AISC 360.
- B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated.
- C. Set column base plates with non-shrink grout to achieve full plate bearing.
- D. Do not field cut or alter structural members without approval.
- E. After erection, prime welds, abrasions, and surfaces not shop primed.

3.03 ERECTION - WALL AND ROOF PANELS

- A. Install in accordance with manufacturer's instructions.
- B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.
- C. Fasten cladding system to structural supports, aligned level and plumb.
- D. Locate end laps over supports. End laps minimum 2 inches (50 mm). Place side laps over bearing.
- E. Provide expansion joints where indicated.
- F. Use exposed fasteners.
- G. Install sealant and gaskets, providing weather tight installation.

3.04 ERECTION - GUTTERS AND DOWNSPOUTS

- A. Rigidly support and secure components. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts.
- B. Apply bituminous paint on surfaces in contact with cementitious materials.
- C. Slope gutters to downspouts.
- D. Install splash pans under each downspout.

3.05 INSTALLATION - ACCESSORY COMPONENTS IN WALL SYSTEM

- A. Install door frames, doors, overhead doors, and windows and glass in accordance with manufacturer's instructions.

3.06 TOLERANCES

- A. Framing Members: 1/4 inch (6 mm) from level; 1/8 inch (3 mm) from plumb.

END OF SECTION