PROJECT MANUAL

CHAMPAIGN COUNTY SELECT DEMOLITION

FOR

CHAMPAIGN COUNTY, ILLINOIS
1701 East Main Street
Urbana, IL 61802

ISSUED FOR BID

Architect's Project # 24002

ITB # 2026-002

February 9, 2026

Bailey Edward Design, Inc.
1103 S. Mattis Avenue
Champaign, Illinois 61821
217.363.3375

TABLE OF CONTENTS

SPECIFIER(S): Karla Smalley, Bailey Edward Design, Inc.
217.363.3375 Email: ksmalley@baileyedward.com

Jake Wolf, Engineering Resource Associates, Inc.
217.351.6268 Emal: jwolf@eraconsultants.com

SECTION 00 11 16 – INVITATION TO BID

INVITATION TO BID:

CHAMPAIGN COUNTY SELECT DEMOLITION

Sealed bids for the Champaign County Select Demolition Project will be received by the Champaign County at the Bennett Administrative Center, Shields-Carter Room (Main level) 102 East Main Street, Urbana, IL 61801. Bids will be opened publicly.

Work generally includes but is not limited to the following:

- Select removal of exterior elements
- Complete demolition of buildings and foundations
- Select removal of sidewalks
- Removal of utilities and hazardous materials
- Infill of basement, compaction, grading, and establishment of grass
- Modifications at connection to existing facility to make weather tight including construction of area well

Proposals must be submitted on the forms provided and shall contain no qualifications or interlineations. In submitting a bid, it is agreed that the bid may not be withdrawn for a period of forty-five (45) days after Bid Date.

The Owner reserves the right to require from any bidder, prior to contract award, a detailed statement regarding the business and technical organization of the bidder that is available for the contemplated work, and a list of his proposed subcontractors. Information pertaining to financial resources may also be required.

A Bid Security in the form of a cashier's check, certified check, or acceptable bidder's surety bond, made payable to the Owner, in an amount that is not less than ten percent (10%) of the Bid proposal submitted, including all Alternates, shall accompany each Bid as a guarantee that: (1) the Bidder will not modify, withdraw or cancel the proposal for forty-five (45) days after the bid date; and (2) the bidder, if awarded the contract, will promptly enter into a contract and execute such bonds and furnish such insurance certificates as may be required. Should the Bidder fail to honor these two (2) guarantees for any reason, the Owner shall total the damages and shall deduct the amount of such damages from the Bidder's Bid Security. Should the damages total less than the amount of the Bid Security, the difference shall be returned to the Bidder. However, all damages in excess of the Bid Security shall be borne by the Owner. Damages may include, but shall not be limited to, reasonable compensation for the Owner's additional time spent, additional Architect's fees, costs to the Owner for delays in completion of the Work based upon the Bidders proposed Contract Time and the Contract Time as Awarded including, but not limited to, interest expense and lost revenue, the difference between the Bidder's proposed Contract Sum and the Contract Sum as awarded and costs to re bid the Project should such action become necessary. Such bid securities will be returned to the unsuccessful bidders after execution of the Contract.

Sealed bids for the proposed work will be received up to the hour of **4:00 P.M.** Central Daylight Time on **Tuesday, February 24, 2026** at the Bennett Administrative Center, Shields-Carter Room (Main level) 102 East Main Street, Urbana, IL 61801

A pre-bid conference will be held at the project site, 1701 East Main Street, Urbana, IL 61802, on **Tuesday, February 17, 2026** at **10:00 A.M.** CDT.

A complete set of documents will be available from Eastern Engineering, 404 E. University Ave., Champaign, IL. 61820, www.easternengineering.com, 217.359.3261.

Refundable Plan Deposit: $300.00 for each set of bid documents. Two (2) sets maximum, Additional sets may be purchased without refund.

For Electronic sets, contact Eastern Engineering at www.easternengineering.com, 217.359.3261

Plan deposits will be refunded in full upon the return of the Bid Documents, in good condition, within thirty (30) days after the bid opening. The deposits of General Contractors, who do not submit a bonafide bid or do not return the Bid Documents within thirty (30) days after the bid opening, will not be refunded.

Contractor and Subcontractors shall include in bids, the cost for the current prevailing wage (Illinois Prevailing Wage Act - 820 ILCS 130/0.01 et seq.). The Contractor shall ensure that any Subcontractors shall comply with the Illinois Prevailing Wage Act.

Champaign County has a Project Labor Agreement.

The Owner reserves the right to reject any or all bids, to waive any irregularities in the bidding, or to accept the bids that in their judgment will be for their best interest.

Once awarded the contract, the Contractor will furnish a satisfactory performance bond, execute the contract and proceed with the work. The Contractor shall indicate the amount of the performance bond on the bid form.

END OF SECTION 00 11 16

SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 INSTRUCTIONS TO BIDDERS

A. AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and Contracting Requirements by reference.
   1. A copy of AIA Document A701-2018, "Instructions to Bidders," is bound in this Project Manual.

B. AIA Document A201 “General Conditions” is hereby incorporated into the Procurement.
   1. A copy of AIA Document A201-2017 “General Conditions” is bound in this project manual.

END OF DOCUMENT 00 21 13

AIA® Document A701™ – 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)

Champaign County Select Demolition
ITB# 2026-002

THE OWNER:
(Name, legal status, address, and other information)

Champaign County, IL
1701 East Main Street
Urbana, IL 61802

THE ARCHITECT:
(Name, legal status, address, and other information)

Bailey Edward Design, Inc.
1103 S. Mattis Avenue
Champaign, IL 61821
Telephone Number: 217.363.3375

TABLE OF ARTICLES

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

ARTICLE 1 DEFINITIONS

§ 1.1 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, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 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.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 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.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

.1 the Bidder has read and understands the Bidding Documents;

.2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;

.3 the Bid complies with the Bidding Documents;

.4 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 observations with the requirements of the Proposed Contract Documents;

.5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and

.6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.
(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3 Substitutions

§ 3.3.1 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.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 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.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than four 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.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.6 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 neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name 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 agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:

(Insert the form and amount of bid security.)

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount

of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:
(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:
(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, 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 judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, 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 lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

.1 a designation of the Work to be performed with the Bidder's own forces;

.2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and

.3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.
(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)

.4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013.)

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda:

Number	Date	Pages

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[ ] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017.)

[ ] The Sustainability Plan:

Title	Date	Pages

[ ] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents listed below:
(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

Champaign County Select Demolition
ITB# 2026-002

THE OWNER:
(Name, legal status and address)

Champaign County, Illinois
1701 East Main Street
Urbana, IL 61802

THE ARCHITECT:
(Name, legal status and address)

Bailey Edward Design, Inc,
1103 S. Mattis Avenue
Champaign, IL 61821

TABLE OF ARTICLES

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

Init.
/

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES

INDEX
(Topics and numbers in bold are Section headings.)

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent

consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

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

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements,

assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the

Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the

Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations

and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor,

prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work,

promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
.2 Unit prices stated in the Contract Documents or subsequently agreed upon;
.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will

affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and

unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off 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 and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- **.7** repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

.1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;

.2 failure of the Work to comply with the requirements of the Contract Documents;

.3 terms of special warranties required by the Contract Documents; or

.4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

.1 employees on the Work and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

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

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to

the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

.1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;

.2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;

.3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or

.4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

.1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

.2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or Suppliers;

.3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; and

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance,

the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

.1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the

Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

SECTION 00 22 13 – SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1.1 INSTRUCTIONS TO BIDDERS

A. Instructions to Bidders for Project consist of the following:

1. AIA Document A701 - 2018, "Instructions to Bidders" a copy of which is bound in this Project Manual.
2. The following Supplementary Instructions to Bidders that modify and add to the requirements of the Instructions to Bidders.

1.2 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, GENERAL

A. The following supplements modify AIA Document A701, "Instructions to Bidders." Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, unaltered portions of the Instructions to Bidders shall remain in effect.

1.3 ARTICLE 2 - BIDDER'S REPRESENTATIONS

A. Add Section 2.1.7:

1. 2.1.7 - The Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.

B. Add Section 2.1.8:

1. 2.1.8 - The Bidder is a properly licensed Contractor according to the laws and regulations of the local and state jurisdictions and meets qualifications indicated in the Procurement and Contracting Documents.

C. Add Section 2.1.9:

1. 2.1.9 - The Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Procurement and Contracting Documents.

1.4 ARTICLE 3 - BIDDING DOCUMENTS

A. 3.4 - Addenda:

1. Delete Section 3.4.3 and replace with the following:

a. 3.4.3 - Addenda may be issued at any time prior to the receipt of bids.

2. Add Section 3.4.4.1:

a. 3.4.4.1 - Owner may elect to waive the requirement for acknowledging receipt of 3.4.4 Addenda as follows:

1) 3.4.4.1.1 - Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Procurement and Contracting Documents included in an unacknowledged Addendum.
2) 3.4.4.1.2 - Modifications to the Procurement and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

1.5 ARTICLE 4 - BIDDING PROCEDURES

A. 4.1 - Preparation of Bids:

1. Add Section 4.1.9:

a. 4.1.9 - Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.

B. 4.2 - Bid Security:
1. Delete section 4.2.1 and replace with the following:
a. Each Bid shall be accompanied by a bid security in the form and amount required in the bid documents and noted in 00 41 06.

C. 4.3 - Submission of Bids:

1. Delete section 4.3.1 and replace with the following:
a. A Bidder shall submit paper copies its Bid, the bid security, and all other documents required by the bid documents.

2. Add Section 4.3.2.1:

a. 4.3.2.1 - Include Bidder's Contractor License Number applicable in Project jurisdiction on the face of the sealed bid envelope.

D. 4.4 - Modification or Withdrawal of Bid:

1. Add the following sections to 4.4.1:

a. 4.4.1.1 - Such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Owner, or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Owner at the time of seeking modifications or withdrawal of the Bid.

b. 4.4.1.2 - Owner will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the

following: the modification is indicated by a percent or stated amount to be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification. Completion of an unsealed bid form, awaiting final figures from the Bidder, does not require power of attorney due to the evidenced authorization of the Bidder implied by the circumstance of the completion and delivery of the Bid.

1.6 ARTICLE 5 - CONSIDERATION OF BIDS

A. 5.2 - Rejection of Bids:

1. Add Section 5.2.1:

a. 5.2.1 - Owner reserves the right to reject a bid based on Owner's and Engineer's evaluation of qualification information submitted following opening of bids. Owner's evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.

1.7 ARTICLE 6 – POST-BID INFORMATION

A. 6.1 - Contractor's Qualification Statement:

1. Add Section 6.1.1:

a. 6.1.1 - Submit Contractor's Qualification Statement no later than five days after the bid submittal.

1.8 ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

A. 7.1 - Bond Requirements:

1. Add Section 7.1.1.1:

a. 7.1.1.1 – A Performance Bond will be required, in an amount equal to 100 percent of the Contract Sum.

B. 7.2 - Time of Delivery and Form of Bonds:

1. Delete the first sentence of Section 7.2.1 and insert the following:

a. The Bidder shall deliver the required bonds to Owner no later than 10 days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Owner may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.

2. Delete Section 7.2.3 and insert the following:

a. 7.2.3 - Bonds shall be executed and be in force on the date of the execution of the Contract.

1.9 ARTICLE 8 – ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

A. The form of agreement between Owner and Contractor is included in specifications and is bound in this project manual.

1.10 ARTICLE 9 - EXECUTION OF THE CONTRACT

A. Add Article 9:

1. 9.1.1 - Subsequent to the Notice of Intent to Award, and within 10 days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner, in such number of counterparts as Owner may require.

2. 9.1.2 - Owner may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.

3. 9.1.3 - Unless otherwise indicated in the Procurement and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement or the date that the Bidder is obligated to deliver the executed Agreement and required bonds to Owner.

4. 9.1.4 - In the event of a default, Owner may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

END OF DOCUMENT 00 22 13

SECTION 00 22 44 - ADDITIONAL INSURANCE REQUIREMENTS

1.1 INSURANCE

The Contractor shall purchase and maintain insurance as required in the current edition of the Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a Stipulated Sum, AIA Document A101 and the General Condition of the Contract for Construction, AIA Document A201 as modified by these specifications, AIA General Conditions and Supplements to the AIA General Conditions, Article 11

A. All of the above documents shall be thoroughly studied prior to purchases of an insurance policy to cover the Project.

B. While not limited to the following requirements, the requirements listed below are brought to the Contractors Specific attention.

1) Champaign County, and the Architect/Engineer shall be named as additional insureds on the Commercial General Liability Policy and the Umbrella Liability Policy.

2) Waivers of Subrogation are required for both Property Insurance and for Liability Insurance.

1.2 ADDITIONAL LIABILITY INSURANCE REQUIREMENTS

In addition to the liability insurance requirements noted in Paragraph 1.01 above, the following requirements also apply:

A. The Contractor shall purchase and maintain a Commercial General Liability Policy which shall include the following coverage areas:

1) Operations of the Contractor - direct liability coverage for the Contractors activities at a permanent location and the Project Site;
2) Operations of Subcontractors - Liability coverage for those entities for which the Contractor has a duty to supervise and stand legally responsible for their conduct;
3) Completed Operations - Liability for property damage and bodily injury and death that occurs after Substantial Completion;
4) Personal Injury - Including but not limited to, libel, slander, defamation of character, wrongful eviction, right of private occupancy, false arrest and detention and other similar personal injuries;
5) Employees as Additional Insured - Include employees and their acts into the coverage;
6) Explosion, Collapse, Underground - Liability coverage for the property of others to include, but not limited to, unknown utilities; and
7) Contractual Liability - coverage for the assumption of others by Contract.

B. The Commercial General Liability Policy shall name Champaign County, the Architect, the Architect's Consultants, their agents and employees as additional insured.

C. The Contractor shall purchase and maintain Workers Compensation and Employees Liability Insurance.

D. The Contractor shall purchase and maintain commercial Automobile Liability Insurance. This policy shall cover Owned, Non-owned and Hired vehicles.

E. The Contractor shall purchase and maintain Umbrella Liability Coverage to provide higher limits of liability above those required for General Liability, Employers Liability and Automobile Liability.

F. The Umbrella Liability Policy shall name Champaign County, the Architect, the Architect's

Consultants, their agents and employees as additional insured.

G. Liability limits shall be as specified herein or the maximum exposure as stated in the Government Tort Claims Acts as most recently amended, whichever is higher.

H. The minimum amount of coverage and the limits of liability shall be as specified below:

1) Claims under workers' or workman's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed:

a. As required by law.

2) Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees:

a. $1,000,000.00

3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees:

a. $ 500,000.00

4) Claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person:

a. $1,000,000.00

5) Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom:

a. $ 500,000.00

6) Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle:

a. $1,000,000.00

7) Claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18 of the General Conditions for the Contract for Construction as modified:

a. $ 500,000.00

1.3 SUBMITTAL REQUIREMENTS

A. Submit ACORD 25-S form along with the signed Agreement Between Owner and Contractor.

B. Champaign County shall be listed as Certificate Holder.

C. Include the following sentence under Special Items:

"The Certificate Holder is Champaign County. The Owner, Architect, Architect's Consultants, including their Agents and Employees are named as additional insured's in both the General and Umbrella Liability Policy. Waivers of Subrogation are in effect for both liability and property insurance policies."

1.4 LOSS OF USE INSURANCE

A. The Owner, at the Owners option, may purchase and maintain such insurance that will protect the Owner against the loss of use of this property.

END OF SECTION 00 22 44

SECTION 00 25 13 – PREBID MEETING

1.1 PREBID MEETING

A. There will be a Prebid meeting as indicated below:

1. Meeting Date: Tuesday, February 17, 2026
2. Meeting Time: 10:00 A.M. CDT.
3. Location: Project Site, 1701 East Main Street, Urbana, IL 61802
4. Attendance at the prebid meeting is not mandatory.

B. Bidder Questions: Submit written questions to be addressed at Prebid meeting a minimum of two business days prior to meeting.

C. Agenda: Prebid meeting agenda will include review of topics that may affect proper preparation and submittal of bids, including the following:

1. Procurement and Contracting Requirements:
   a. Instructions to Bidders.
   b. Bidder Qualifications.
   c. Bonding.
   d. Insurance.
   e. Bid Form and Attachments.
   f. Bid Submittal Requirements.
   g. Notice of Award.

2. Communication during Bidding Period:
   a. Obtaining documents.
   b. Bidder's Requests for Information.
   c. Bidder's Substitution Request/Prior Approval Request.
   d. Addenda.

3. Contracting Requirements:
   a. Agreement.
   b. The General Conditions.
   c. The Supplementary Conditions.
   d. Other Owner requirements.

4. Construction Documents:
   a. Scopes of Work.
   b. Temporary Facilities.
   c. Use of Site.
   d. Work Restrictions.
   e. Unit Price.
   f. Substitutions following award.

5. Schedule:
   a. Project Schedule.
   b. Contract Time.
   c. Other Bidder Questions.

6. Site/facility visit or walkthrough.

7. Post-Meeting Addendum.

D. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes to attendees of prebid meeting only. Minutes of meeting are issued as Available Information and do not constitute a modification to the Procurement and Contracting Documents. Modifications to the Procurement and Contracting Documents are issued by written Addendum only.

1. Sign-in Sheet: Minutes will include list of meeting attendees.

END OF DOCUMENT 00 25 13

RETURN WITH BID

DOCUMENT 00 41 06 – BID BOND

_____

_____

as Principal, and _____

a corporation of the State of _____

as Surety, are held and firmly bound unto the Champaign County the amount of ten percent (10%) of the amount of the base bid for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, to this agreement.

Principal has submitted to Obligee a bid to enter into a written contract, for

Project Number: _____ Division of Work: _____

in accordance with bidding documents for the project, which contract is by reference made a part hereof and is hereinafter referred to as "the Contract".

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

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

Signed and sealed this _____ day of _____ , 20____.

_____ _____

CONTRACTOR SURETY

BY _____ BY _____

SIGNATURE OFFICER OF THE SURETY

Title _____ Title _____

ATTEST:

_____

CORPORATE SECRETARY (Corporations only)

JURAT (Notary's Statement Authenticating Signature)

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public in and for said county, do hereby certify that

(Insert Name of Attorney-In-Fact for SURETY)

who is personally known to me to be the same person whose name is subscribed to the foregoing instrument on behalf of SURETY, appeared before me this day in person and acknowledged respectively, that he/she signed, sealed, and delivered said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ DAY OF _____ A.D. 20 ____

My commission expires _____

Notary Signature _____

SECTION 00 41 13 – BID FORM – STIPULATED SUM (SINGE-PRIME CONTRACT)

1.1 BID INFORMATION

A. Bidder: _____.
B. Project Name: Champaign County Select Demolition

C. Project Location: 1701 E. Main Street, Urbana, Illinois 61802

D. Owner: Champaign County

1.2 CERTIFICATIONS AND BID

A. **Base Bid, Single-Prime (All Trades) Contract**: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Bailey Edward Design, Inc., 1103 S. Mattis Avenue, Champaign, IL 61821, and their consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____Dollars

($_____)

B. Alternates

1. Alternate No. 1: Demolition of Garage and Mechanical/Boiler House

_____Dollars

($_____)

C. Unit Prices

1. Unit Price No. 1: Removal of Additional Sidewalk

_____Dollars

($_____)

1.3 TIME OF COMPLETION

A. Provided the contractor receives Notice to Proceed on or prior to March 10, 2026 the bidder agrees to be substantially complete with the Base Bid work on or before August 1, 2026.
   1. Demolition work, including basement, at the connection to the occupied ILEAS building should be complete on or before April 15, 2026 to allow for AHU installation at the basement.

1.4 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

   1. Addendum No. 1, dated _____.

   2. Addendum No. 2, dated _____.

   3. Addendum No. 3, dated _____.

1.5 SUBMISSION OF BID

A. In submitting the Bid, the undersigned agree that this Proposal will not be withdrawn for a period of thirty (30) calendar days from the date of submission. It is understood the Owner reserves the right to reject any and all Bids and to waive informalities and irregularities.

1. Respectfully submitted this ____ day of _____, 2026.

2. Submitted By :_____
(Name of bidding firm or corporation).

3. Authorized Signature :_____
(Handwritten signature).

4. Signed By :_____
(Type or print name).

5. Title :_____
(Owner/Partner/President/Vice President).

6. Witness By :_____
(Handwritten signature).

7. Attest :_____
(Handwritten signature).

8. By :_____
(Type or print name).

9. Title :_____
(Corporate Secretary or Assistant Secretary).

10. Street Address:_____.

11. City, State, Zip: _____.

12. Phone: _____.

13. License No.:_____.

14. Federal ID No. :_____

(Affix Corporate Seal Here).

END OF DOCUMENT 00 41 13

RETURN WITH BID

BIDDER'S / CONTRACTOR'S DISCLOSURE AFFIDAVIT

STATE OF ILLINOIS)
) SS
COUNTY OF _____)

BUSINESS STATUS STATEMENT

I, the undersigned, being duly sworn, do state as follows:

A. _____ (hereafter "Contractor") is a:
Company Name

(Place a mark in front of appropriate type of business)

_____ Corporation (If a Corporation, complete B)

_____ Partnership (If a Partnership, complete C)

_____ Individual Proprietorship (If an Individual, complete D)

B. CORPORATION

The State of Incorporation is _____

The registered agent of the Corporation in Illinois is:

Name: _____

Address: _____

City, State, Zip: _____

Telephone: _____

The Corporate officers are as follows:

President: _____

Vice President: _____

Secretary: _____

Treasurer: _____

C. PARTNERSHIP
The Partners are as follows (attach additional sheets if necessary):

Name	Address
Name	Address
Name	Address
Name	Address

The business address is: _____

D. INDIVIDUAL PROPRIETORSHIP

The business address is: _____

Business Telephone: _____

My home address is: _____

Home Telephone: _____

E. Under penalty of perjury _____
(Contractor's Name)

Certifies that _____ (FEIN / SSN)
is its correct Federal Taxpayer Identification Number, or in the case of an individual or sole proprietorship, Social Security Number.

NON-DISCRIMINATION STATEMENT
The Contractor does not and will not engage in discriminatory practices; the Contractor does not and will not engage in discrimination because of race, sex, age, religion, national origin or sensory, mental, or physical handicap in hiring or firing; and the Contractor is, in fact, an equal opportunity employer.

NON-COLLUSION STATEMENT

A. That the only persons or corporations interested with _____ (Name of Bidder) in the delivery of the materials and/or services bid upon under the Contract other than its officers, directors, shareholders and employees are:

Name	Address
Name	Address
Name	Address
Name	Address

B. That the said Bid is made without any connection or common interest in the profits with any other persons making any Bid or Proposal for said Work except as listed above.

C. That this Contract is in all respects fair and entered into without collusion or fraud.

D. That no employee or any officer of the Owner has any financial interest, directly or indirectly, in the award of this Bid to Bidder except as listed above.

E. That the Bidder is not barred from bidding on this Contract as a result of violation of either Section 33E-3 (Bid Rigging) or Section 33E-4 (Bid Rotating) of Chapter 38, Illinois Revised Statutes.

F. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

NO DELINQUENT ILLINOIS TAXES STATEMENT

The undersigned certifies that the Contractor is not delinquent in payment of any tax administered by the Illinois Department of Revenue except that the taxes for which liability for the taxes or the amount of the taxes are being contested, in accordance with the procedure established by the appropriate Revenue Act; or the Contractor has entered into an agreement (2) with the Illinois Department of Revenue for the payment of all such taxes due and is in compliance with the agreement.

FAMILIARITY WITH LAWS STATEMENT

I, the undersigned, being duly sworn, do hereby state that _____
(Company Name)
is familiar with and will comply with all Federal, State and Local laws applicable to the Project, which include, but are not limited to, the Prevailing Wage Act and the Davis-Bacon Act.

PENDING AND UNCOMPLETED WORK

I, the undersigned, being duly sworn, do hereby declare that the following is a true and correct statement relating to **all** uncompleted contracts of the undersigned for Federal, State, County, City and private work, including **all** subcontract work; and all pending low BIDS not yet awarded or rejected:

Total Projects Under Contract _____

Total Projects with Pending Low Bids _____

Total Value of Projects Under Contract and Pending Low Bids

_____
(Affiant's Signature) (Print Name & Title)

_____
(Company Name)

SUBSCRIBED and SWORN to before me this

_____ day of _____ , 2026

Notary Public

My Commission Expires: _____

(SEAL)

INSTRUCTIONS: This affidavit is to be completely filled out and executed by the chief officer of the Bidder authorized to submit the affidavit. Attach written explanation where applicable.

RETURN WITH BID

DRUG FREE WORKPLACE CERTIFICATION

STATE OF _____)
) SS
COUNTY OF _____)

Note: The Illinois Drug Free Workplace Act, effective January 2, 1992, requires the Owner to obtain this certification from each contractor with 25 or more employees or with contracts for $5,000 or more.)

The Contractor certifies that it will:

A. Public a statement:

1. Notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.

2. Specifying the actions that will be taken against employees for violations of such prohibitions.

3. Notifying the employee that, as a condition of employment on such contract or grant, the employee will:

   a. Abide by the terms of the statement; and

   b. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than 5 days after such conviction.

B. Establish a drug free awareness program to inform employees about:

1. The dangers of drug abuse in the workplace.

2. The Contractor's policy of maintaining a drug free workplace.

3. Any available drug counseling, rehabilitation and employee assistance program.

4. The penalties that may be imposed upon employees for drug violations.

C. Give a copy of the published statement referred to in paragraph A above to each employee engaged in the performance of the Owner's contract and post the statement in a prominent place in the workplace.

D. Notify the Owner within 10 days after receiving notice under paragraph A.3.b. above from an employee or otherwise receiving actual notice of such conviction.

E. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program by any employee who is so convicted.

F. Assist employees in selecting a course of action in the event drug counseling, treatment or rehabilitation is required and a trained referral team is in place.

G. Make a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

If an individual, the Contractor certifies that it will not engage in the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance in the performance of the Owner's contract.

The Contractor shall, within 30 days after receiving notice from an employee of a conviction of a violation of a criminal drug statute occurring in the workplace:

A. Take appropriate personnel action against such employee up to and including termination; and

B. Require the employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State or local health, law enforcement or other appropriate agency.

Contractor:

By:_____

Title:_____

SIGNED and SWORN to before me this

_____ day of _____, 2026.

_____
Notary Public

SECTION 00 43 43 – PREVAILING RATE OF WAGES

1. PREVAILING WAGE ACT

1.1 Pursuant to Illinois Compiled Statutes 820 ILCS 130/0.01 et seq., these specifications list on the following pages, the Illinois Department of Labor prevailing rate of wages for the county where the contract is being performed and for each craft or type of worker needed to execute the contract.

1.2 Contractor shall submit certified payrolls with monthly application for payment.

1.3 A Project Labor Agreement (PLA) is required for this project.

END OF SECTION 00 43 43

Champaign County Prevailing Wage Rates posted on 1/15/2026

						Overtime										
Trade Title	Rg	Type	C	Base	Foreman	M-F	Sa	Su	Hol	H/W	Pension	Vac	Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
ASBESTOS ABT-GEN	All	BLD		37.46	38.71	1.5	1.5	2.0	2.0	9.25	19.09	0.00	0.91	0.00	0.00	0.00
ASBESTOS ABT-MEC	All	BLD		29.20	31.20	1.5	1.5	2.0	2.0	10.95	9.50	0.00	0.50		0.00	0.00
BOILERMAKER	All	BLD		50.46	54.46	1.5	1.5	2.0	2.0	7.07	24.29	0.00	2.34	0.00	16.38	32.76
BRICK MASON	All	BLD		39.06	41.40	1.5	1.5	2.0	2.0	10.80	17.34	0.00	1.23		0.00	0.00
CARPENTER	All	BLD		41.29	44.04	1.5	1.5	2.0	2.0	9.95	20.15	0.00	0.81	0.00	15.05	30.10
CARPENTER	All	HWY		39.17	40.92	1.5	1.5	2.0	2.0	9.95	23.65	0.00	0.78	0.00	0.00	0.00
CEMENT MASON	All	BLD		40.59	43.34	1.5	1.5	1.5	2.0	11.00	12.50	0.00	0.60		0.00	0.00
CEMENT MASON	All	HWY		41.00	43.75	1.5	1.5	1.5	2.0	11.42	14.00	0.00	0.60	0.00	0.00	0.00
CERAMIC TILE FINISHER	All	BLD		36.34		1.5	1.5	2.0	2.0	10.80	12.97	0.00	0.62		0.00	0.00
ELECTRIC PWR EQMT OP	All	ALL		57.47	68.20	1.5	1.5	2.0	2.0	9.22	16.09	0.00	0.57		0.00	0.00
ELECTRIC PWR GRNDMAN	All	ALL		39.05	68.20	1.5	1.5	2.0	2.0	8.67	10.93	0.00	0.39	0.00	0.00	0.00
ELECTRIC PWR LINEMAN	All	ALL		63.97	68.20	1.5	1.5	2.0	2.0	9.42	17.91	0.00	0.64	0.00	0.00	0.00
ELECTRIC PWR TRK DRV	All	ALL		40.98	68.20	1.5	1.5	2.0	2.0	8.73	11.48	0.00	0.41	0.00	0.00	0.00
ELECTRICIAN	All	BLD		49.63	54.59	1.5	1.5	2.0	2.0	8.85	12.92	0.00	0.74	0.00	1.12	2.23
ELECTRONIC SYSTEM TECH	All	BLD		38.34	41.34	1.5	1.5	2.0	2.0	8.85	13.51	0.00	0.40		0.58	1.15
ELEVATOR CONSTRUCTOR	All	BLD		60.52	68.09	2.0	2.0	2.0	2.0	16.37	21.76	4.84	0.85		0.00	0.00
FENCE ERECTOR	All	ALL		38.98	41.48	1.5	1.5	2.0	2.0	12.64	17.00	0.00	1.11	0.00	17.00	17.00
GLAZIER	All	BLD		42.27	44.27	1.5	1.5	2.0	2.0	8.20	14.00	0.00	0.68	0.00	0.00	0.00
HEAT/FROST INSULATOR	All	BLD		40.20	41.95	1.5	1.5	2.0	2.0	8.99	15.09	0.00	0.40	3.30	0.00	0.00
IRON WORKER	All	BLD		38.98	41.48	1.5	1.5	2.0	2.0	12.64	17.00	0.00	1.11	0.00	17.00	17.00
IRON WORKER	All	HWY		41.92	43.92	1.5	1.5	2.0	2.0	12.64	17.00	0.00	1.11	0.00	17.00	17.00
LABORER	All	BLD		34.46	35.71	1.5	1.5	2.0	2.0	9.25	19.09	0.00	0.81	0.00	0.00	0.00
LABORER	All	HWY		38.58	39.58	1.5	1.5	2.0	2.0	9.25	19.42	0.00	0.81	0.00	0.00	0.00
LATHER	All	BLD		41.29	44.04	1.5	1.5	2.0	2.0	9.95	20.15	0.00	0.81	0.00	15.05	30.10
MACHINIST	All	BLD		60.39	64.39	1.5	1.5	2.0	2.0	11.43	9.95	1.85	1.47	0.00	0.00	0.00
MARBLE FINISHER	All	BLD		36.34		1.5	1.5	2.0	2.0	10.80	12.97	0.00	0.62		0.00	0.00
MARBLE MASON	All	BLD		38.00		1.5	1.5	2.0	2.0	10.80	12.97	0.00	0.62		0.00	0.00

Champaign County Prevailing Wage Rates posted on 1/15/2026

MILLWRIGHT	All	BLD		39.10	41.85	1.5	1.5	2.0	2.0	9.95	22.85	0.00	0.81	0.00	16.40	32.80
MILLWRIGHT	All	HWY		42.00	43.75	1.5	1.5	2.0	2.0	9.95	24.12	0.00	0.78	0.00	0.00	0.00
OPERATING ENGINEER	All	ALL	1	47.30	48.30	1.5	1.5	2.0	2.0	12.15	14.50	0.00	1.50		0.00	0.00
OPERATING ENGINEER	All	ALL	2	32.20	48.30	1.5	1.5	2.0	2.0	12.15	14.50	0.00	1.50		0.00	0.00
OPERATING ENGINEER	All	ALL	3	49.30	50.30	1.5	1.5	2.0	2.0	12.15	14.50	0.00	1.50		0.00	0.00
PAINTER	All	ALL		40.96	42.46	1.5	1.5	2.0	2.0	9.85	8.63	0.00	0.60		0.00	0.00
PAINTER - SIGNS	All	ALL		40.96	42.46	1.5	1.5	2.0	2.0	9.85	8.63	0.00	0.60		0.00	0.00
PILEDRIVER	All	BLD		43.29	46.04	1.5	1.5	2.0	2.0	9.95	20.15	0.00	0.81	0.00	15.05	30.10
PILEDRIVER	All	HWY		40.17	41.92	1.5	1.5	2.0	2.0	9.95	23.65	0.00	0.78	0.00	0.00	0.00
PIPEFITTER	All	BLD		54.31	57.68	1.5	1.5	2.0	2.0	9.95	11.39	0.00	2.81	0.00	0.00	0.00
PLASTERER	All	BLD		39.05	41.05	1.5	1.5	1.5	2.0	10.10	15.20	0.00	0.50	0.00	0.00	0.00
PLUMBER	All	BLD		54.31	57.68	1.5	1.5	2.0	2.0	9.95	11.39	0.00	2.81	0.00	0.00	0.00
ROOFER	All	BLD		38.21	41.21	1.5	1.5	2.0	2.0	12.33	10.65	0.00	1.36		0.00	0.00
SHEETMETAL WORKER	All	BLD		46.23	49.23	1.5	1.5	2.0	2.0	12.55	16.22	0.00	0.80	2.15	0.00	0.00
SPRINKLER FITTER	All	BLD		50.51	53.76	1.5	1.5	2.0	2.0	12.40	17.31	0.00	0.54	0.00	0.00	0.00
STONE MASON	All	BLD		39.06	41.40	1.5	1.5	2.0	2.0	10.80	17.34	0.00	1.23		0.00	0.00
TERRAZZO FINISHER	All	BLD		36.34		1.5	1.5	2.0	2.0	10.80	12.97	0.00	0.62		0.00	0.00
TERRAZZO MASON	All	BLD		38.00		1.5	1.5	2.0	2.0	10.80	12.97	0.00	0.62		0.00	0.00
TILE MASON	All	BLD		38.00		1.5	1.5	2.0	2.0	10.80	12.97	0.00	0.62		0.00	0.00
TRUCK DRIVER	All	ALL	1	45.29	49.65	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	2	45.88	49.65	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	3	46.15	49.65	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	4	46.54	49.65	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	5	47.64	49.65	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	1	36.23	39.72	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	2	36.70	39.72	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	3	36.92	39.72	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	4	37.23	39.72	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	5	38.11	39.72	1.5	1.5	2.0	2.0	17.11	8.06	0.00	0.25	0.00	0.00	0.00
TUCKPOINTER	All	BLD		39.06	41.40	1.5	1.5	2.0	2.0	10.80	17.34	0.00	1.23		0.00	0.00

Champaign County Prevailing Wage Rates posted on 1/15/2026

Legend
Rg Region
Type Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers
C Class
Base Base Wage Rate
OT M-F Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.
OT Sa Overtime pay required for every hour worked on Saturdays
OT Su Overtime pay required for every hour worked on Sundays
OT Hol Overtime pay required for every hour worked on Holidays
H/W Health/Welfare benefit
Vac Vacation
Trng Training
Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations CHAMPAIGN COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for

naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Draglines, Derricks, Shovels, Gradalls, Mechanics, Tractor Highlift, Tournadozer, Concrete Mixers with Skip, Tournamixer, Two Drum Machine, One Drum Hoist with Tower or Boom, Cableways, Tower Machines, Motor Patrol, Boom Tractor, Boom or Winch Truck, Winch or Hydraulic Boom Truck, Tournapull, Tractor Operating Scoops, Bulldozer, Push Tractor, Asphalt Planer, Finishing Machine on Asphalt, Large Rollers on

Champaign County Prevailing Wage Rates posted on 1/15/2026

Earth, Rollers on Asphalt Mix, Ross Carrier or similar Machine, Gravel Processing Machine, Asphalt Plant Engineer, Paver Operator, Dredging Equipment, or Dredge Engineer, or Dredge Operator, Central Mix Plant Engineer, CMI or similar type machine, Concrete Pump, Truck or Skid Mounted, Engineer or Rock Crusher Plant, Concrete Plant Engineer, Ditching Machine with dual attachment, Tractor Mounted Loaders, Hydro Crane, Standard or Dinkey Locomotives, Scoopmobiles, Euclid Loader, Soil Cement Machine, Back Filler, Elevating Machine, Power Blade, Drilling Machine, including Well Testing, Caissons, Shaft or any similar type drilling machines, Motor Driven Paint Machine, Pipe Cleaning Machine, Pipe Wrapping Machine, Pipe Bending Machine, Apsco Paver, Boring Machine, (Head Equipment Greaser), Barber-Greene Loaders, Formless Paver, (Well Point System), Concrete Spreader, Hydra Ax, Span Saw, Marine Scoops, Brush Mulcher, Brush Burner, Mesh Placer, Tree Mover, Helicopter Crew (3), Piledriver-Skid or Crawler, Stump Remover, Root Rake, Tug Boat Operator, Refrigerating Machine, Freezing Operator, Chair Cart- Self-Propelled, Hydra Seeder, Straw Blower, Power Sub Grader, Bull Float, Finishing Machine, Self-Propelled Pavement Breaker, Lull (or similar type Machine), Two Air Compressors, Compressors hooked in Manifold, Chip Spreader, Mud Cat, Sull-Air, Fork Lifts (except when used for landscaping work), Soil Stabilizer (Seaman Tiller, Bo Mag, Rago Gator, and similar types of equipment), Tube Float, Spray Machine, Curing Machine, Concrete or Asphalt Milling Machine, Snooper Truck-Operator, Backhoe, Farm Tractors (with attachments), 4 Point Lift System (Power Lift or similar type), Skid-Steer (Bob Cat or similar type), Wrecking Shears, Water Blaster.

Class 2. Concrete Mixers without Skips, Rock Crusher, Ditching Machine under 6', Curbing Machine, One Drum Machines without Tower or Boom, Air Tugger, Self-Propelled Concrete Saw, Machine Mounted Post Hole Digger, two to four Generators, Water Pumps or Welding Machines, within 400 feet, Air Compressor 600 cu. ft. and under, Rollers on Aggregate and Seal Coat Surfaces, Fork Lift (when used for landscaping work), Concrete and Blacktop Curb Machine, One Water Pump, Oilers, Air Valves or Steam Valves, One Welding Machine, Truck Jack, Mud Jack, Gunnite Machine, House Elevators when used for hoisting material, Engine Tenders, Fireman, Wagon Drill, Flex Plane, Conveyor, Siphons and Pulsometer, Switchman, Fireman on Paint Pots, Fireman on Asphalt Plants, Distributor Operator on Trucks, Tampers, Self-Propelled Power Broom, Striping Machine (motor driven), Form Tamper, Bulk Cement Plant, Equipment Greaser, Deck Hands, Truck Crane Oiler-Driver, Cement Blimps, Form Grader, Temporary Heat, Throttle Valve, Super Sucker (and similar type of equipment).

Class 3. Power Cranes, Truck or Crawler Crane, Rough Terrain Crane (Cherry Picker), Tower Crane, Overhead Crane.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

Champaign County Prevailing Wage Rates posted on 1/15/2026

SECTION 01 11 00 – PROJECT SUMMARY

1. GENERAL

1.1 WORK INCLUDED

A. Contractor shall provide all labor and materials associated with the work of this section, including:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants and owner.
5. Work restrictions.
6. Specification and drawing conventions.

1.2 PROJECT INFORMATION

A. Project Identification:

1. Champaign County Select Demolition
   1701 E. Main Street, Urbana, Illinois 61802

B. Owner's Representative: Michelle Jett

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Work generally includes but is not limited to:
- Select removal of exterior elements. These elements shall be returned to the owner.
- Complete demolition of buildings and foundations.
- Select removal of sidewalks
- Removal of utilities and hazardous materials
- Infill of basement, compaction, grading, and establishment of grass
- Modifications at connection to existing facility including construction of area well.

B. Provided the contractor receives Notice to Proceed on or prior to March 10, 2026 the bidder agrees to be substantially complete with the Base Bid work on or before August 1, 2026.

C. Demolition work, including basement, at the connection to the occupied ILEAS building should be complete on or before April 15, 2026 to allow for AHU installation at the basement. The AHU purchase and installation is under a separate contract but will need to be coordinated with this project.

2. PRODUCTS (NOT APPLICABLE)

3. EXECUTION (NOT APPLICABLE)

END OF SECTION 01 11 00

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the Part 3 "Schedule of Unit Prices" Article contain requirements for materials described under each unit price.

PART 2 - PRODUCTS

2.1 UNIT PRICE ITEM SCHEDULE

A. Unit Price No 1: Removal of additional sidewalk
   1. Remove existing concrete sidewalk identified in the documents.
   2. Grade to match existing adjacent levels, compact, and install/maintain grass seed until established.
   3. Unit of Measurement: Per 16 square foot (approx. 4’x4’ area)
   4. Related Work
      a. 02 41 19 Selective Demolition
      b. 32 92 00 Turf and Grasses

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 22 00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

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

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

1.3 PROCEDURES

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

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate Bid No. 1: Demolition of Garage and Mechanical/Boiler House
1. All material, labor, and equipment needed to remove the existing buildings and foundations completely, infill with soil, compact, and establish turf
2. Related Work:
   a. 02 41 19 Select Demolition
   b. 32 92 00 Turf and Grasses

END OF SECTION 01 23 00

SECTION 01 32 00 - CONSTRUCTION SCHEDULE

1. GENERAL

1.1 REQUIREMENTS INCLUDE:

A. The General Contractor shall prepare and maintain a detailed project schedule as described below.

B. The project schedule shall be the Contractor's working schedule; used to execute the work and record and report actual progress. It shall show how the Contractor plans to complete the work within the contract time and meet any contractually specified intermediate milestone dates.

1.2 RELATED REQUIREMENTS

A. Specified Elsewhere:

1. Section 01 11 00 - Project Summary
2. Section 01 33 23 - Shop Drawings, Product Data and Samples

1.3 FORM OF SCHEDULE

A. The schedule shall provide sufficient detail and clarity so that the General Contractor can plan and control the work and the Owner and the A/E can readily monitor and follow the progress of all portions of the work. The critical activities must be clearly shown. The degree of detail must be satisfactory to the A/E and the Owner.

1. Scope of work should be identified by floor level as applicable.

B. The project schedule shall be in the form of a Gantt chart, and shall indicate the critical path, including durations.

1.4 CONTENTS OF SCHEDULE

A. The schedule must be inclusive of all installation tasks of the work.

B. Submittal and approval of shop drawings and material samples as well as delivery dates of major equipment shall be included in the project schedule.

C. Activity duration shall be in whole working days.

D. There should be at least one activity for each specification section.

1.5 UPDATING

A. The project schedule shall be updated monthly.

B. Actual activity completion dates shall be reported and recorded on the schedule.

C. Progress on uncompleted activities shall be reported.

D. Projected completion dates and activities shall be reviewed and revised if necessary.

1.6 REPORTS AND SUBMITTALS

A. Within 15 days of the Authorization to Proceed, the Contractor shall submit the project schedule to the A/E and the Owner.

B. Five (5) days prior to the pay/progress meeting, the contractor shall submit the current updated schedule to the A/E and the Owner.

1.7 REVIEWS

A. Payment and reduction of retainage may be denied by the Owner for failure to submit a proper schedule and maintaining work progress according to the project schedule.

2. PRODUCTS

(NOT APPLICABLE)

3. EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 32 00

SECTION 01 33 23 - SHOP DRAWINGS, PRODUCT DATA & SAMPLES

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. The Sub-contractor shall make submittals to the General Contractor. The General Contractor shall maintain a master list of submittals.

B. Submittals shall be complete and legible. Incomplete submittals will be returned and not reviewed.

1.2 GENERAL CONTRACTOR:

A. Review Sub-contractor's submittals within 5 business days.

1. Verify field dimensions.
2. Verify compliance with Contract requirements.

1.3 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Submittals specific to each section are further outlined within the technical specifications. Submittals deemed incomplete or not indication as supplied by separate sub, shall be returned without review.

1.4 DEFINITIONS

A. Shop drawings: Shop drawings are original drawings prepared by Contractor, subcontractor, sub-subcontractor, supplier or distributor, which illustrated some portion of the work, showing fabrication, layout, setting or erection details.

1. Prepared by qualified detailer.
2. Identify details by reference to sheet and detail numbers shown on contract drawings.
3. Maximum sheet size: 30" x 42"
4. Submit a maximum of (3) copies. Electronic copies of submittals are preferred.

B. Product data:

1. Manufacturer's standard schematic drawings edited to fit this project.
2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.

a. Clearly mark each copy to identify pertinent materials, products or models.
b. Show dimensions and clearances.
c. Show wiring diagrams and controls.

C. Samples: Physical samples to illustrate materials, equipment or workmanship. Approved samples establish standards by which complete work is judged. Maintain at site as directed. Protect until no longer needed.

1. Office samples: Of sufficient size to clearly illustrate:

a. Functional characteristics of product or material.
b. Full range of color samples.
c. After review, samples may be used on construction of project.

2. Field samples and mock-ups:
    a. Erect at project site at location approved by the Architect.
    b. Construct each sample or mock-up complete, including work of all crafts required in finished work.
    c. Remove as directed.

1.5 SUBMITTAL SCHEDULE

A. Submit schedule of all exhibits to Architect/Engineer within fifteen (15) business days after preconstruction meeting.

1. Prepare schedule in gnatt chart format, Include:
    a. Exhibit identification
    b. Specification section and page number
    c. Date of submittal to Architect/Engineer
    d. Latest date for final approval
    e. Fabrication time.
    f. Date of Installation
2. Architect/Engineer will review and comment on exhibit schedule and will advise the Contractor as to which submittals require longer review durations.
3. Submit number of copies of shop drawings, product data and samples which contractor requires for distribution plus (2) copies which will be retained by Architect/Engineer.

B. Accompany submittals with transmittal letter, in duplicate, containing:

1. Date
2. Project title and number
3. Contractor's name and address.
4. The number of shop drawings, product data and samples submitted.
5. Notification of deviations from Contract.
6. Other pertinent data.

C. Submittals shall include:

1. Date and revision
2. Project title and number
3. Name of:
    a. Architect/ Engineer
    b. Architect/ Engineer consultant
    c. Subcontractor
    d. Sub-subcontractor
    e. Supplier
    f. Manufacturer
    g. Separate detailer when pertinent
4. Identification of product or material.
5. Relation to adjacent structure or material.
6. Field dimensions clearly identified as such.
7. Specification section and page number.
8. Specified standards, such as ASTM number or ANSI.
9. A blank space, (5"x5"), for Architect/Engineer's stamp.
10. Identification of previously approved deviation(s) from contract documents.

11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract.
12. Space for Contractor's approval stamp.

D. Electronic Submittals: All submittals may be submitted electronically except for those specifically listing a requirement for paper submittals or physical samples. Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single file (pdf format) incorporating submittal requirements of a single Specification Section and transmittal form. Only complete submittals will be accepted.
2. Name file with submittal number or other unique identifier, including revision identifier.
   a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g.; PROJNAME_061000.01). Resubmittals shall include an alphabetic suffix after the decimal point (e.g.; PROJNAME_061000.01A)
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Owner/ Architect/ Engineer.
4. Transmittal Cover Sheet Form for Electronic Submittals: As described by the Architect and containing all information as indicated above for paper submittals.
5. Time for review shall commence on Architect's receipt of submittal. Submittals received by Architect after 3:00 p.m. Central Time will be considered as received the following working day.

1.6 RESUBMISSION REQUIREMENTS

A. Resubmit all shop drawings, product data, and samples as requested by the Contractor and/or A/E.

B. Resubmit complete package to Architect within 14 days of receiving rejected submittal.

1.7 RESPONSIBILITIES

A. Review shop drawings, product data and samples prior to submission to the next level of authority. Review Subcontractor's submittals within five (5) business days. Certify review and transmit to Architect.

B. Verify:

1. Field dimensions.
2. Field construction criteria.
3. Catalog numbers and similar data.
4. Verify compliance with contract documents.

C. Coordinate each submittal with requirements of:

1. The work.
2. The contract documents.
3. The work of other contractors.
4. The existing conditions indicated to remain.

D. Contractor's responsibility for errors, omissions or deviation from contract documents in submittals is not relieved by the Architect/Engineer's review of submittals.

E. Prior to submission, notify the Architect/Engineer in writing of all proposed deviations in submittals from Contract requirements. Substitution of materials or equipment may only be approved by change order.

F. Do not begin any work which requires submittals without Architect/Engineer's approval.

G. After Architect/Engineer's review, make response required by A/E's stamp and distribute copies. Indicate by transmittal that copy of approved data has been delivered to installer.

1.8 ARCHITECT/ENGINEER'S RESPONSIBILITIES

A. Review submittals within fourteen (14) calendar days.

B. Review for:

1. Design concept of project.
2. Compliance with Contract Documents.

C. Review all requests for proposed deviations.

D. Affix stamp, date and initials or signature certifying review of submittal, and with instructions for the Contractor.

E. Return submittals to sender for response or distribution.

2. PRODUCTS
(NOT APPLICABLE)

3. EXECUTION
(NOT APPLICABLE)

END OF SECTION 01 33 23

SECTION 01 35 16 - REMODELING PROJECT PROCEDURES

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Each Contractor:

1. Coordinate work of employees and subcontractors.
2. Schedule elements of remodeling and renovation work to expedite completion.
3. Schedule noisy or hazardous work to avoid problems with Owner's operations.
4. In addition to demolition, cut, move or remove existing construction to provide access or to allow remodeling and new work to proceed. Include:

   a. Repair or remove hazardous or unsanitary conditions.
   b. Remove abandoned piping, conduit and wiring.
   c. Remove unsuitable or extraneous materials not marked for salvage, such as rotted wood, brick paving, rusted metals and deteriorated concrete.

5. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a neat transition to adjacent new or restored construction.
6. Note or record existing project conditions before beginning work to minimize later disputes.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. 01 32 00 - Construction Schedule.
2. 01 51 50 – Use of Existing Facilities
3. 01 73 29 - Cutting and Patching
4. 01 74 13 - Construction Cleaning
5. 01 74 23 - Final Cleaning.

1.3 SEQUENCE AND SCHEDULES

A. Submit separate detailed sub-schedule for alterations work, coordinated with Construction Schedule. Show:

1. Each stage of work; occupancy dates of areas.
2. Date of Substantial Completion for each area of alteration work.
3. Crafts and subcontractors employed in each stage.

1.4 ALTERATIONS, CUTTING AND PROTECTION

A. Cut finish surfaces by methods to terminate surfaces in a straight line at a natural point of division.

2. PRODUCTS (NOT USED)

3. EXECUTION

3.1 REMOVE EXISTING CONSTRUCTION

A. Temporary Removals:

1. Remove all items as noted on the drawings or otherwise required to complete the work shown.
2. Store all items as noted on the drawings or otherwise required to complete the work shown.
3. Recondition all existing items as noted on the drawings or otherwise required to complete the work shown.
4. Reinstall all items as noted on the drawings or otherwise required to complete the work shown.

B. Remove and dispose of existing items as noted in the documents.

3.2 PERFORMANCE. Patch and extend existing work using skilled craftsmen capable of matching existing quality of workmanship. For patched or extended work, provide quality equal to that specified for new work.

3.3 DAMAGED SURFACES

A. Patch and replace all portions of existing finished surfaces found to be damaged, lifted, discolored or showing other imperfections, with matching material.

1. Provide adequate support prior to patching the finish.
2. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.
3. When existing surface cannot be matched, refinish entire surface to nearest intersections or change of direction.

3.4 TRANSITION FROM EXISTING TO RESTORED WORK

A. When restored work abuts or finishes flush with existing work, make a smooth transition. Patched work shall match existing adjacent work in texture and appearance.

1. When finished surfaces are cut in such a way that a smooth transition with restored work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

3.5 CLEANING

A. Perform construction cleaning as specified in 01 74 13

B. At completion of work of each craft, clean area and make surfaces ready for work of successive crafts.

C. At completion of alterations work in each area, provide final cleaning in accord with 01 74 23 and return space to a condition suitable for use of User.

END OF SECTION 01 35 16

SECTION 01 51 50 - USE OF EXISTING FACILITIES

1. GENERAL

1.1 These requirements supplement and other sections of the Project Manual.

1.2 The Owner and public have vacated the building to be removed. The Owner and the public will use the ILEAS facility during construction. Portions of the south parking lot may be used by the contractor during construction. The north ILEAS parking lot should be avoided and use coordinated with the Owner. Some limited closure or barricades are expected for portions of the work. Contractor is responsible for coordinating all closures and signage with Champaign County as necessary.

1.3 REQUIREMENTS INCLUDE - Contractor provide:

A. Scheduling
B. Security and site regulations
C. Entrances (if required)
D. Construction aids
E. Temporary enclosures and barriers
F. Fences
G. Temporary utilities
H. Construction Cleaning
I. Storage
J. Signage
K. Close-out

2. EXECUTION

2.1 SECURITY AND SITE REGULATIONS

A. Confer with the Owner's representative and obtain full knowledge of all site rules and regulations affecting work.

2.2 CONSTRUCTION AIDS: Except as noted, Contractor provide and maintain construction aids and equipment for common use and to facilitate execution of the work.

2.3 TEMPORARY ENCLOSURES AND BARRIERS - Contractor:

A. Provide temporary enclosures to separate work areas from existing parking and from areas occupied by Owner.

B. Provide and maintain suitable barriers to prevent unauthorized entry, and to protect the work.

2.4 TEMPORARY UTILITIES

A. Contractor shall provide and pay for extension or modification of services to perform the work, and for restoration of services at completion of work.

2.5 ACCESS ROADS & PARKING AREAS

A. Limit any loading of existing paved areas to 4000 p.s.i. maximum.

B. Use of existing parking facilities for construction personnel or for contractor's vehicles or equipment is not permitted unless otherwise noted or coordinated with the Owner.

C. Maintain roads, walks and parking areas in a sound, clean condition. Restore areas, damaged by construction operations, not in contract to original condition upon work completion prior to Final Acceptance.

D. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations or construction operations.

E. Coordinate any temporary construction vehicle entrance onto the property for deliveries or access with the Owner a minimum of three (3) days prior to the necessity.

F. Equipment with bearing pressure above 4000 psi shall not be allowed on the grounds or paving.

2.6 TRAFFIC REGULATION: Contractor provide traffic control and directional signs, mounted on barricades or standard posts:

A. At each change of direction of a roadway and at parking areas.

B. Provide qualified and suitably equipped flaggers when construction operations encroach on traffic lanes, as required for traffic regulation.

C. Where contractor requires sidewalk closure to execute scope of work, permits and alternative access for pedestrians shall be provided in the work of this contract.

2.7 CONSTRUCTION CLEANING

A. Each Contractor provide cleaning and disposal of waste materials, debris and rubbish during construction.

B. Coordinating Contractor to supervise and coordinate cleaning operations of all Assigned Contractors.

C. Each Contractor provide covered containers for deposit of waste materials, debris and rubbish.

2.8 STORAGE Make arrangements with Owner's Representative for any on-site storage of materials and equipment to be installed in project. Protection and security for stored materials and equipment is solely contractor's responsibility.

2.9 CLOSEOUT

A. Upon completion of need to use existing user-provided facilities, or when directed by Architect/Engineer, restore each to original or specified condition.

B. At completion of work in each area, provide final cleaning and return space to a condition suitable for use of Owner.

END OF SECTION 01 51 50

SECTION 01 54 00 – CONSTRUCTION AIDS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor shall provide all labor and material to install and maintain construction aids and equipment for all personnel use and to facilitate execution of the work:

1. Ladders, working platforms and Scaffolding/Fall Protection.
2. Heavy Equipment.
3. Temporary enclosures, electrical power & water services, etc.
4. Construction Barriers, and dust/noise/fume separations.
5. Platforms.
6. Stairs.
7. Power and hand tools.

B. Each Contractor must comply with OSHA regulations as they relate to these construction aids and all applicable standards.

C. See respective specification sections for particular requirements.

D. Provide and maintain for own forces all other construction aids required to complete his work.

E. Remove all construction aids upon completion of the work, or as directed.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 01 11 00 - Project Summary.
2. Section 01 51 50 - Use of Existing Facilities.
3. Section 01 74 23 - Final Cleaning.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Materials may be new or used, suitable for purpose. Comply with specified codes, standards, and regulations.

2.2 CONSTRUCTION AIDS

A. Maintain facilities and equipment in first class, clean and operable condition.

PART 3 - EXECUTION

3.1 PREPARATION

A. Consult with Architect and Owner, review site conditions and factors which affect construction procedures and construction aids, including adjacent occupied areas which may be affected by execution of the work.

B. Coordinate with Owner for placement of barriers to maintain Owner operations, while protecting occupants form exposure to dust, noise, and fumes.

3.2 INSTALLATION

A. Comply with respective Project Manual Specification Sections.

B. Relocate construction aids as construction progresses to expedite storage or work and to accommodate legitimate requirements of the Owner and other contractors at the site.

3.3 REMOVAL:

A. Completely remove temporary materials, equipment and services:

1. When construction needs can be met by authorized use of permanent construction.
2. At project completion.

B. Clean and repair damage caused by installation or use of temporary facilities.

C. Restore existing facilities used for temporary purposes to original condition.

END OF SECTION 01 54 00

SECTION 01 56 00 - TEMPORARY BARRIERS AND ENCLOSURES

PART I - GENERAL

1.1 WORK INCLUDES

A. Base Bid: Use of Barriers and Enclosures: The Contractor shall provide all labor and materials necessary to furnish, erect and maintain temporary barriers, barricades, enclosures, and temporary construction fencing as required for the following:

1. To provide weather tight protection of building as roofing or deck is removed as part of the work in contract.
2. To protect the health and safety of occupants and the general public from exposure to immediate physical harm as well as to noise, dust, and fumes. Note that this Section does not provide minimum requirements related to Indoor Air Quality.
2. To protect new and pre-existing adjacent construction from exposure to physical damage, dust, dirt, and water.
3. To provide security of valuable property.
4. To protect trees and plants.

1.2 RELATED SECTIONS

A. Section 01 54 00 - Construction Aids

PART 2 - PRODUCTS

2.1 GENERAL FABRICATION

A. Substantial Construction: Barriers and enclosures shall be of adequately substantial construction to serve their purpose without failure throughout the duration of their use. Materials may be new or used, suitable for the intended purpose, but shall not violate requirements of applicable codes and standards.

B. Rigid Fencing: The general public, as well as adjacent lawns and plantings, shall be protected from harm by the installation of continuous, durable, rigid 6 foot high fencing at the limit lines of each construction area.

C. Tree Protection: Existing trees that are adjacent to a construction site shall be protected from damage by the installation of durable, rigid 6 foot high fencing at the drip line of each tree.

D. Dust enclosures.

PART 3 - EXECUTION

3.1 BASIC REQUIREMENTS

A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for required purposes.

B. Install barriers and enclosures so as to not create new hazards such as tripping or protrusions that might be a source of safety concern to pedestrians or passers by.

C. Establish reasonable alternative access when necessary due to placement of barriers.

D. Maintain barriers during entire construction period.

E. Relocate barriers as required by progress of construction.

3.2 TREE AND PLANT PROTECTION REQUIREMENTS

A. Preserve and protect existing trees and plants at site which are designed to remain, and those adjacent to site.

B. Consult with the Owner for removal of agreed-on roots and branches which interfere with construction.

1. Employ a qualified tree surgeon to remove, and to treat cuts.

C. Provide temporary barriers to a height of six feet, around each, or around each group, of trees and plants. The barriers shall be placed at the drip line of each tree.

D. Protect root zones of trees and plants:

1. Do not allow vehicular traffic or parking.

2. Do not store materials or products.

3. Prevent dumping of refuse or chemically injurious materials or liquids.

4. Prevent puddling or continuous running water.

E. Carefully supervise excavating, grading and filling, and subsequent construction operations, to prevent damage.

F. Replace, or suitably repair, trees and plants designated to remain which are damaged or destroyed due to construction operations. Any damage and any necessary replacements will be evaluated by the contractor's horticulturists.

3.3 DUST ENCLOSURES

A. Dust enclosures shall be continuous barriers with a rigid frame, made of clean materials, which will prevent dust from leaving work areas. Additionally, they may be required to resist noise and fumes as necessitated by contractors work plan.

3.4 REMOVAL

A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by the Architect.

B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

END OF SECTION 01 56 00

SECTION 01 62 04 – SUBSTITUTION PROCEDURES

1. GENERAL

1.1 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for substitutions.

1.2 SUBSTITUTIONS

A. Base Bid shall be in accordance with the Contract Documents.

B. Substitution requests prior to bidding shall be submitted to Architect, in writing, a minimum of ten (10) days prior to bid date.

C. After the end of the bidding period, substitution requests will be considered only in case of:

1. Product unavailability
2. Other conditions beyond the control of the Contractor

D. Substitution Requests: Submit PDF electronic file of each request submitted for consideration. Identify product or fabrication or installation method to be replaced. Submit requests for substitutions on attached form. Submit a separate request form for each substitution. Include Specification Section number, title, and Drawing numbers and titles. Support each request with the following information:

1. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:

a. Product identification, including manufacturer's name and address.
b. Manufacturer's literature, identifying:

1) Product description
2) Reference standards
3) Performance and test data

2. Itemized comparison of the proposed substitution with product specified, listing significant variations.
3. Data relating to changes in construction schedule.
4. Effects of substitution on separate contracts.
5. List of changes required in other work or products.
6. Accurate cost data comparing proposed substitution with product specified.

a. Amount of net change to Contract Sum

7. Designation of required license fees or royalties.
8. Designation of availability of maintenance services sources replacement materials.

E. Substitutions will not be considered for acceptance when:

1. A substitution is indicated or implied on shop drawings or product data submittals without a formal request from the Contractor.
2. Acceptance will require substantial revision of Contract Documents.
3. In judgment of the Architect, the substitution request does not include adequate information necessary for a complete evaluation.
4. Requested directly by a Subcontractor or supplier.

F. Substitutions for Convenience: Not allowed

G. Do not order or install substitute products without recommendation of the Architect and acceptance by the Owner.

H. Architect will determine acceptability of proposed substitutions.

I. No verbal or written approvals other than by Change Order will be valid.

1.3 CONTRACTOR'S REPRESENTATION

A. In making formal request for substitution the Contractor represents that:

1. The proposed product has been investigated and it has been determined that it is equivalent, or superior, in all respects to the product specified.
2. The same warranties or bonds will be provided for the substitute product as for the product specified.
3. Coordination and installation of the accepted substitution into the Work will be accomplished and changes as may be required for the Work to be complete will be accomplished.
4. Claims for additional costs caused by substitution which may subsequently become apparent will be waived by the Contractor.
5. Complete cost data is attached and includes related costs under the Contract, but not:

a. Costs under separate contracts.
b. Architect's costs for redesign or revision of Contact Documents.

1.4 REQUEST FOR SUBSTITUTION FORM

A. 01 62 04.1 – Substitution Request Form

B. Substitutions will be considered only when the substitution form is completed and included with the request for substitution submittal and back-up data.

2. PRODUCTS

(NOT APPLICABLE)

3. EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 62 04

SECTION 01 62 04.1 – REQUEST FOR SUBSTITUTION FORM

Note: Use separate form for each material, product, or equipment item.

Date: _____ Request No.: _____

Project: _____

Location: _____

Name of material, product, or equipment item submitted as substitution:

_____

Name of material, product, or equipment item specified:

_____

Specification Section _____, Article _____, Paragraph_____

Qualities that differ from specified product or system: _____

_____

_____

_____
Name of Manufacturer/(Fabricator):

_____
Address

_____ (_____) _____
City, State, and Zip Telephone

_____
Name of Vendor/Supplier

_____
Address

_____ (_____) _____
City, State, and Zip Telephone

Reason for requesting substitution: _____

_____

_____

Substitution affects other materials or systems, such as dimensional revisions, redesign of structure, or modifications to other work:

_____ No

_____ Yes; describe requirements:

_____

_____

_____

If substitution requires modifications to dimensions indicated on drawings, are such modifications clearly indicated on attached data?

_____ Yes

_____ No; if no, explain: _____

Substitution has an effect on construction schedule:

_____ No

_____ Yes; describe effect on schedule:

_____

_____

_____

Savings or credit to Contract Amount for accepting substitute:

_____

_____Dollars ($_____)
Written Amount Amount in Figures

The attached data is furnished herewith for evaluation of the substitution:

Product Data _____, Drawings _____, Samples _____, Tests _____, Reports _____

Other Information _____

The undersigned hereby certifies:

1. The proposed substitution has been fully investigated and is equal or superior to specified product.

2. The same or better warranty will be furnished for proposed substitution as for specified material, product or equipment.

3. All changes in the work resulting from the use of this substitution, if approved, will be coordinated and completed in all respects and all costs, including, but not limited to, those for additional services rendered by the Architect are the responsibility of this Contractor at no additional cost to the Contract.

_____ _____

Contractor Signed by

_____

Address

_____

City, State, and Zip

For Use by Architect:
____Recommend
____Not Recommended
____Insufficient Data
____Recommend as Noted
____Received Too Late

By:_____

Date: _____

For Use by Owner:
____Approved
____Not Approved
____Approved as Noted

By: _____

Date: _____

END OF FORM

SECTION 01 66 00 - STORAGE AND PROTECTION

1. GENERAL

   A. REQUIREMENTS INCLUDE

      1. General Contractor may make arrangements with Owner for storage of materials and equipment to be installed in project. Protection and security for stored materials and equipment, on and off site, is solely the contractor's responsibility.

   B. OFF-SITE AUTHORIZATION. Payment for materials/equipment stored off-site will be permitted only on prior written authorization, proof of insurance is submitted, and the material is stored in an independent warehouse under the owner's name and paid for by the contractor.

   C. SUBMITTALS.

      1. In accordance with Section 01 33 23, submit:

         a. Request for allocation of storage space.
         b. List of materials and equipment to be stored.
         c. Proposed location for storage.
         d. Special storage requirements.
         e. Schedule of anticipated storage dates.

2. PRODUCTS

   A. PROTECTIVE MATERIALS

      1. For duration of storage period, provide materials which will provide proper protection against the elements or other harmful environmental conditions.

3. EXECUTION

   A. LOCATION

      1. Where authorized by Owner.

      2. Contractor will resolve conflicts in storage requirements of all subcontractors.

   B. PROTECTION

      1. Appropriate protection is required as necessary to maintain quality and intent of stored materials.

END OF SECTION 01 66 00

SECTION 01 73 29 - CUTTING AND PATCHING

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Unless noted otherwise, each contractor shall:

1. Execute cutting (including excavating), filling or patching of work to:

   a. Install specified work.
   b. Remove samples of installed work specified for testing.
   c. Remove and replace defective work.

2. In addition, upon written instructions of Architect/Engineer:

   a. Uncover work to provide for observation of covered work.
   b. Remove samples of installed materials for testing.
   c. Remove work to provide for alteration of existing work.

3. Do not cut or alter work of another contractor without written consent of Architect/Engineer.

1.2 SUBMITTALS

A. Prior to cutting which affects structural members or work of another contractor, submit written notice to Architect/Engineer requesting consent to proceed with cutting, including:

1. Project identification.
2. Description of affected work.
3. Necessity for cutting.
4. Effect on other work, on structural integrity of project.
5. Description of proposed work. Designate:

   a. Scope of cutting and patching.
   b. Contractor and Crafts to execute the work.
   c. Products proposed to be used.
   d. Extent of refinishing.

6. Alternatives to cutting and patching.
7. Designation of party responsible for cost of cutting and patching.

B. Prior to cutting and patching done on instruction of Architect/ Engineer, submit cost estimate.

C. When conditions of work, or schedule, indicate change of materials or methods, submit recommendation to Architect/Engineer, including:

1. Condition indicating change.
2. Recommendation for alternative materials or methods.
3. Submittals specified for substitutions.

D. Submit written notice to Architect/Engineer, designating time work will be uncovered, to provide for observation.

1.3 PAYMENT FOR COSTS

A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of Architect/Engineer: Party responsible for ill-timed, rejected or non-conforming work.

B. Work done on instructions of Architect/Engineer (by change order only), other than defective or non-conforming work: Owner

2. PRODUCTS

2.1 MATERIALS. For replacement of work removed: Comply with specifications for type of work to be performed.

3. EXECUTION

3.1 INSPECTION

A. Inspect existing conditions of work, including elements subject to movement or damage during:

1. Cutting and patching.
2. Excavating and backfilling.

B. After uncovering work, inspect conditions affecting installation of new products.

3.2 PREPARATION

A. Prior to cutting:

1. Provide shoring, bracing and support to maintain structural integrity of project.
2. Provide protection for other portions of the project.
3. Provide protection from elements.

3.3 PERFORMANCE

A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances, finishes.

B. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.

C. Restore work which has been cut or removed; install new products to provide completed work in accord with contract documents.

D. Refinish entire surfaces to provide an even finish.

E. Continuous surfaces: To nearest intersection(s).

F. Assembly: Entire refinishing.

END OF SECTION 01 73 29

SECTION - 01 74 13 - CONSTRUCTION CLEANING

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. General Contractor: Supervise and coordinate cleaning operations.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Individual Specification Sections: specific cleaning for product or work.
2. Section 01 35 16 – Remodeling Project Procedures

2. PRODUCTS

2.1 EQUIPMENT

A. As designated in individual specification sections.

3. EXECUTION

3.1 CLEANING

A. As designated in individual specification sections.

3.2 DISPOSAL

A. Maintain individual disposal units for sorting of debris for recycling and general disposal.

B. Properly dispose of all contents of dumpsters off site in an environmentally friendly manner and in compliance with local, state and federal regulations.

C. No burning of debris or materials is acceptable on site.

D. All hazardous materials shall be disposed of off-site in an EPA approved facility.

END OF SECTION 01 74 13

SECTION - 01 74 23 - FINAL CLEANING

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. General Contractor: Provide final cleaning:

1. At completion of work, or at such other times as directed by the Owner, remove all waste, debris, rubbish, tools, equipment, machinery and surplus materials. Clean all sight exposed surfaces; leave work clean and ready for occupancy.
2. Contractor shall protect mechanical system intakes from demolition debris at adjacent building. Coordinate replacement of filters at completion of demolition with Owner.

1.1 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 01 74 13 - Construction Cleaning.

2. PRODUCTS

2.1 All products shall be environmentally friendly “Green” cleaning products.

3. EXECUTION

3.1 FINAL CLEANING

A. Employ experienced workers for final cleaning.

B. Remove grease, dust, dirt, stains, labels, fingerprints, protection and other foreign materials from sight-exposed finished surfaces; polish surfaces so designated to specified finish.

1. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed surfaces, and of concealed spaces to ensure performance.

C. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.

D. Contractor soft broom clean all exposed concrete surfaces clean; other paved areas with soft or stiff broom as directed. Rake clean other surfaces on grounds.

E. Contractor to replace air handling filters at completion of cleaning and just prior to Owner occupancy.

F. Contractor to maintain finally cleaned areas until project, or designated portion thereof, is accepted by A/E.

END OF SECTION 01 74 23

SECTION 01 78 36 - WARRANTIES & BONDS

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Each Contractor shall warrant their work in accordance with the Standard Documents for Construction. In addition, the following Warranties and Bonds shall be provided as specified.

B. Champaign County will be the designated agent during the warranty period.

2. PRODUCTS

A. Warranties and Bonds. Include the following:
   1. Warranty and/or bond.
   2. List of circumstances and conditions that would affect validity of warranty or bond.

3. EXECUTION (NOT APPLICABLE)

END OF SECTION 01 78 36

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 WORK INCLUDES

A. General Contractor shall provide all labor, materials, equipment and supplies necessary to:

1. Demolition and removal of selected portions of building as noted on the drawings and as required to complete the work shown on the drawings.

2. It is anticipated that hazardous materials will be encountered during demolition. Contractor shall notify Architect prior to the removal of hazardous materials so the material may be tested.

3. Assume all paint is lead-based paint and dispose per regulatory guidelines.

B. General Contractor is responsible for providing the penetrations, and patching required to complete their work in the Contactor's respective division.

1.2 RELATED SECTIONS

A. Section 01 35 16 – Remodeling Project Procedures.

B. Section 01 73 29 – Cutting and Patching.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and returned to Owner or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Using Agency/University cleaned and ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, clean and prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property for dust control and for noise control. Indicate proposed locations and construction of barriers.

B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Coordination on the use of elevator and stairs.

C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.
1. Coordinate on-site with Owner's representative.
2. Items to be salvaged and returned to the Owner are identified in the drawings.

D. Pre-demolition Photographs or Video: Submit before Work begins.
1. For elements and structures to remail, any damage not documented as pre-existing will be repaired by contractor.

1.5 QUALITY ASSURANCE

A. Pre-demolition Conference: Conduct conference at Project site. General Contractor, demolition contractor, project managers, site forman, Owner, and Architect shall be in attendance if work impacts other trades, a representative from those contractors shall also be in attendance.
1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

B. Demolition Firm Qualifications: Company specializing in the type of work required and has a minimum of five (5) years documented experience.

1.6 PROJECT CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. Storage or sale of removed items or materials on-site is not permitted.

D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

E. If any suspected hazardous materials are encountered do not disturb; immediately notify Architect and Owner.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

C. Call the Fire Department and notify the Using Agency if the following systems will be disabled/ restricted at any time during construction/ renovation.
1. Fire Alarm.
2. Fire Suppression.
3. Emergency exit and evacuation.

D. Any construction/renovation that creates excessive dust (i.e. demolition of plaster, drywall, or flooring) must use dust barriers and negative pressure ventilation.

E. Any construction/renovation that involves temporary loss of power or ventilation must be coordinated/scheduled with the Facility Manager and will be discussed and determined at the pre-construction meeting.

F. Any construction/ renovation that creates excessive noise (i.e. jack hammering, use of power saws, power drills,) must be coordinated/ scheduled with the Facility Manager or Using Agency, which will be determined at the pre-construction meeting.

G. Any construction/ renovation that breaches/ penetrates the building envelope (roof, window, and wall) must be protected from water damage and subsequent mold growth.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review record documents of existing construction provided by Owner. Owner and Architect do not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Verify hazardous materials have been remediated where impacted, prior to proceeding with building demolition operations.

3.2 UTILITY SERVICES AND MECHANICAL / ELECTRICAL / PLUMBING SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
   1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
   1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
   2. Arrange to shut off indicated utilities with utility companies.
   3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
   4. Disconnect, demolish, and remove plumbing, and HVAC systems, equipment, and components indicated to be removed.

      a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.

      b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material. Any piping or conduit to be abandoned in place shall be approved by the Architect, otherwise all pipe and conduit abandoned shall be removed completely.

      c. Equipment to Be Removed: Disconnect and cap services and remove equipment.

      d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational. Any disruption in operations is to be scheduled with Facility Manager a minimum of 72 hours in advance and will be operational at the end of each construction day.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

B. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
   2. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
   3. Cover and protect furniture, furnishings, and equipment that have not been removed.

4. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
   1. Strengthen or add new supports when required during progress of selective demolition.

D. Remove temporary barricades and protections where/when hazards no longer exist.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
   1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
   2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations and for two (2) hours after operations cease.
   4. Maintain adequate ventilation when using cutting torches.
   5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
   6. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
   7. Dispose of demolished items and materials promptly.

B. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
   3. Protect items from damage during transport and storage.
   4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

C. Unless otherwise indicated, demolition waste becomes the property of the Contractor.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, returned to Owner, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site.
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
   3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

SECTION 03 20 00 - CONCRETE REINFORCING

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide **ALL** labor, materials, equipment, and services necessary or incidental to the completion of all work of this section as shown, herein specified, or otherwise required.

a. Section Includes:

1) Steel reinforcement bars.
2) Welded-wire reinforcement.

B. Alternate Bids: None

1.2 RELATED DOCUMENTS

A. Section 03 33 00 "Architectural Concrete" for additional information relating to placement of cast-in-place concrete

1.3 ACTION SUBMITTALS

A. Product Data: For the following:

1. Each type of steel reinforcement.
2. Bar supports.
3. Mechanical splice couplers.

B. Shop Drawings: Comply with ACI SP-066:

1. Include placing drawings that detail fabrication, bending, and placement.
2. Include bar sizes, lengths, materials, grades, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, location of splices, lengths of lap splices, details of mechanical splice couplers, details of welding splices, tie spacing, hoop spacing, and supports for concrete reinforcement.

C. Construction Joint Layout: Indicate proposed construction joints required to build the structure.

1. Location of construction joints is subject to approval of the Engineer.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Statements: For testing and inspection agency.

B. Material Test Reports: For the following, from a qualified testing agency:

1. Steel Reinforcement:

2. Mechanical splice couplers.

C. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

1. Store reinforcement to avoid contact with earth.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A615/A615M, Grade 60 (Grade 420), deformed.

B. Plain-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, plain, fabricated from as- drawn steel wire into flat sheets.

2.2 REINFORCEMENT ACCESSORIES

A. Joint Dowel Bars: ASTM A615/A615M, Grade 60 (Grade 420), plain-steel bars, cut true to length with ends square and free of burrs.

B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place.

1. Manufacture bar supports from steel wire, plastic, or precast concrete in accordance with CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

a. For concrete surfaces exposed to view, where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire, all-plastic bar supports, or CRSI Class 2 stainless steel bar supports.

C. Mechanical Splice Couplers: ACI 318 (ACI 318M) Type 1, same material of reinforcing bar being spliced; mechanical-lap type.

D. Steel Tie Wire: ASTM A1064/A1064M, annealed steel, not less than 0.0508 inch (1.2908 mm) in diameter.

1. Finish: Plain.

2.3 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice." PART 3

- EXECUTION

3.1 PREPARATION

A. Protection of In-Place Conditions:

1. Do not cut or puncture vapor retarder.
2. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.

3.2 INSTALLATION OF STEEL REINFORCEMENT

A. Comply with CRSI's "Manual of Standard Practice" for placing and supporting reinforcement.

B. Accurately position, support, and secure reinforcement against displacement.

1. Locate and support reinforcement with bar supports to maintain minimum concrete cover.
2. Do not tack weld crossing reinforcing bars.

C. Preserve clearance between bars of not less than 1 inch (25 mm), not less than one bar diameter, or not less than 1-1/3 times size of large aggregate, whichever is greater.

D. Provide concrete coverage in accordance with ACI 318 (ACI 318M).

E. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

F. Splices: Lap splices as indicated on Drawings.

1. Bars indicated to be continuous, and all vertical bars shall be lapped not less than 36 bar diameters at splices, or 24 inches (610 mm), whichever is greater.
2. Stagger splices in accordance with ACI 318 (ACI 318M).
3. Mechanical Splice Couplers: Install in accordance with manufacturer's instructions.

G. Install welded-wire reinforcement in longest practicable lengths.

1. Support welded-wire reinforcement in accordance with CRSI "Manual of Standard Practice."

    a. For reinforcement less than W4.0 or D4.0, continuous support spacing shall not exceed 12 inches (305 mm).

2. Lap edges and ends of adjoining sheets at least one wire spacing plus 2 inches (50 mm) for plain wire and 8 inches (200 mm) for deformed wire.
3. Offset laps of adjoining sheet widths to prevent continuous laps in either direction.
4. Lace overlaps with wire.

3.3 JOINTS

A. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

1. Place joints perpendicular to main reinforcement.
2. Continue reinforcement across construction joints unless otherwise indicated.
3. Do not continue reinforcement through sides of strip placements of floors and slabs.

B. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length, to prevent concrete bonding to one side of joint.

3.4 INSTALLATION TOLERANCES

A. Comply with ACI 117 (ACI 117M).

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

B. Inspections:

1. Steel-reinforcement placement.
2. Steel-reinforcement mechanical splice couplers.

END OF SECTION 03 20 00

SECTION 03 33 00 - ARCHITECTURAL CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete, including form facings, reinforcement and accessories, concrete materials, concrete mixture design, placement procedures, and finishes.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site. General Contractor, demolition contractor, project managers, site forman, Owner, and Architect shall be in attendance if work impacts other trades, a representative from those contractors shall also be in attendance.

1. Inspect and discuss condition of construction to be selectively demolished.

2. Review structural load limitations of existing structure.

3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.

4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

5. Review areas where existing construction is to remain and requires protection.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

C. Design Mixtures: For each concrete mixture.

D. Formwork Shop Drawings.

E. Placement schedule.

F. Samples: For each of the following materials:

1. Form-facing panels.
2. Form ties.
3. Form liners.
4. Exposed aggregates.
5. Coarse- and fine-aggregate gradations.
6. Chamfers and rustications.

1.4 INFORMATIONAL SUBMITTALS

A. Material certificates.

B. Material test reports.

1.5 QUALITY ASSURANCE

A. Field Sample Panels: After approval of verification sample and before casting architectural concrete, produce field sample panels to demonstrate the approved range of selections made under Sample submittals. Produce a minimum of three sets of full-scale panels, cast vertically, approximately 48 by 48 by 6 inches (1200 by 1200 by 150 mm) minimum, to demonstrate the expected range of finish, color, and texture variations.

B. Mockups: Before casting architectural concrete, build mockups to verify selections made under Sample submittals and to demonstrate typical joints, surface finish, texture, tolerances, and standard of workmanship. Build mockups to comply with the following requirements, using materials indicated for the completed Work:

1.6 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Contractor to engage a qualified testing agency to perform preconstruction testing on concrete mixtures.

1.7 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 306.1.

B. Hot-Weather Placement: Comply with ACI 301 (ACI 301M).

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301 (ACI 301M).
2. ACI 303.1.

2.2 FORM-FACING MATERIALS

A. General: Comply with Section 033000 "Cast-in-Place Concrete" for formwork and other form-facing material requirements.

B. Form-Facing Panels for As-Cast Finishes: Steel- and glass-fiber-reinforced plastic, or other approved nonabsorptive panel materials that provide continuous, true, and smooth architectural concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

C. Form Liners: Units of face design, texture, arrangement, and configuration to match existing. Furnish with manufacturer's recommended liquid-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent surface treatments of concrete.

D. Rustication Strips: Metal, dressed wood, or rigid plastic, or with sides beveled and back kerfed; nonstaining; in longest practicable lengths.

E. Chamfer Strips: Metal, rigid plastic, elastomeric rubber, or dressed wood, 3/4 by 3/4 inch (19 by 19 mm), minimum; nonstaining; in longest practicable lengths.

F. Form Joint Tape: Compressible foam tape; pressure sensitive; AAMA 800; minimum 1/4 inch (6 mm) thick.

G. Form Ties: Factory-fabricated, or removable ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

2.3 STEEL REINFORCEMENT AND ACCESSORIES

A. General: Comply with Section 03 33 00 "Architectural Concrete" for steel reinforcement and other requirements for reinforcement accessories.

B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire fabric in place; manufactured according to CRSI's "Manual of Standard Practice."

1. Where legs of wire bar supports contact forms, use gray, all-plastic bar supports.

2.4 CONCRETE MATERIALS

A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

B. Cementitious Materials:

1. Portland Cement: ASTM C 150/C 150M, **Type I/IIgray**.
2. Fly Ash: ASTM C 618, **Class C** or **Class F**.

C. Normal-Weight Aggregates: ASTM C 33/C 33M, **Class 5S** coarse aggregate or better, graded. Provide aggregates from single source.

1. Maximum Coarse-Aggregate Size: 3/4 inch (19 mm)
2. Gradation: Uniformly graded.
3. Free of materials with deleterious reactivity to alkali in cement.

D. Air-Entraining Admixture: ASTM C 260/C 260M.

E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that does not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

F. Water: Potable, complying with ASTM C 94/C 94M, except free of wash water from mixer washout operations.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
1. For concrete indicated to be sealed, curing compound shall be compatible with sealer.

2.6 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of cast-in-place architectural concrete proportioned on basis of laboratory trial mixture or field test data, or both, according to ACI 301 (ACI 301M).

1. Use a qualified independent testing agency for preparing and reporting proposed design mixtures based on laboratory trial mixtures.

B. Cementitious Materials: For cast-in-place architectural concrete exposed to deicers, limit percentage, by weight, of cementitious materials other than Portland cement according to ACI 301 (ACI 301M) requirements.
1. Fly Ash or other pozzolans: 25% by mass.

C. Concrete Mixtures:

1. Compressive Strength (28 Days): 4500 psi (31 MPa)
2. Maximum W/C Ratio: 0.46.
3. Slump Limit: 3 inches
4. Air Content: 5-1/2 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch (38-mm) nominal maximum aggregate size.

2.7 CONCRETE MIXING

A. Ready-Mixed Architectural Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and furnish batch ticket information.

1. Clean equipment used to mix and deliver cast-in-place architectural concrete to prevent contamination from other concrete.
2. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

A. General: Comply with Section 03 33 00 "Architectural Concrete" for formwork, embedded items, and shoring and reshoring.

B. Limit deflection of form-facing panels to not exceed ACI 303.1 requirements.

C. Construct forms to result in cast-in-place architectural concrete that complies with ACI 117 (ASI 117M).

D. Chamfer exterior corners and edges of cast-in-place architectural concrete.

E. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

F. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

G. Place form liners accurately to provide finished surface texture indicated. Provide solid backing and attach securely to prevent deflection and maintain stability of liners during concreting. Prevent form liners from sagging and stretching in hot weather. Seal joints of form liners and form-liner accessories to prevent mortar leaks. Coat form liner with form-release agent.

3.2 REINFORCEMENT AND INSERT INSTALLATION

A. Securely fasten steel reinforcement and wire ties against shifting during concrete placement.

B. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.3 REMOVING AND REUSING FORMS

A. Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.

1. Cut off and grind glass-fiber-reinforced plastic form ties flush with surface of concrete.

B. Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved 28-day design compressive strength. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for cast-in-place architectural concrete surfaces.

3.4 JOINTS

A. Construction Joints: Install construction joints true to line, with faces perpendicular to surface plane of cast-in-place architectural concrete, so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated.

B. Contraction Joints: Form weakened-plane contraction joints true to line, with faces perpendicular to surface plane of cast-in-place architectural concrete, so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

3.5 CONCRETE PLACEMENT

A. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

B. Deposit concrete continuously between construction joints. Deposit concrete to avoid segregation.

3.6 FINISHES, GENERAL

A. Architectural Concrete Finish: Match Architect's design reference sample, identified and described as indicated, to satisfaction of Architect.
1. Match adjacent wall concrete at existing building.

B. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces.

1. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

C. Maintain uniformity of special finishes over construction joints unless otherwise indicated.

D. Form-Liner Finish: Produce a textured surface free of pockets, streaks, and honeycombs, and of uniform appearance, color, and texture.

3.7 CONCRETE CURING

A. Begin curing cast-in-place architectural concrete immediately after removing forms from concrete. Cure according to ACI 308.1, by one or a combination of the following methods that will not mottle, discolor, or stain concrete:

1. Moisture curing.
2. Moisture-retaining-cover curing.
3. Curing compound.

3.8 REPAIR, PROTECTION, AND CLEANING

A. Repair and cure damaged finished surfaces of cast-in-place architectural concrete when approved by Architect. Match repairs to color, texture, and uniformity of surrounding surfaces and to repairs on approved mockups.

1. Remove and replace cast-in-place architectural concrete that cannot be repaired and cured to Architect's approval.

B. Protect corners, edges, and surfaces of cast-in-place architectural concrete from damage; use guards and barricades.

C. Protect cast-in-place architectural concrete from staining, laitance, and contamination during remainder of construction period.

END OF SECTION 03 33 00

SECTION 03 35 11 - CONCRETE FINISHES

PART 1 - GENERAL

1.01 WORK INCLUDES

A General Contractor to provide all labor and materials for:

1. Surface treatments for concrete floors and slabs.
2. Clear coatings.
3. Clear penetrating sealers.

1.02 RELATED WORK

A Specified elsewhere: Section 03 33 00 - Architectural Concrete: Finishing of concrete surface to tolerance; floating, troweling, and similar operations; curing.

1.03 SUBMITTALS

A Product Data: Manufacturer's published data on each finishing product, including information on compatibility of different products and limitations.

B Product Data: Manufacturer's published data and installation instructions for concrete polishing system and finishing products, including manufacturer's installation instructions, information on compatibility of different products, and limitations.

C Warranty Documentation: Manufacturer warranty; ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

A Deliver materials in manufacturer's sealed packaging, including application instructions.

1.05 WARRANTY

A Correct defective work within a two-year period commencing on the Date of Substantial Completion.

PART 2 - PRODUCTS

2.01 CONCRETE FLOOR FINISH APPLICATIONS

A Clear Coating:

1. Use at following locations: All exposed interior locations

2.02 COATINGS

A For mechanical floor with no floor finish: Clear, Penetrating, Moisture Vapor-Resistant Coating: Vapor-resistant and pH-reducing coating recommended by manufacturer for new and existing concrete floors and slabs.

1. Products:
   a. LATICRETE International, Inc; Vapor Ban Primer ER: www.laticrete.com/#sle.
   b. Rust-Oleum Corporation; TVB Water-Based Topside Vapor Barrier: www.rustoleum.com/#sle.

PART 3 - EXECUTION

3.01 EXAMINATION

A Verify that floor surfaces are acceptable to receive the work of this section.

B Verify that flaws in concrete have been patched and joints filled with methods and materials suitable for further finishes.

3.02 GENERAL

A Apply materials in accordance with manufacturer's instructions.

3.03 COATING APPLICATION

A Verify that surface is free of previous coatings, sealers, curing compounds, water repellents, laitance, efflorescence, fats, oils, grease, wax, soluble salts, residues from cleaning agents, and other impediments to adhesion.

B Protect adjacent non-coated areas from drips, overflow, and overspray; immediately remove excess material.

C Apply coatings in accordance with manufacturer's instructions, matching approved mock-ups for color, special effects, sealing and workmanship.

END OF SECTION 03 35 11

SECTION 04 20 00 – UNIT MASONRY

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide all labor, materials, equipment, and services necessary or incidental to the completion of all work of this section as shown on the drawings, herein specified, or otherwise required.
   a. Concrete masonry units.
   b. Building (common) brick. Color blend to match architect's sample. Brick size to be Modular in running bond. Tinted mortar to match architect's sample.

B. Alternate Bid: None

1.2 RELATED WORK

A. Section 01 43 39 - Integrated Exterior Mockups

B. Section 01 83 16 - Building Enclosure Field Testing

C. Section 04 72 00 - Cast Stone Masonry

D. Section 05 12 00 - Structural Steel Framing

1.3 DEFINITIONS

A. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

B. CMU(s): Concrete masonry unit(s).

1.4 SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals: In addition to requirements in Section 01 81 13.14, comply with:

1. Product Data for LEED Material Resource (MR) credits Building Product Disclosure and Optimization (BPDO) credits: MR credit BPDO - Environmental Product Declaration, MR credit BPDO - Sourcing of Raw Materials, and MR credit BPDO - Material Ingredients.

   a. For products having environmental impact documentation in the form of Environmental Product Declarations (EPD's), include EPD document and a statement indicating cost for

each product.

b. For products with responsible sourcing attributes such as recycled or salvaged content, legally harvested bio-based material, FSC wood products, include Product Certificates, distance from the point of extraction, harvest, or recovery, and a statement indicating cost for each raw material.

c. For products having human health impact documentation in the form of Health Products Declarations (HPD's) or another USGBC-recognized program, include documentation and a statement indicating cost for each product.

2. Product Data for LEED Indoor Environmental Quality (EQ) credit, Low-Emitting Material:

a. For wet applied products such as, paints, coatings, and primers and similar applications, include documentation and a statement indicating cost, volume applied, and surface area applied for each product. Products shall comply with South Coast Air Quality Management District (SCAQMD) Rule 1113 or California Air Resources Board (CARB) 2007 as applicable.

b. For wet applied products, such as adhesives and sealants, include documentation and a statement indicating cost, volume applied, and surface area applied for each product. Products shall comply with South Coast Air Quality Management District (SCAQMD) Rule 1168.

c. For flooring, wall panels, ceilings, insulation, and composite wood, include documentation indicating that product contains no urea formaldehyde, provide a statement indicating cost and surface area applied for each product. Products shall comply with California Air Resources Board (CARB) 2007.

C. Shop Drawings: For reinforcing steel. Detail bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315. Show elevations of reinforced walls.

D. Samples for Verification: For each type and color of exposed masonry unit and] colored mortar.

E. Material Certificates: For each type and size of product. For masonry units, include data on material properties.

F. Sample board of brick matching Architect's sample.

G. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C109/C109M for compressive strength, ASTM C1506 for water retention, and ASTM C91/C91M for air content.

2. Include test reports, according to ASTM C1019, for grout mixes required to comply with compressive strength requirement.

1.5 QUALITY ASSURANCE

A. Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects. Comply with requirements in Section 01 40 00 "Quality Requirements" for mockups.

B. Mockup: Build sample panels for each type of exposed unit masonry construction typical exterior wall in sizes approximately 48 inches long by 48 inches high by full thickness. This mock up can be part of the exterior wall assembly mockup.

1. Include a sealant-filled joint at least 16 inches (406 mm) long in exterior wall mockup.
2. Include lower corner of window opening at upper corner of exterior wall mockup. Make opening approximately 12 inches (305 mm) wide by 16 inches (406 mm) high.
3. Include through-wall flashing installed for a 24-inch (610-mm) length in corner of exterior wall mockup approximately 16 inches (406 mm) down from top of mockup, with a 12-inch (305-mm) length of flashing left exposed to view (omit masonry above half of flashing).
4. Include metal studs, sheathing, water-resistive barrier, sheathing joint-and-penetration treatment, veneer anchors, flashing, cavity drainage material, and weep holes in exterior masonry-veneer wall mockup.
5. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.
6. Protect accepted mockups from the elements with weather-resistant membrane.
7. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations by Change Order.

1.6 PREINSTALLATION MEETING

A. Preinstallation Meeting: General Contractor shall arrange conference at project site. General contractor, Contractor performing the work's project manager and their site foreman, and Architect shall be in attendance. If the work impacts other trades, a representative from those contractors shall also be in attendance.

1.7 FIELD CONDITIONS

A. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

1. Do not lay masonry when temperatures are 40 degrees and falling or if temperatures are forecast below 40 degrees for 72 hours after installation of masonry without prior approval of plan to maintain heat at wall by Architect.

C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 UNIT MASONRY, GENERAL

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.

B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work and will be within 20 feet vertically and horizontally of a walking surface.

C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

D. Sustainable Design Material Requirements: Materials shall comply with the requirements of Section 01 81 13.14 “Sustainable Design Requirements”.

2.2 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
2. Provide square-edged units for outside corners unless otherwise indicated.

B. CMUs: ASTM C90, normal weight.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2150 psi (14.8 MPa).
2. Size (Width): Manufactured to dimensions 3/8 inch (10 mm) less than nominal dimensions.

2.3 BRICK

A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:

1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.

2. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

B. Clay Face Brick: Facing brick complying with ASTM C216.

1. Manufacturers:

a. Refer to Schedule - Paragraph 3.12.

2. Grade: Severe Weather SW, FBX.

3. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 3350 psi.

4. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested according to ASTM C67.

5. Efflorescence: Provide brick that has been tested according to ASTM C67 and is rated “not effloresced.”

6. Surface Coating: Brick with colors or textures produced by application of coatings shall withstand 50 cycles of freezing and thawing according to ASTM C67 with no observable difference in the applied finish when viewed from 10 feet.

7. Modular Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.

2.4 CONCRETE LINTELS

A. Concrete Lintels: ASTM C1623, matching CMUs in color, texture, and density classification; and with reinforcing bars indicated.

2.5 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C150/C150M, Type I. Provide white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of Portland cement and hydrated lime containing no other ingredients.

D. Masonry Cement: ASTM C91/C91M.

1. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C979/C979M. Use only pigments with a record of satisfactory performance in masonry mortar.

2. Colored Cement Products: Packaged blend made from Portland cement and hydrated lime or masonry cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.

3. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.

4. Pigments do not exceed 10 percent of Portland cement by weight.

5. Pigments do not exceed 5 percent of masonry cement or mortar cement by weight.

E. Aggregate for Mortar: ASTM C144.

1. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.

2. White-Mortar Aggregates: Natural white sand or crushed white stone.

3. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

F. Aggregate for Grout: ASTM C404.

G. Water: Potable.

2.6 REINFORCEMENT

A. Uncoated-Steel Reinforcing Bars: ASTM A615/A615M or ASTM A996/A996M, Grade 60.

B. Masonry-Joint Reinforcement, General: ASTM A951/A951M.

1. Exterior Walls: Hot-dip galvanized carbon.

2. Wire Size for Side Rods: 0.148-inch diameter.

3. Wire Size for Cross Rods: 0.148-inch diameter.

4. Wire Size for Veneer Ties: 0.148-inch diameter.

5. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches o.c.

6. Provide in lengths of not less than 10 feet.

C. Masonry-Joint Reinforcement for Multi wythe Masonry:

1. Ladder type with one side rod at each face shell of hollow masonry units more than 4 inches wide, plus one side rod at each wythe of masonry 4 inches wide or less.

2. Tab type, either ladder or truss design, with one side rod at each face shell of backing wythe and with rectangular tabs sized to extend at least halfway through facing wythe, but with at least 5/8-inch cover on outside face.

3. Adjustable (two-piece) type, either ladder or truss design, with one side rod at each face shell of backing wythe and with separate adjustable ties with pintle-and-eye connections having a maximum horizontal play of 1/16 inch and maximum vertical adjustment of 1-1/4 inches. Size ties to extend at least halfway through facing wythe but with at least 5/8-inch cover on outside face. Ties have hooks or clips to engage a continuous horizontal wire in the facing wythe.

D. Masonry-Joint Reinforcement for Veneers Anchored with Seismic Masonry-Veneer Anchors: Single 0.187-inch-diameter, hot-dip galvanized carbon steel continuous wire.

2.7 TIES AND ANCHORS

A. General: Ties and anchors shall extend at least 1-1/2 inches into veneer but with at least a 5/8-inch cover on outside face.

B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A82/A82M, with ASTM A153/A153M, Class B-2 coating.

2. Steel Sheet, Galvanized after Fabrication: ASTM A1008/A1008M, Commercial Steel, with ASTM A153/A153M, Class B coating.

3. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

C. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch-diameter, hot-dip galvanized-steel wire.

2. Tie Section: Triangular-shaped wire tie made from 0.187-inch-diameter, hot-dip galvanized-steel wire.

D. Rigid Anchors: Fabricate from steel bars 1-1/2 inches wide by 1/4 inch thick by 24 inches long, with ends turned up 2 inches or with cross pins unless otherwise indicated.

1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A153/A153M.

E. Adjustable Masonry-Veneer Anchors:

1. General: Provide anchors that allow vertical adjustment but resist a 100-lbf load in both tension and compression perpendicular to plane of wall without deforming or developing play in excess of 1/16 inch.

2. Fabricate sheet metal anchor sections and other sheet metal parts from 0.075-inch-thick steel sheet, galvanized after fabrication.

3. Fabricate wire ties from 0.187-inch-diameter, hot-dip galvanized-steel wire unless otherwise indicated.

4. Screw-Attached, Masonry-Veneer Anchors: Wire tie and a gasketed sheet metal anchor section, with pronged legs of length to match thickness of insulation or sheathing and raised rib-stiffened strap to provide a slot for inserting wire tie.

5. Coated, Steel Drill Screws for Steel Studs: ASTM C954 except with hex washer head and neoprene or EPDM washer, No. 10 diameter, and with coating with salt-spray resistance to red rust of more than 800 hours according to ASTM B117.

2.8 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, 0.016 inch thick.

B. Solder and Sealants for Sheet Metal Flashings: As specified in Section 07 62 00 "Sheet Metal Flashing and Trim."

C. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene or urethane.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).

D. Weep/Cavity Vent Products: Use one of the following unless otherwise indicated:

1. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch less than depth of outer wythe, in color selected from manufacturer's standard.

E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.

1. Configuration: Provide one of the following:

a. Strips, full depth of cavity and 10 inches high, with dovetail shaped notches 7 inches deep that prevent clogging with mortar droppings.

b. Full cavity drainage mat, full depth of cavity.

2.10 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

1. Cleaner must be tested on mockup to verify the cleaner will not discolor masonry.

2.11 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.

2. For exterior masonry, use Portland cement-lime or masonry cement mortar.

3. Add cold-weather admixture, not allowed.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For exterior, above-grade, load-bearing and non-load-bearing walls, and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.

D. Grout for Unit Masonry: Comply with ASTM C476.

1. Use grout of type indicated or, if not otherwise indicated, of type fine that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.

2. Proportion grout in accordance with ASTM C476, Table 1.

3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C143/C143M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.

C. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C67. Allow units to absorb water so they are damp but not wet at time of laying.

3.2 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.

2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.

3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet, or 1/2-inch maximum.

2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.

3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.

4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.

5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.

2. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.

3. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

3.3 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

C. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

D. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

E. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

3.4 MORTAR BEDDING AND JOINTING

A. Lay brick and CMU as follows:

1. Bed face shells in mortar and make head joints of depth equal to bed joints.
2. Bed webs in mortar in all courses of piers, columns, and pilasters.
3. Bed webs in mortar in grouted masonry, including starting course on footings.
4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.

B. Lay solid masonry units and hollow brick with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.5 ANCHORED MASONRY VENEERS

A. Anchor masonry veneers to wall framing and concrete and masonry backup with seismic masonry-veneer anchors to comply with the following requirements:

1. Fasten screw-attached and seismic anchors through sheathing to wall framing and to concrete and masonry backup with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.

2. Embed tie sections connector sections and continuous wire in masonry joints.

3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.

4. Space anchors as indicated, but not more than 18 inches o.c. vertically and 24 inches o.c. horizontally, with not less than one anchor for each 2 sq. ft. of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 8 inches, around perimeter.

3.6 MASONRY-JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.

1. Space reinforcement not more than 16 inches o.c.

2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.

3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings in addition to continuous reinforcement.

B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.

C. Provide continuity at wall intersections by using prefabricated T-shaped units.

D. Provide continuity at corners by using prefabricated L-shaped units.

3.7 FLASHING, WEEP HOLES, AND CAVITY VENTS

A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install cavity vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.

2. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.

3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.

4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal flashing termination.

C. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.

1. Use specified weep/cavity vent products to form weep holes (full joint weep vent material).

2. Space weep holes 24 inches o.c. unless otherwise indicated.

3. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.

D. Place cavity drainage material in airspace behind veneers to comply with configuration requirements for cavity drainage material in “Miscellaneous Masonry Accessories” Article.

E. Install cavity vents in head joints in exterior wythes at spacing indicated. Use specified weep/cavity vent products to form cavity vents.

1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.8 REINFORCED UNIT MASONRY

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.

2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.

2. Limit height of vertical grout pours to not more than 60 inches.

3.9 FIELD QUALITY CONTROL

A. Testing and Inspecting: Engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

B. Inspections: Special inspections according to Level B in TMS 402/ACI 530/ASCE 5.

1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
3. Place grout only after inspectors have verified proportions of site-prepared grout.

C. Testing Prior to Construction: One set of tests.

D. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.

E. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C67 for compressive strength.

F. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C780.

G. Mortar Test (Property Specification): For each mix provided, according to ASTM C780. Test mortar for mortar air content and compressive strength.

H. Grout Test (Compressive Strength): For each mix provided, according to ASTM C1019.

3.10 REPAIRING, POINTING, AND CLEANING

A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes.

3. Protect adjacent surfaces from contact with cleaner.

4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.

5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.

6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

3.11 MASONRY WASTE DISPOSAL

A. Masonry Waste Recycling: Return broken CMUs to manufacturer for recycling.

B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

1. Do not dispose of masonry waste as fill within 18 inches of finished grade.

C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Using Agency's property.

3.12 SCHEDULE

BRK-51-A	Material:	Clay Brick
	Manufacturer:	US Brick
	Series:	Chestnut Velour
	Style/Model:	Modular
	Color:	4 color blend to match Architect's sample
	Finish:	velour
	Remarks:	https://usbrick.com/product/chestnut-velour/
BRK-51-B	Material:	Clay Brick
	Manufacturer:	Bowerston Shale
	Series:	Autumn Rose W/C No Dark
	Style/Model:	Modular
	Color:	4 color blend to match Architect's sample
	Finish:	velour
	Remarks:	https://www.bowerstonshale.com/
BRK-51-C	Material:	Clay Brick
	Manufacturer:	Glen Gery
	Series:	Compton Iron Spot
	Style/Model:	Modular
	Color:	4 color blend to match Architect's sample
	Finish:	velour
	Remarks:	https://www.glengery.com/sites/default/files/d98c72407ec1130ebbc8a1020b1df36b.jp

END OF SECTION 04 20 00

SECTION 04 22 00 - CONCRETE UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Decorative concrete masonry units.
3. Pre-faced concrete masonry units.
4. Steel reinforcing bars.

1.2 DEFINITIONS

A. CMU(s): Concrete masonry unit(s).

B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

C. Shop Drawings: For reinforcing steel. Detail bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315.

D. Samples: For each type and color of the following:

1. **Exposed** CMUs.

1.4 INFORMATIONAL SUBMITTALS

A. Material Certificates: For each type and size of product. For masonry units, include **data on material properties, material test reports substantiating compliance with requirements**.

B. Mix Designs: For each type of mortar**.** Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91/C 91M for air content.
2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

1.5 QUALITY ASSURANCE

A. Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects. Comply with requirements in Section 014000 "Quality Requirements" for mockups.

1. Build sample panels for [**each type of exposed unit masonry construction**] [**typical exterior wall**] [**typical interior wall**] [**typical exterior and interior walls**] in sizes approximately [**48 inches (1200 mm)**] [**60 inches (1500 mm)**] <**Insert dimension**> long by [**36 inches (900 mm)**] [**48 inches (1200 mm)**] <**Insert dimension**> high[**by full thickness**].

1.6 FIELD CONDITIONS

A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 UNIT MASONRY, GENERAL

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.

B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.

C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.2 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.

B. Integral Water Repellent: Provide units made with integral water repellent [**for exposed units**] [**and**] [**where indicated**].

C. Insulated CMUs: Where indicated, units shall contain rigid, specially shaped, cellular thermal insulation units complying with ASTM C 578, Type I, designed for installing in cores of masonry units.

D. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of [**2150 psi (14.8 MPa)**] [**2800 psi (19.3 MPa)**] [**3050 psi (21.0 MPa)**] <**Insert value**>.
2. Density Classification: [**Lightweight**] [**Medium weight**] [**Normal weight**][**unless otherwise indicated**].

2.3 CONCRETE LINTELS

A. Concrete Lintels: ASTM C 1623, matching CMUs in color, texture, and density classification; and with reinforcing bars indicated.[**Provide lintels with net-area compressive strength not less than that of CMUs.**]

2.4 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Masonry Cement: ASTM C 91/C 91M.

E. Aggregate for Mortar: ASTM C 144.

1. White-Mortar Aggregates: Natural white sand or crushed white stone.
2. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

F. Aggregate for Grout: ASTM C 404.

G. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

H. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent from same manufacturer.

I. Water: Potable.

2.5 REINFORCEMENT

A. Uncoated-Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).

B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from 0.148-inch (3.77-mm) steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

C. Masonry-Joint Reinforcement, General: ASTM A 951/A 951M.

1. Interior Walls: Hot-dip galvanized, carbon steel.
2. Exterior Walls: Stainless steel.
3. Wire Size for Side Rods: [0.148-inch (3.77-mm)] diameter.
4. Wire Size for Cross Rods: [0.148-inch (3.77-mm)] diameter.
5. Spacing of Cross Rods: Not more than 16 inches (407 mm) o.c.
6. Provide in lengths of not less than 10 feet (3 m) with prefabricated corner and tee units.

2.6 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M, with ASTM A 153/A 153M, Class B-2 coating.
2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
3. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- (6.35-mm-) diameter, hot-dip galvanized-steel wire.
2. Tie Section: Triangular-shaped wire tie made from [**0.187-inch- (4.76-mm-)**] [**0.25-inch- (6.35-mm-)**] diameter, hot-dip galvanized-steel wire.

C. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Connector Section: Dovetail tabs for inserting into dovetail slots in concrete and attached to tie section; formed from [**0.060-inch- (1.52-mm-) thick steel sheet, galvanized after fabrication**] [**0.105-inch- (2.66-mm-) thick steel sheet, galvanized after fabrication**].
2. Tie Section: Triangular-shaped wire tie made from [**0.187-inch- (4.76-mm-)**] [**0.25-inch- (6.35-mm-)**] diameter, hot-dip galvanized-steel wire.
3. Corrugated-Metal Ties: Metal strips not less than 7/8 inch (22 mm) wide with corrugations having a wavelength of 0.3 to 0.5 inch (7.6 to 12.7 mm) and an amplitude of 0.06 to 0.10 inch (1.5 to 2.5 mm) made from [**0.060-inch- (1.52-mm-) thick steel sheet, galvanized after fabrication**] [**0.075-inch- (1.90 mm-) thick steel sheet, galvanized after fabrication**] [**0.105-inch- (2.66-mm-) thick steel sheet, galvanized after fabrication**] with dovetail tabs for inserting into dovetail slots in concrete.

D. Partition Top Anchors: 0.105-inch- (2.66-mm-) thick metal plate with a 3/8-inch- (9.5-mm-) diameter metal rod 6 inches (152 mm) long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication.

E. Rigid Anchors: Fabricate from steel bars 1-1/2 inches (38 mm) wide by 1/4 inch (6.35 mm) thick by 24 inches (610 mm) long, with ends turned up 2 inches (51 mm) or with cross pins unless otherwise indicated.

1. Corrosion Protection: [**Hot-dip galvanized to comply with ASTM A 153/A 153M**] [**Epoxy coating 0.020 inch (0.51 mm) thick**].

2.7 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with Section 076200 "Sheet Metal Flashing and Trim" and as follows:

1. Fabricate metal drip edges from stainless steel. Extend at least 3 inches (76 mm) into wall and 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees[**and hemmed**].
2. Fabricate metal sealant stops from stainless steel. Extend at least 3 inches (76 mm) into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch (19 mm) and down into joint 1/4 inch (6 mm) to form a stop for retaining sealant backer rod.
3. Fabricate metal expansion-joint strips from [**stainless steel**] [**copper**] to shapes indicated.

B. Flexible Flashing: Use[**one of**] the following unless otherwise indicated:

1. Copper-Laminated Flashing: [**5-oz./sq. ft. (1.5-kg/sq. m)**] [**7-oz./sq. ft. (2-kg/sq. m)**] copper sheet bonded between two layers of glass-fiber cloth. Use only where flashing is fully concealed in masonry.

2. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than [**0.030 inch (0.76 mm)**] [**0.040 inch (1.02 mm)**].

3. Butyl Rubber Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than [**0.030 inch (0.76 mm)**] [**0.040 inch (1.02 mm)**].

4. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy.

5. EPDM Flashing: Sheet flashing product made from ethylene-propylene-diene terpolymer, complying with ASTM D 4637/D 4637M, 0.040 inch (1.0 mm) thick.

C. Single-Wythe CMU Flashing System: System of CMU cell flashing pans and interlocking CMU web covers made from UV-resistant, high-density polyethylene. Cell flashing pans have integral weep spouts designed to be built into mortar bed joints and that extend into the cell to prevent clogging with mortar.

D. Solder and Sealants for Sheet Metal Flashings: As specified in Section 07 62 00 "Sheet Metal Flashing and Trim."

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from [**neoprene**] [**urethane**] [**or**] [**PVC**].

B. Preformed Control-Joint Gaskets: Made from [**styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805**] [**or**] [**PVC, complying with ASTM D 2287, Type PVC-65406**] and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D 226/D 226M, Type I (No. 15 asphalt felt).

2.9 MASONRY-CELL FILL

A. Loose-Fill Insulation: Perlite complying with ASTM C 549, Type II (surface treated for water repellency and limited moisture absorption) or Type IV (surface treated for water repellency and to limit dust generation).

B. Lightweight-Aggregate Fill: ASTM C 331/C 331M.

2.10 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use [**portland cement-lime**] [**or**] [**masonry cement**] mortar unless otherwise indicated.
3. For exterior masonry, use [**portland cement-lime**] [**or**] [**masonry cement**] mortar.
4. For reinforced masonry, use [**portland cement-lime**] [**or**] [**masonry cement**] mortar.
5. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, [**Proportion**] [**Property**] Specification. Provide the following types of mortar for applications stated unless another type is indicated.

1. For masonry below grade or in contact with earth, use [**Type M**] [**Type S**].
2. For reinforced masonry, use [**Type S**] [**Type N**].
3. For mortar parge coats, use [**Type S**] [**or**] [**Type N**].
4. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N.
5. For interior nonload-bearing partitions, Type O may be used instead of Type N.

D. Pigmented Mortar: Use colored cement product[**or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products**].

1. Pigments shall not exceed 10 percent of portland cement by weight.
2. Pigments shall not exceed 5 percent of masonry cement by weight.
3. Application: Use pigmented mortar for exposed mortar joints with the following units:

    a. Decorative CMUs.
    b. Pre-faced CMUs.

E. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar color.

1. Application: Use colored-aggregate mortar for exposed mortar joints with the following units:

    a. Decorative CMUs.
    b. Pre-faced CMUs.

F. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, [**Table 1**] [**or**] [**paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi (14 MPa)**].
3. Provide grout with a slump of [**8 to 11 inches (200 to 280 mm)**] [**10 to 11 inches (250 to 280 mm)**] as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.2 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2-inch (12-mm) maximum.

2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2-inch (12-mm) maximum.
3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2-inch (12-mm) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2-inch (12-mm) maximum.
5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2-inch (12-mm) maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).
2. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
3. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm).

3.3 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

C. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

D. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

E. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.

F. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

3.4 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. Bed face shells in mortar and make head joints of depth equal to bed joints.
2. Bed webs in mortar in all courses of piers, columns, and pilasters.
3. Bed webs in mortar in grouted masonry, including starting course on footings.
4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.

B. Lay solid CMUs with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

D. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

3.5 MASONRY-CELL FILL

A. Pour [**loose-fill insulation**] [**lightweight-aggregate fill**] into cavities to fill void spaces. Maintain inspection ports to show presence of fill at extremities of each pour area. Close the ports after filling has been confirmed. Limit the fall of fill to one story high, but not more than 20 feet (6 m).

B. Install molded-polystyrene insulation units into masonry unit cells before laying units.

3.6 MASONRY-JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).

1. Space reinforcement not more than 16 inches (406 mm) o.c.
2. Space reinforcement not more than 8 inches (203 mm) o.c. in foundation walls and parapet walls.
3. Provide reinforcement not more than 8 inches (203 mm) above and below wall openings and extending 12 inches (305 mm) beyond openings[**in addition to continuous reinforcement**].

B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.

C. Provide continuity at wall intersections by using prefabricated T-shaped units.

D. Provide continuity at corners by using prefabricated L-shaped units.

3.7 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

A. Anchor masonry to structural steel and concrete, where masonry abuts or faces structural steel or concrete, to comply with the following:

1. Provide an open space not less than [**1/2 inch (13 mm)**] [**1 inch (25 mm)**] [**2 inches (50 mm)**] wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
3. Space anchors as indicated, but not more than 24 inches (610 mm) o.c. vertically and 36 inches (915 mm) o.c. horizontally.

3.8 FLASHING

A. General: Install embedded flashing at ledges and other obstructions to downward flow of water in wall where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape[**as recommended by flashing manufacturer**].
2. At lintels, extend flashing a minimum of 6 inches (150 mm) into masonry at each end. At heads and sills, extend flashing 6 inches (150 mm) at ends and turn up not less than 2 inches (50 mm) to form end dams.
3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall, and adhere flexible flashing to top of metal flashing termination.

C. Install single-wythe CMU flashing system in bed joints of CMU walls where indicated to comply with manufacturer's written instructions. Install CMU cell pans with upturned edges located below face shells and webs of CMUs above and with weep spouts aligned with face of wall. Install CMU web covers so that they cover upturned edges of CMU cell pans at CMU webs and extend from face shell to face shell.

3.9 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than [**60 inches (1520 mm)**] [**12.67 ft. (3.86 m)**] <**Insert height**>.

3.10 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and

inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

B. Inspections: Special inspections according to Level [**B**] [**C**] in TMS 402/ACI 530/ASCE 5.

1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
3. Place grout only after inspectors have verified proportions of site-prepared grout.

C. Testing Prior to Construction: One set of tests.

D. Testing Frequency: One set of tests for each 5000 sq. ft. (464 sq. m) of wall area or portion thereof.

E. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.

F. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.

G. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for [**mortar air content**] [**and**] [**compressive strength**].

H. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

I. Prism Test: For each type of construction provided, according to ASTM C 1314 at [**seven days and at**]28 days.

3.11 PARGING

A. Parge exterior faces of below-grade masonry walls, where indicated, in two uniform coats to a total thickness of 3/4 inch (19 mm). Dampen wall before applying first coat, and scarify first coat to ensure full bond to subsequent coat.

B. Use a steel-trowel finish to produce a smooth, flat, dense surface with a maximum surface variation of 1/8 inch per foot (3 mm per 300 mm). Form a wash at top of parging and a cove at bottom.

C. Damp-cure parging for at least 24 hours and protect parging until cured.

3.12 REPAIRING, POINTING, AND CLEANING

A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes.
2. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.

3.13 MASONRY WASTE DISPOSAL

A. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

1. Do not dispose of masonry waste as fill within 18 inches (450 mm) of finished grade.

B. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.

C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04 22 00

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1. WORK INCLUDES

A. Coordinating Contractor shall provide all labor, materials, equipment and supplies for:
   1. Carpentry work shown on the drawings for blocking.

1.2. RELATED WORK

A. Section xx

1.3. REFERENCES

A. All references are the current editions unless noted otherwise.

B. ALSC - American Lumber Standards Committee: Softwood Lumber Standards.

C. APA - American Plywood Association: Grades and Standards.

D. AWPA - American Wood Preservers' Association

E. FS TT-W-571 - Wood Preservation: Treating Practices.

F. NFPA - National Forest Products Association.

G. SFPA - Southern Forest Products Association.

H. WCLIB - West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber.

I. WWPA - Western Wood Products Association.

1.4. QUALITY ASSURANCE

A. Plywood Standard: Comply with DOC, PS 1.

1.5. PRODUCT HANDLING

A. Delivery and Storage: Keep materials dry during delivery and storage. Protect against exposure to weather and store above ground on framework or blocking. Cover with protective waterproof covering. Stack plywood to provide air circulation within stacks.

PART 2 – PRODUCTS

2.1 MATERIALS

A. For areas not exposed to view: wood sheathing shall be 5/8" thickness, CDX.

B. 2x blocking will be straight and smooth with no knots or blemishes, #2 min grade.

C. Fasteners and Anchorages: Provide size, type, material and finish as recommended by applicable Standards for nails, staples, screws, bolts, nuts, washers and anchoring devices.

D. Treated wood is not permitted.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine the supporting structure and the conditions under which the carpentry work is to be installed. Notify the Architect in writing of conditions detrimental to the work. Do not proceed with the installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Basic requirements:
   1. Discard units of material with defects which might impair the quality of the work, and units which are too small to fabricate the work with minimum joints or the optimum joint arrangement.
   2. Set carpentry work accurately to indicated levels and lines, with members plumb and true and accurately cut and fitted.
   3. Securely attach carpentry work by anchoring and fastening as shown or by recognized standards. Countersink nail heads on exposed carpentry work and fill holes. Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials.
   4. Make tight connections between members: Install fasteners without splitting of wood; predrill as required.
   5. Select fasteners of a size that will make tight all connections between members. Install fasteners without the splitting of wood; pre-drill as required.

B. Wood blocking :
   1. Provide wherever shown and where required for screeding or attachment of other work or equipment / items requiring blocking. Form to shapes as shown and cut for true line and level of work to be attached. Coordinate location with other work involved.
   2. Attachment shall support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown.

C. Installation of plywood:
   1. Stagger joints in both directions.
   2. Secure edge of plywood at 8” OC max spacing.
   3. Comply with recommendations of the American Plywood Association (APA) for the installation of plywood.

END OF SECTION 06 10 00

SECTION 06 16 00 - SHEATHING

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:
   1. General Contractor shall provide all labor, materials, equipment, and services necessary or incidental to the completion of all work of this section as shown on the drawings, herein specified, or otherwise required.
      a. Section Includes:
         1) Wall sheathing.
         2) Sheathing joint and penetration treatment.

B. Alternate Bid: None

1.2 RELATED WORK

A. Section 06 10 00 - Rough Carpentry

1.3 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

B. Evaluation Reports: For the following, from ICC-ES:
   1. Fire-retardant-treated plywood.
   2. Foam-plastic sheathing.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer of air-barrier and water-resistant glass-mat gypsum sheathing.
   1. Installer shall be licensed by ABAA according to ABAA's Quality Assurance Program and shall employ ABAA-certified installers and supervisors on Project.

B. Mockups: Build mockups to set quality standards for materials and execution and for preconstruction testing.
   1. Build integrated mockups of exterior wall assembly, 150 sq. ft. (14 sq. m), incorporating backup wall construction, window, storefront, door frame and sill, ties and other penetrations, and flashing to demonstrate crack and joint treatment and sealing of gaps, terminations, and penetrations of air-barrier sheathing assembly.
      a. Coordinate construction of mockups to permit inspection and testing of sheathing before external insulation and cladding are installed.
      b. Include junction with roofing membrane, building corner condition.

c. If Architect determines mockups do not comply with requirements, reconstruct mockups until mockups are approved.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance Ratings: As tested according to ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 WALL SHEATHING

A. Glass-Mat Gypsum Sheathing: ASTM C1177/C1177M.
1. Type and Thickness: Type X, 5/8 inch thick.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. For parapet and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.

2.4 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

A. Sealant for Glass-Mat Gypsum Sheathing: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials, recommended by sheathing manufacturer for application indicated and complying with requirements for elastomeric sealants specified in Section 07 92 00 "Joint Sealants."

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. Table 2304.9.1, “Fastening Schedule,” in the ICC’s International Building Code.
2. Table R602.3(1), “Fastener Schedule for Structural Members,” and Table R602.3(2), “Alternate Attachments,” in the ICC’s International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

D. Coordinate wall, parapet, and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.2 GLASS-MAT GYPSUM SHEATHING INSTALLATION

A. Comply with GA-253 and with manufacturer’s written instructions.
1. Fasten gypsum sheathing to cold-formed metal framing with screws.
2. Install panels with a 3/8-inch gap where non-load-bearing construction abuts structural elements.
3. Install panels with a 1/4-inch gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.

B. Seal sheathing joints according to sheathing manufacturer’s written instructions.

1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient amount of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.
2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel sealant to embed entire face of tape in sealant. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.

END OF SECTION 06 16 00

SECTION 07 92 00 – JOINT SEALANTS

PART 1 – GENERAL

1.1 WORK INCLUDES

A. General Contractor shall provide all labor, material, equipment, and services necessary or incidental to the completion of all work to install joint sealants as specified herein or noted in documents.

1.2 SUBMITTALS

A. Product Data: For each joint-sealant product.

B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Joint-Sealant Schedule: Include the following information:
   1. Joint-sealant application, joint location, and designation.
   2. Joint-sealant manufacturer and product name.
   3. Joint-sealant formulation.
   4. Joint-sealant color.

D. Qualification Data: For qualified testing agency.

E. Preconstruction Laboratory Test Schedule: Include the following information for each joint sealant and substrate material to be tested:
   1. Joint-sealant location and designation.
   2. Manufacturer and product name.
   3. Type of substrate material.
   4. Proposed test.
   5. Number of samples required.

F. Preconstruction Laboratory Test Reports: From sealant manufacturer, indicating the following:
   1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
   2. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.

G. Preconstruction Field-Adhesion-Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.

H. Sample Warranties: For special warranties.

1.3 PRECONSTRUCTION TESTING

A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:

1. Locate test joints representative of typical conditions.
2. Conduct field tests for each kind of sealant and joint substrate.
3. Notify Architect seven days in advance of dates and times when test joints will be erected.
4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
    a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
        1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.4 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:
    1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 DEG F.
    2. When joint substrates are wet.
    3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
    4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.5 WARRANTY

A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
    1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
    1. Warranty Period: Five years from date of Substantial Completion.

C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
    1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
    2. Disintegration of joint substrates from causes exceeding design specifications.
    3. Mechanical damage caused by individuals, tools, or other outside agents.
    4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 URETHANE JOINT SEALANTS

A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. BASF CORP. - CONSTRUCTION CHEMICALS; MasterSeal NP 1
      b. BOSTIK, INC; Chem-Calk 2000
      c. PECORA CORPORATION; Dynatrol I-XL.
      d. SIKA CORPORATION; 15LM
      e. TREMCO INCORPORATED; Dymonic 100

2.3 BUTYL-RUBBER-BASE JOINT SEALANT

A. One-part butyl rubber sealant for use between all types of masonry, steel aluminum, glass, and wood; ASTM C-1311.
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. Bostik, Inc. - Chem-Calk 300
      b. Pecora Corporation – BC-158
      c. Tremco – Butyl
      d. Sonneborn - Butakauk

2.4 MILDEW-RESISTANT JOINT SEALANTS

A. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.

   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

      a. Adfast.
      b. GE Construction Sealants; Momentive Performance Materials Inc.
      c. May National Associates, Inc.; a subsidiary of Sika Corporation.
      d. Pecora Corporation.
      e. Soudal USA.
      f. The Dow Chemical Company.
      g. Tremco Incorporated.

2.5 Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Everkem Diversified Products, Inc.
b. Franklin International.
c. May National Associates, Inc.; a subsidiary of Sika Corporation.
d. Pecora Corporation.
e. Sherwin-Williams Company (The).
f. Tremco Incorporated.

2.6 SILICONE JOINT SEALANTS

A. Silicone, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. May National Associates, Inc.; a subsidiary of Sika Corporation.
b. Pecora Corporation.
c. Sika Corporation; Joint Sealants.
d. The Dow Chemical Company.

2.7 NONSTAINING SILICONE JOINT SEALANTS

A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C1248.

B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Use NT.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. May National Associates, Inc.; a subsidiary of Sika Corporation.
b. Pecora Corporation.
c. Sika Corporation; Joint Sealants.
d. Tremco Incorporated.

2.8 JOINT-SEALANT BACKING

A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
1. Products: Subject to compliance with requirements, provide one of the following:
a. ALCOT PLASTICS LTD.; ALCOT Standard Backer Rod.
b. BASF CORP. - CONSTRUCTION CHEMICALS; MasterSeal 920 & 921(Pre-2014: Sonolastic Backer Rod).
c. CONSTRUCTION FOAM PRODUCTS; A DIVISION OF NOMACO, INC.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.9 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.

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

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
   1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
   2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
      a. Concrete.
      b. Masonry.
      c. Exterior insulation and finish systems.
   3. Remove laitance and form-release agents from concrete.

4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
   a. Metal.
   b. Glass.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.
   3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   3. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
   1. Extent of Testing: Test completed and cured sealant joints as follows:
      a. Perform 10 tests for the first 1000 FEET of joint length for each kind of sealant and joint substrate.
      b. Perform one test for each 1000 FEET of joint length thereafter or one test per each floor per elevation.
   2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
      a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
   3. Inspect tested joints and report on the following:
      a. Whether sealants filled joint cavities and are free of voids.
      b. Whether sealant dimensions and configurations comply with specified requirements.
      c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
   4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.
   5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 07 92 00

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK INCLUDES

A New hollow metal doors and frames including:

1 Non-fire-rated hollow metal doors and frames.

2 Commercial security hollow metal doors and frames.

3 Hollow metal borrowed lites glazing frames.

4 Accessories, including glazing, louvers, and matching panels.

B Coordinating contractor shall provide all labor, materials, equipment and supplies for: installing all new hollow metal doors and frames where shown on the drawings

1.3 SUBMITTALS

A See Section 01 33 23 – Shop drawings, product data and samples.

B Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.

C Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

D Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

E Installer's Qualification Statement.

1.4 RELATED REQUIREMENTS

A Section 08 71 00 - Door Hardware.

B Section 08 80 00 - Glazing: Glass for doors and borrowed lites.

C Section 09 91 23 - Interior Painting: Field painting.

1.5 ABBREVIATIONS AND ACRONYMS

A ANSI: American National Standards Institute.

B HMMA: Hollow Metal Manufacturers Association.

C NAAMM: National Association of Architectural Metal Manufacturers.

D NFPA: National Fire Protection Association.

E SDI: Steel Door Institute.

F UL: Underwriters Laboratories.

1.6 REFERENCE STANDARDS

A ADA Standards - 2010 ADA Standards for Accessible Design 2010.

B ANSI/SDI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames 2019.

C ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors 2018.

D ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames 2020.

E ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100) 2017.

G ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames 2020.

H ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.

I BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames 2016.

J ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

K NAAMM HMMA 805 - Recommended Selection and Usage Guide for Hollow Metal Doors and Frames 2012.

L NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames 2011.

M NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames 2017.

N NAAMM HMMA 850 - Fire-Rated Hollow Metal Doors and Frames 2014.

O NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames 2014.

P NAAMM HMMA 862 - Guide Specifications for Forced Entry/Bullet Resistant (FE/BR) Security Hollow Metal Doors and Frames 2021.

Q NAAMM HMMA 865 - Guide Specifications for Sound Control Hollow Metal Door and Frames Assemblies 2013.

R NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.

S NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2022.

T SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames 2019.

U UFC 4-010-01 - DoD Minimum Antiterrorism Standards for Buildings 2018.

V UL (DIR) - Online Certifications Directory Current Edition.

W UL 10B - Standard for Fire Tests of Door Assemblies Current Edition, Including All Revisions.

X UL 752 - Standard for Bullet-Resisting Equipment Current Edition, Including All Revisions.

1.7 QUALITY ASSURANCE

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

B Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

C Maintain at project site copies of reference standards relating to installation of products specified.

1.8 DELIVERY, STORAGE, AND HANDLING

A Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A Hollow Metal Doors and Frames:

1 Ceco Door, an Assa Abloy Group company; www.assaabloydss.com/#sle.

2 Curries, an Assa Abloy Group company; www.assaabloydss.com/#sle.

3 Steelcraft, an Allegion brand; www.allegion.com/#sle.

4 Titan Metal Products, Inc; Builders Series 20 - 90 Minute Doors: www.titanmetalproducts.com/#sle.

5 Substitutions: See Section 01 62 04 – Substitution procedures.

B Bullet-Resistant, Commercial Security, and Detention Security Hollow Metal Doors and Frames:

1 AMBICO Limited; www.ambico.com/#sle.

2 Fleming Door Products, an Assa Abloy Group company; www.assaabloydss.com/#sle.

3 Krieger Specialty Products; Bullet Resistant Doors: www.kriegerproducts.com/#sle.

4 Megamet Industries, Inc; MegaSafe Ballistic Doors: www.megametusa.com/#sle.

5 Mesker, dormakaba Group; BR Series Bullet-Resistant Doors and Frames: www.meskeropeningsgroup.com/#sle.

6 Republic Doors, an Allegion brand; www.republicdoor.com/#sle.

7 Security Metal Products Corporation, an Assa Abloy Group company; www.assaabloydss.com/#sle.

8 Overly Door Company; www.overly.com/#sle.

9 Titan Metal Products, Inc; Ballistic Rated Doors and Frames: www.titanmetalproducts.com/#sle.

10 Substitutions: See Section 01 62 04 – Substitution procedures.

2.2 PERFORMANCE REQUIREMENTS

A Requirements for Hollow Metal Doors and Frames:

1 Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.

2 Accessibility: Comply with ICC A117.1 and ADA Standards.

3 Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.

4 Door Edge Profile: Manufacturers standard for application indicated.

5 Typical Door Face Sheets: Flush.

6 Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.

7 Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.3 HOLLOW METAL DOORS

A Door Finish: Factory primed and field finished.

B Interior Doors, Non-Fire-Rated:

1 Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).

a Level 1 - Standard-duty.

b Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.

c Model 1 - Full Flush.

d Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.

2 Door Thickness: 1-3/4 inches, nominal.

3 Door Finish: Factory primed and field finished.

C Fire-Rated Doors:

1 Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).

a Level 1 - Standard-duty.

b Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.

c Model 1 - Full Flush.

d Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.

2 Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").

3 Provide units listed and labeled by UL (DIR) or ITS (DIR).

a Attach fire rating label to each fire rated unit.

4 Smoke and Draft Control Doors (Indicated with letter "S" on Drawings and/or Door Schedule): Self-closing or automatic closing doors in accordance with NFPA 80 and NFPA 105, with fire-resistance-rated wall construction rated the same or greater than the fire-rated doors, and the following;

a Maximum Air Leakage: 3.0 cfm/sq ft of door opening at 0.10 inch w.g. pressure, when tested in accordance with UL 1784 at both ambient and elevated temperatures.

b Gasketing: Provide gasketing or edge sealing as necessary to achieve leakage limit.

c Label: Include the "S" label on fire-rating label of door.

5 Door Core Material: Manufacturers standard core material/construction in compliance with requirements.

6 Door Thickness: 1-3/4 inches, nominal.

7 Door Finish: Factory primed and field finished.

D Bullet-Resistant Doors: Interior

1 Commercial Security Rating Impact Testing: Comply with forced entry, static load, and soft or hard body impact testing for Class 1 in accordance with NAAMM HMMA 862 requirements.

2 Bullet Resistance: UL 752, Threat Level Rating - Level 7.

3 Door Core Material: Manufacturers standard core material/construction in compliance with requirements.

4 Door Thickness: As required to meet requirements indicated.

5 Door Finish: Factory primed and field finished.

6 Hinge Rail and Reinforcement: Non-beveled edge, reinforced with continuous steel channel, 12 gauge, 0.093 inch minimum metal thickness, welded at 5 inch on center maximum, and compatible with 4-1/2 inch full mortise template and continuous geared hinges.

2.4 HOLLOW METAL FRAMES

A Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B Frame Finish: Factory primed and field finished.

C Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.

1 Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch, maximum, above floor at 45 degree angle.

2 Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.

3 Frame Finish: Factory primed and field finished.

D Door Frames, Fire-Rated: Full profile/continuously welded type.

1 Fire Rating: Same as door, labeled.

2 Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch, maximum, above floor at 45 degree angle.

3 Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.

4 Frame Finish: Factory primed and field finished.

E Bullet-Resistant Door Frames: Comply with UL 752, with same level of bullet resistance as door; face welded construction, ground smooth, fully prepared and reinforced for hardware installation.

1 Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.

2 Frame Finish: Factory primed and field finished.

F Commercial and/or Detention Security-Resistant Door Frames: With same security resistance as door; face welded or full profile/continuously welded construction, ground smooth, fully prepared and reinforced for hardware installation.

G Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.

H Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.

I Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.

J Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches high to fill opening without cutting masonry units.

K Frame siZes, rabbet dimensions, and hardware preparations to be coordinated with salvage door sizes

2.5 FINISHES

A Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.6 ACCESSORIES

A Louvers: Roll formed steel with overlapping frame; finish same as door components ; factory-installed.

1 In Fire-Rated Doors: UL (DIR) or ITS (DIR) listed fusible link louver, same rating as door.

2 Style: Standard straight slat blade.

3 Louver Free Area: as required by ventilation

4 Fasteners: Exposed or concealed fasteners.

B Door Window Frames: Door window frames with glazing securely fastened within door opening.

1 Size: As indicated on drawings.

2 Frame Material: 18 gauge, 0.0478 inch, galvanized steel.

3 Metal Finish: Dark Bronze polyester powder coating.

C Glazing: As specified in Section 08 80 00, factory installed.

D Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.

E Astragals and Edges for Double Doors: Pairs of door astragals, and door edge sealing and protection devices. Provide astragals that meet UL fire rating for rated doors.

1 UL listed products in compliance with requirements of authorities having jurisdiction.

2 Provide surface mounted astragal to cover or fill space for full door height between pair of doors or door and adjacent jamb.

3 Astragal Type: Split, two parts, and with automatic locking, cutouts for other door hardware, and sealing gasket.

4 Edge Type: Beveled edge

5 Material: Aluminum.

6 Metal Finish: Dark Bronze powder coating.

7 Provide non-corroding fasteners at exterior locations.

F Mechanical Fasteners for Concealed Metal-to-Metal Connections: Self-drilling, self-tapping, steel with electroplated zinc finish.

G Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.

H Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

I Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.1 EXAMINATION

A Verify existing conditions before starting work.

B Verify that opening sizes and tolerances are acceptable.

C Verify that finished walls are in plane to ensure proper door alignment.

3.2 PREPARATION

A Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.3 INSTALLATION

A Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B Install fire rated units in accordance with NFPA 80.

C Coordinate frame anchor placement with wall construction.

D Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.

E Install door hardware as specified in Section 08 71 00.

1 Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMA 861.

F Comply with glazing installation requirements of Section 08 80 00.

G Coordinate installation of electrical connections to electrical hardware items.

H Touch up damaged factory finishes.

3.4 TOLERANCES

A Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.

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

3.5 ADJUSTING

A Adjust for smooth and balanced door movement.

B Adjust sound control doors so that seals are fully engaged when door is closed.

C Test sound control doors for force to close, latch, and unlatch; adjust as necessary in compliance with requirements.

3.6 SCHEDULE

A Refer to Door and Frame Schedule on the drawings.

END OF SECTION 08 11 13

SECTION 08 43 13 - ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 01 Specifications Sections, apply to this section.

1.2 WORK INCLUDES

A Aluminum-framed storefront, with vision glass. For exterior application.

B Coordinating contractor shall provide all labor, materials, equipment and supplies for:

1 Aluminum doors and frames.

2 Weatherstripping.

3 Door hardware

1.3 PRE-INSTALLATION MEETING

A Convene a pre-installation meeting one week before starting work of this section; require attendance by each of the affected installers. Other attendees shall include the Architect and Owner representatives.

1.4 SUBMITTALS

A See Section 01 33 23 – Shop drawings, Product Data and Samples.

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 Samples: Submit two samples 6x6 inches in size illustrating finished aluminum surface, glass, glazing materials.

E Hardware Schedule: Complete itemization of each item of hardware to be provided for each door, cross-referenced to door identification numbers in Contract Documents.

F Specimen warranty.

1.5 RELATED REQUIREMENTS

A Section 08 71 00 - Door Hardware: Hardware items other than specified in this section.

B Section 08 80 00 - Glazing: Glass and glazing accessories.

1.6 REFERENCE STANDARDS

A AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site 2015.

B AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document) 2015.

C AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2021, with Errata (2022).

D ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2021.

1.7 ADMINISTRATIVE REQUIREMENTS

A Coordinate with installation of other adjacent components.

B Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

1.8 QUALITY ASSURANCE

A Manufacturer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

B Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

1.9 MOCK-UPS

A Locate where directed.

B Mock-up may remain as part of work.

1.10 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.

1.11 FIELD CONDITIONS

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

1.12 WARRANTY

A See Section 01 78 36 – Warranties and Bonds for additional warranty requirements.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A Aluminum-Framed Storefronts:

1 Kawneer North America; www.kawneer.com/#sle.

2 Oldcastle BuildingEnvelope; www.oldcastlebe.com/#sle.

3 Tubelite, Inc; www.tubeliteinc.com/#sle.

2.2 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 1/4 inch monolithic glazing.

2 Glazing Position: Centered (front to back).

3 Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep.

a. Wall thickness at any location for main frame: Not less than 0.070”

4 Finish: High performance organic coatings.

a Factory finish all surfaces that will be exposed in completed assemblies.

b Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

5 Finish Color: Brown/Black to match existing storefront color.

6 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.

7 Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.

8 Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.

9 Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.

10 Perimeter Clearance: Minimize space between framing members and adjacent

2.3 BASIS OF DESIGN

A Swing Door Medium Stile, Monolithic Glazing:

1 Thickness: 1-3/4 inches.

B Frame system:

1 451T system by Kawneer.

2.4 COMPONENTS

A Aluminum Framing Members: Tubular aluminum sections.

1 Glazing Stops: Flush.

2 Glazing: See Section 08 80 00.

3 Swing Doors: Glazed aluminum.

4 Thickness: 1-3/4 inches.

5 Top Rail: 4 inches wide.

6 Vertical Stiles: 4-1/2 inches wide.

7 Bottom Rail: 10 inches wide.

8 Glazing Stops: Square.

9 Finish: Same as storefront.

2.5 MATERIALS

A Extruded Aluminum: ASTM B221 (ASTM B221M) 6063-T6 alloy and temper.

B Fasteners: Stainless steel.

C Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

2.6 FINISHES

A High Performance Organic Coating: AAMA 2604; multiple coats, thermally cured fluoropolymer system.

B Color: Brown/Black to match existing.

2.7 HARDWARE

A For each door, include associated hardware as specified in drawings and in Section 08 71 00.

3.1 EXAMINATION

A Field verify dimensions, tolerances, and method of attachment with other work.

3.2 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 Install hardware using templates provided.

F Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.3 TOLERANCES

A Maximum Variation from Plumb: 0.06 inch per 3 feet non-cumulative or 0.06 inch per 10 feet, whichever is less.

B Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.4 ADJUSTING

A Adjust operating hardware for smooth operation.

3.5 CLEANING

A Remove protective material from pre-finished aluminum surfaces.

B Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

3.6 PROTECTION

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

END OF SECTION 08 43 13

SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Mechanical door hardware for the following:

a. Swinging doors.

B. Related Requirements:

1. Section 08 11 13 "Hollow Metal Doors and Frames".

1.3 COORDINATION

A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant. Coordinate door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.

2. Format: Use same scheduling sequence and format and use same door numbers as in door hardware schedule in the Contract Documents.
3. Content: Include the following information:

    a. Identification number, location, hand, fire rating, size, and material of each door and frame.
    b. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
    c. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
    d. Description of electrified door hardware sequences of operation and interfaces with other building control systems.
    e. Fastenings and other installation information.
    f. Explanation of abbreviations, symbols, and designations contained in door hardware schedule.
    g. Mounting locations for door hardware.
    h. List of related door devices specified in other Sections for each door and frame.

C. Keying Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.

1.5 INFORMATIONAL SUBMITTALS

A. Maintenance Data: For each type of door hardware to include in maintenance manuals.

B. Schedules: Final door hardware and keying schedule.

1.6 QUALITY ASSURANCE

A. Supplier Qualifications: The hardware supplier shall be a corporate member in good standing of The Door and Hardware Institute (DHI), employing at least one Architectural Hardware Consultant (AHC) who is currently participating in DHI's continuing education program (CEP).

B. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.

1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedule.

C. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as an Architectural Hardware Consultant (AHC).

1.7 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

C. Deliver keys and permanent cores to Owner by registered mail or overnight package service.

1.8 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures including excessive deflection, cracking, or breakage.
b. Faulty operation of doors and door hardware.
c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.

2. Warranty Period: Manufacturers' standard warranty period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of door hardware from preapproved list of manufacturers only.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

B. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that complies with requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at the tested pressure differential of 0.3-inch wg (75 Pa) of water.

C. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

D. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and Illinois Accessibility Code (IAC).

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22.2 N).
2. Comply with the following maximum opening-force requirements:

a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
4. Adjust door closer sweep periods so that, from an open position of 90 degrees, the door will take at least 5 seconds to move to a position of 12 degrees from the latch.
5. Adjust spring hinges so that, from an open position of 70 degrees, the door will take at least 1.5 seconds to move to the closed position.

2.3 HINGES

A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames. All hinges shall be mortised with the door. Doors greater than 84 inches in height shall use 4 hinges per door. Doors equal to or greater than 42 inches in width shall use 4 hinges per door.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Hager Companies.
   b. IVES Hardware; an Allegion company.

2.4 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: As indicated in door hardware schedule.

B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Bored Locks: Minimum 1/2-inch (13-mm) latchbolt throw.
2. Mortise Locks: Minimum 3/4-inch (19-mm) latchbolt throw.
3. Deadbolts: Minimum 1-inch (25-mm) throw.

C. Lock Backset: 2-3/4 inches (70 mm) unless otherwise indicated.

D. Lock Trim:

1. Description: As indicated in door hardware schedule.

E. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Manufacturer's special strike box fabricated for aluminum framing.
4. Rabbet Front and Strike: Provide on locksets for rabbeted meeting stiles.

F. Mortise Locks: BHMA A156.13; Operational Grade 1; stamped steel case with steel or brass parts; Series 1000.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

    a. Schlage, an Allegion Company. (No Substitutions)

2.5 AUTOMATIC AND SELF-LATCHING FLUSH BOLTS

A. Automatic Flush Bolts: BHMA A156.3, Type 25; minimum 3/4-inch (19-mm) throw; with dust-proof strikes; designed for mortising into door edge.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

    a. IVES Hardware; an Allegion company.
    b. Architectural Builders Hardware

2.6 LOCK CYLINDERS

A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

    a. Schlage; an Allegion company. (No Substitutions)

2.7 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock. Incorporate decisions made in keying conference.

1. New Master Key System:

    a. Master key or grand master key locks to Owner's requirements.

B. Keys: Nickel Silver.

1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

    a. Notation: Information to be furnished by Owner.

2.8 ACCESSORIES FOR PAIRS OF DOORS

A. Coordinators: BHMA A156.3; consisting of active-leaf, hold-open lever and inactive-leaf release trigger; fabricated from steel with nylon-coated strike plates; with built-in, adjustable safety release; and with internal override.

B. Carry-Open Bars: BHMA A156.3; prevent the inactive leaf from opening before the active leaf; provide polished brass or bronze carry-open bars with strike plate for inactive leaves of pairs of doors unless automatic or self-latching bolts are used.

C. Astragals: BHMA A156.22.

2.9 SURFACE CLOSERS

A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. LCN Closers; an Allegion company. (No Substitutions)

2.10 MECHANICAL STOPS AND HOLDERS

A. Wall- and Floor-Mounted Stops: BHMA A156.16; stainless steel base metal.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

a. IVES Hardware; an Allegion company.
b. Rockwood; an ASSA Abloy company.

2.11 OVERHEAD STOPS AND HOLDERS

A. Overhead Stops and Holders: BHMA A156.8.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

a. Glynn-Johnson; an Allegion company.
b. Architectural Builders Hardware

2.12 METAL PROTECTIVE TRIM UNITS

A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch- (1.3-mm-) thick stainless steel; with manufacturer's standard machine or self-tapping screw fasteners.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Hager Companies.
b. IVES Hardware; an Allegion company.
c. Rockwood Manufacturing Company.

2.13 AUXILIARY DOOR HARDWARE

A. Auxiliary Hardware: BHMA A156.16.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Hager Companies.
    b. IVES Hardware; an Allegion company.
    c. Rockwood Manufacturing Company.

2.14 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rating labels and as otherwise approved by Architect.

    1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware unless otherwise indicated.

    1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
    2. Fire-Rated Applications:

        a. Wood or Machine Screws: For the following:

            1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.
            2) Strike plates to frames.
            3) Closers to doors and frames.

        b. Steel Through Bolts: For the following unless door blocking is provided:

            1) Surface hinges to doors.
            2) Closers to doors and frames.
            3) Surface-mounted exit devices.

    3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
    4. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.15 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance of the Work.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

3.2 PREPARATION

A. Steel Doors and Frames: For surface-applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

D. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule, but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches (750 mm) of door height greater than 90 inches (2286 mm).

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as directed by Owner.
2. Furnish permanent cores to Owner for installation.

F. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

3.4 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant: Engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
2. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 70 degrees and so that closing time complies with accessibility requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door and door hardware operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

3.8 DEMONSTRATION

A. Engage Installer to train Owner's maintenance personnel to adjust, operate, and maintain door hardware.

3.9 DOOR HARDWARE SCHEDULE

SET 01

3	EA	HINGES	AS SPECIFIED ABOVE	652	HAG
1	EA	PANIC DEVICE	99L-F	626	VON
1	EA	CYLINDER	AS REQUIRED	626	SCH
1	EA	CLOSER	4040XP S CUSH	689	LCN
1	SET	SEAL	160	AL	NGP
1	EA	SWEEP	200N	AL	NGP
1	EA	THRESHOLD	425	AL	NGP
1	EA	RAIN DRIP	16	AL	NGP

SET 02

6	EA	HINGES	AS SPECIFIED ABOVE	630	HAG
2	EA	CYLINDER	AS REQUIRED	626	SCH
1	EA	PANIC DEVICE	99L-F	626	VON
1	EA	PANIC DEVICE	99EO-F	626	VON
1	EA	CLOSER	4040XP	689	LCN
1	EA	OVERHEAD STOP	100S	630	GLY
1	SET	SEAL	160	AL	NGP
1	EA	SWEEP	200N	AL	NGP
1	EA	THRESHOLD	425	AL	NGP
1	EA	RAIN DRIP	16	AL	NGP
1	EA	KEY REMOVAL MULLION	AS SUPPLIED BY HARDWARE MANUF.		

END OF SECTION 08 71 00

SECTION 08 80 00 - GLAZING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK INCLUDES

A Glazing for doors

B Glazing for windows.

C Glazing compounds.

D Coordinating contractor shall provide all labor, materials, equipment and supplies for:

1.3 SUBMITTALS

A See Section 01 33 23 – Shop drawings, product data and samples 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 Samples: Submit two samples 12 by 12 inch in size of glass units.

E Samples: Submit 6 inch long bead of glazing sealant, color as selected.

F Manufacturer's qualification statement.

G Installer's qualification statement.

H Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.4 PRE-INSTALLATION MEETING

A Convene a preinstallation meeting one week before starting work of this section; require attendance by each of the affected installers.

1.5 RELATED REQUIREMENTS

B Section 08 11 13 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.

D Section 08 43 13 - Aluminum-Framed Storefronts: Glazing provided as part of storefront assembly.

1.6 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 (Reaffirmed 2020).

C ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers 2005 (Reapproved 2019).

D ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.

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

F ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass 2019.

G ASTM C1193 - Standard Guide for Use of Joint Sealants 2016.

H ASTM C1349 - Standard Specification for Architectural Flat Glass Clad Polycarbonate 2017.

I ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass 2021a.

J ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings 2016.

K ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation 2019.

L GANA (SM) - GANA Sealant Manual 2008.

M NFRC 100 - Procedure for Determining Fenestration Product U-factors 2020.

N NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence 2020.

O NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems 2020.

1.7 QUALITY ASSURANCE

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

B Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

C Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

1.8 MOCK-UPS

A Provide on-site glazing mock-up with the specified glazing components.

B Locate where directed.

C Mock-ups may remain as part of the Work.

D Preconstruction testing

1.9 FIELD CONDITIONS

A Do not install glazing when ambient temperature is less than 40 degrees F.

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

1.9 WARRANTY

A See Section 01 78 36 – Warranties and Bonds for additional warranty requirements.

B Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for C seal failure, interpane dusting or misting, including providing products to replace failed units.

C Laminated Glass: Provide a five (5) year manufacturer warranty to include coverage for delamination, including providing products to replace failed units.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A Glass Fabricators:

1 Viracon, Inc: www.viracon.com/#sle.

B Float Glass Manufacturers:

1 Guardian Glass, LLC; www.guardianglass.com/#sle.

2 Pilkington North America Inc; www.pilkington.com/na/#sle.

3 Saint Gobain North America; www.saint-gobain.com/#sle.

2.2 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 Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.

2 Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.

3 Glass thicknesses listed are minimum.

B 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:

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 6.3 computer program.

2 Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.

3 Solar Optical Properties: Comply with NFRC 300 test method.

2.3 GLASS MATERIALS

A Float Glass: Provide float glass based glazing unless otherwise indicated.

1 Kind FT - Fully Tempered Type: Complies with ASTM C1048.

2.4 INSULATING GLASS UNITS

A Manufacturers:

1 Cardinal Glass Industries; www.cardinalcorp.com/#sle.

2 Guardian Glass, LLC; www.guardianglass.com/#sle.

3 Viracon, Apogee Enterprises, Inc; www.viracon.com/#sle.

B Fabricator: Certified by glass manufacturer for type of glass, coating, and treatment involved and capable of providing specified warranty.

C Insulating Glass Units: All

1 Durability: Certified by an independent testing agency to comply with ASTM E2190.

2 Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.

3 Spacer Color: Black.

4 Edge Seal Color: Black.

5 Purge interpane space with dry air, hermetically sealed.

D Insulating Glass Units: Vision glass, double glazed.

1 Applications: Exterior glazing unless otherwise indicated.

2 Space between lites filled with air.

3 Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.

a Tint: Clear.

b Coating: Low-E (passive type), on #2 surface.

4 Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.

a Tint: Bronze or Gray to match adjacent existing color.

5 Total Thickness: 1 inch.

6 Thermal Transmittance (U-Value); 0.24, nominal.

7 Visible Light Transmittance (VLT); percent, nominal.

8 Solar Heat Gain Coefficient (SHGC): 0.27, nominal.

2.5 GLAZING COMPOUNDS

A Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; nonbleeding, nonstaining; ASTM C920 Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25. Color to be selected by Architect from manufacturer's standards.

2.6 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 of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.

B Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.

PART 3 EXECUTION

3.1 INSTALLERS

A Installer List:

1 Substitution Limitations: Same as specified for products, see Section 01 62 04 – Substitution procedures.

3.2 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.

3.3 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.

3.4 INSTALLATION - WET/DRY GLAZING METHOD (TAPE AND SEALANT)

A Application - Interior Glazed: Set glazing infills from the interior of the building.

B Cut glazing tape to length and install against permanent stops, projecting 1/16 inch above sight line.

C Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

D Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.

E Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, 1/4 inch below sight line.

F Fill gaps between pane and applied stop with silicone type sealant to depth equal to bite on glazing, to uniform and level line.

G Carefully trim protruding tape with knife.

END OF SECTION 08 80 00

SECTION 09 22 16 – NON-STRUCTURAL METAL FRAMING

1. GENERAL

1.1 WORK INCLUDES

A. General Contractor shall provide all labor, materials, equipment and services necessary or incidental to the completion of all work of this section as shown on the drawings and herein specified or otherwise required.

1. Non-load-bearing steel framing systems for interior partitions and accessories.
2. Suspension systems for interior ceilings and soffits.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry

B. Section 07 92 00 - Joint Sealants

C. Section 09 29 00 - Gypsum Board

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Furnish manufacturer's printed instructions for installation of the assemblies.

C. Product Certificates: For each type of code-compliance certification for studs and tracks.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience.

2. PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer:

1. ClarkDetrich Building Systems, 9100 Centre Pointe Drive, West Chester, OH 45069

2. Marino\Ware, 400 Metuchen Road, South Plainfield, NJ 07080

3. National Gypsum Company, 2001 Rexford Road, Charlotte, NC 28211

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.

2.3 FRAMING SYSTEMS

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.

B. Studs and Tracks: ASTM C 645.

1. Steel Studs and Tracks:
   a. Minimum Base-Metal Thickness: 18 ga.; embossed or deformed studs in lieu of base metal thickness is not permitted
   b. Depth: As indicated on Drawings: 3-5/8 inches, 6 inches and 1-5/8 inches.
   c. At all door or borrowed lite jambs, use minimum 0.0359-inch (18 gauge).
   d. Protective Coating: Manufacturer's standard corrosion-resistant coating for exterior soffits and ceiling suspension members.
   e. Runners: Match studs; type recommended by stud manufacturer for floor and ceiling support of studs, and for vertical abutment of drywall work at other work.
   f. Stiffeners: 3/4" cold-rolled steel channels at 0.3 lb. Per ft., rust-inhibitive paint finish.
   g. Stud System Accessories: Provide stud manufacturer's standard clips, shoes, ties, reinforcements, fasteners and other accessories as needed for a complete stud system.

C. Slip-Type Head Joints: Where indicated, provide one of the following:
1. Double-Track System: ASTM C 645 top outer tracks, inside track with 2-inch-deep flanges in thickness not less than indicated for studs and fastened to studs, and outer track sized to friction-fit over inner track.
2. Firestop track: intumescent strip factory applies to track flanges expands when exposed to heat or flames to provide a perimeter joint seal
   a. Clark Dietrich: BlazeFrame Firestop Deflection Track

D. Preformed Top Track Firestop Seal:
1. Provide components UL-listed for use in UL-listed fire-resistance-rated head of partition joint systems indicated on drawings.
2. Products:
   a. Hilti, Inc; Top Track Seal CFS TTS
   b. Specified Technologies Inc; SpeedFlex TTG Track Top Gasket

E. Cold-Rolled Channel Bridging: Steel, 0.0538-inch (1.367-mm) minimum base-metal thickness, with minimum 1/2-inch- wide flanges.
1. Depth: 1-1/2 inches.
2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches (38 by 38 mm), 0.068-inch- (1.72-mm-) thick, galvanized steel.

F. Cold-Rolled Furring Channels: 0.053-inch (1.34-mm) uncoated-steel thickness, with minimum 1/2-inch- (13-mm-) wide flanges.

1. Depth: As indicated on Drawings or 3/4 inch.
2. Furring Brackets: Adjustable, corrugated-edge-type steel sheet with minimum uncoated-steel thickness of 0.0329 inch (0.8 mm).
3. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- (1.59-mm-) diameter wire, or double strand of 0.048-inch- (1.21-mm-) diameter wire.

G. Fasteners for Metal Framing: Provide fasteners of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel framing and furring members securely to substrates involved.

2.4 SUSPENSION SYSTEMS

A. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- (1.59-mm-) diameter wire, or double strand of 0.048-inch- (1.21-mm-) diameter wire.

B. Hanger Attachments to Concrete:
1. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hangers of type indicated, and with capability to sustain, without failure, a load equal to ten (10) times that imposed by ceiling construction, as determined by testing according to ASTM E 1190 conducted by a qualified independent testing agency.

C. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.16 inch (4.12 mm) in diameter.

D. Flat Hangers: Steel sheet, in size indicated on Drawings or 1 by 3/16 inch (25 by 5 mm) by length indicated.

E. Carrying Channels (Main Runners): Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.0538 inch (1.367 mm) and minimum 1/2-inch- (13-mm-) wide flanges.

1. Depth: 2 inches (51 mm).

2.5 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Steel Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

B. Isolation Strip at Exterior Walls: Provide one of the following:

1. Asphalt-Saturated Organic Felt: ASTM D 226/D 226M, Type I (No. 15 asphalt felt), nonperforated.
2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch (3.2 mm) thick, in width to suit steel stud size.

3. EXECUTION

3.1 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.

1. Gypsum Plaster Assemblies: Also comply with requirements in ASTM C 841 that apply to framing installation.
2. Portland Cement Plaster Assemblies: Also comply with requirements in ASTM C 1063 that apply to framing installation.
3. Gypsum Veneer Plaster Assemblies: Also comply with requirements in ASTM C 844 that apply to framing installation.
4. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install framing and accessories plumb, square, and true to line, with connections securely fastened.

C. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

D. Install bracing at terminations in assemblies.

E. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.2 INSTALLING FRAMED ASSEMBLIES

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

C. Install studs so flanges within framing system point in same direction.

D. Install tracks at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts that penetrate partitions above ceiling.

1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install track section (for cripple studs) at head and secure to jamb studs.

    a. Install two studs at each jamb unless otherwise indicated.
    b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch (13-mm) clearance from jamb stud to allow for installation of control joint in finished assembly.
    c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.

3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

    a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.

5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
6. Curved Partitions:

    a. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.
    b. Begin and end each arc with a stud, and space intermediate studs equally along arcs. On straight lengths of no fewer than two studs at ends of arcs, place studs 6 inches o.c.

E. Direct Furring:

1. Screw to wood framing.
2. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

3.3 INSTALLING CEILING SUSPENSION SYSTEMS

A. Install suspension system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.

C. Suspend hangers from building structure as follows:

1. Install hangers plumb and free from contact with insulation, mechanical and electrical systems, or other objects within ceiling plenum that are not part of supporting structural or suspension system.

    a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.

    a. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.

3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
4. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
5. Do not attach hangers to steel roof deck.
6. Do not attach hangers to permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
7. Do not attach hangers to rolled-in hanger tabs of composite steel floor deck.
8. Do not connect or suspend steel framing from ducts, pipes, or conduit.

D. Fire-Resistance-Rated Assemblies: Wire tie furring channels to supports.

E. Installation Tolerances: Install suspension systems that are level to within 1/8 inch in 12 feet (3 mm in 3.6 m) measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

END OF SECTION 09 22 16

SECTION 09 29 00 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Exterior gypsum board for ceilings and soffits.
3. Tile backing panels.
4. Texture finishes.

1.2 RELATED WORK

A. Section 09 22 16 - Non-Structural Metal Framing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each texture finish indicated on same backing indicated for Work.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

A. Gypsum Board, Type X: ASTM C 1396/C 1396M.
1. Thickness: 5/8 inch (15.9 mm).
2. Long Edges: Tapered.

B. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

2.4 EXTERIOR GYPSUM BOARD FOR CEILINGS AND SOFFITS

A. Exterior Gypsum Soffit Board: ASTM C 1396/C 1396M, with manufacturer's standard edges.
   1. Core: 5/8 inch (15.9 mm), Type X.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

   1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
   2. Shapes:

      a. Cornerbead.
      b. Expansion (control) joint.

B. Exterior Trim: ASTM C 1047.

   1. Material: Hot-dip galvanized-steel sheet.
   2. Shapes:

      a. Cornerbead.
      b. LC-Bead: J-shaped; exposed long flange receives joint compound.
      c. Expansion (Control) Joint: One-piece, rolled zinc with V-shaped slot and removable strip covering slot opening.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

   1. Interior Gypsum Board: Paper.
   2. Exterior Gypsum Soffit Board: Paper.
   3. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
   4. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

   1. Prefilling: At open joints, and damaged surface areas, use setting-type taping compound.
   2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.

      a. Use setting-type compound for installing paper-faced metal trim accessories.

   3. Fill Coat: For second coat, use setting-type, sandable topping compound.
   4. Finish Coat: For third coat, use setting-type, sandable topping compound.
   5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.

D. Joint Compound for Exterior Applications:

1. Exterior Gypsum Soffit Board: Use setting-type taping compound and setting-type, sandable topping compound.
2. Glass-Mat Gypsum Sheathing Board: As recommended by sheathing board manufacturer.

2.7 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

C. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

PART 3 - EXECUTION

3.1 APPLYING AND FINISHING PANELS

A. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

B. Comply with ASTM C 840.

C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

D. For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

E. Prefill open joints and damaged surface areas.

F. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

G. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

a. Primer and its application to surfaces are specified in Section 09 91 23 "Interior Painting."

b. Primer and its application to surfaces are specified in Section 09 91 23 "Interior Painting."

H. Glass-Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.

I. Glass-Mat Faced Panels: Finish according to manufacturer's written instructions.

J. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.2 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.

END OF SECTION 09 29 00

SECTION 09 91 23 - PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A Surface preparation.

B Field application of paints.

C Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
2. Surfaces inside cabinets.
3. Prime surfaces to receive wall coverings.
4. Mechanical and Electrical:
    a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
    b. In finished areas, paint shop-primed items.
    c. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
    d. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.

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, unless prime painting is required.
3. Items indicated to remain unfinished.
4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
5. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, and lead items.
6. Marble, granite, slate, and other natural stones.
7. Floors, unless specifically indicated.
8. Ceramic and other tiles.
9. Brick, architectural concrete, cast stone, integrally colored plaster, and stucco.
10. Glass.

11. Concrete masonry units in utility, mechanical, and electrical spaces.
12. Acoustical materials, unless specifically indicated.
13. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

1.03 IDEFINITIONS

A Comply with ASTM D16 for interpretation of terms used in this section.

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 D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications 2019.

C MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association Current Edition.

D MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.

E SCAQMD 1113 - Architectural Coatings 1977, with Amendment (2016).

F SSPC V1 (PM1) - Good Painting Practice: Painting Manual Volume 1 2016.

G SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual Volume 2 2021.

H SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).

I SSPC-SP 2 - Hand Tool Cleaning 2018.

J SSPC-SP 3 - Power Tool Cleaning 2018.

1.05 SUBMITTALS

A See Section 01 33 23 – Shop Drawings, Product Data and Samples, 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.
4. Manufacturer's installation instructions.
5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

C Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.

1. Where sheen is specified, submit samples in only that sheen.
2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens not required.
3. Allow 30 days for approval process, after receipt of complete samples by Architect.
4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.

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. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
2. Label each container with color in addition to the manufacturer's label.

1.06 QUALITY ASSURANCE

A Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

1.07 MOCK-UP

A Provide panel, 10 feet long by 10 feet wide, illustrating paint color, texture, and finish.

B Provide door and frame assembly illustrating paint color, texture, and finish.

C Locate where directed by Architect.

D Mock-up may remain as part of the work.

1.08 DELIVERY, STORAGE, AND HANDLING

A Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.09 FIELD CONDITIONS

A Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.

D Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.

E Provide lighting level of 80 ft candles 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: www.benjaminmoore.com
2. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
3. Substitutions shall be approved prior to bid.

C Primer Sealers: Same manufacturer as top coats and approved for use by manufacturer.

2.02 PAINTS AND FINISHES - GENERAL

A Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.

1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
4. Supply each paint material in quantity required to complete entire project's work from a single production run.
5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B Flammability: Comply with applicable code for surface burning characteristics.

C Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

D Colors: 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 three 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.
4. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted.
5. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color coding scheme indicated.

2.03 METAL SURFACES

A Epoxy metal primer: Corrosion-resistant, solvent-based, two-component epoxy primer formulated for use on prepared, exterior ferrous- and galvanized-metal surfaces.

B Exterior 100% acrylic latex enamel paint, semi-gloss; formulated for alkali, mold, and water resistance and or use on exterior surfaces.

C Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Benjamin Moore & Co.
2. PPG Paints
3. Rust-Oleum Corporation
4. Sherwin-Williams Company.

2.04 PAINT SYSTEMS

A Paint - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, wood, plaster, and acoustical ceilings.

1. Two top coats and one coat primer.
2. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, 141, or 142.
   a. Products:
      1) Benjamin Moore: Ultra Spec 500 Acrylic Zero VOC Eggshell Enamel (0g/L)
      2) Sherwin-Williams ProMar 200 Zero VOC Interior Latex Egg Shell, B20W2600 (<50 g/L VOC)

B Paint – Metal Surfaces to be Painted. Including shop primed steel, galvanized steel, aluminum.

1. Two top coats and one coat primer.
2. Top Coat(s): High Performance Architectural 100% acrylic latex enamel

a. Products:
   1) Benjamin Moore: Command Acrylic Enamel
   2) Sherwin-Williams DTM Acrylic Enamel

PART 3 EXECUTION

3.01 EXAMINATION

A Do not begin application of paints and finishes until substrates have been adequately prepared.

B Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

D Test shop-applied primer for compatibility with subsequent cover materials.

E Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:

1. Gypsum Wallboard: 12 percent.

3.02 PREPARATION

A Clean surfaces thoroughly and correct defects prior to application.

B Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C Remove or repair existing paints or finishes that exhibit surface defects.

D Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

E Seal surfaces that might cause bleed through or staining of topcoat.

F Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

G Concrete:

1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
2. Clean surfaces with pressurized water. Use pressure range of 1,500 to 4,000 psi at 6 to 12 inches. Allow to dry.
3. Clean concrete according to ASTM D4258. Allow to dry.
4. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP 13.

H Concrete Masonry Units (CMU):

1. Remove efflorescence and chalk. Do not coat surfaces if moisture content, alkalinity of surfaces, or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
2. Prepare surface as recommended by top coat manufacturer.
3. Clean surfaces with pressurized water. Use pressure range of 600 to 1,500 psi at 6 to 12 inches. Allow to dry.

I Concrete Floors and Traffic Surfaces: Remove contamination, acid etch and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.

J Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

K Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

L Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.

M 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.

N 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 using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

O 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 Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.

D Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

E Apply each coat to uniform appearance in thicknesses specified by manufacturer.

F Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.

G Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

H Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

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

3.05 PROTECTION

A Protect finishes until completion of project.

B Touch-up damaged finishes after Substantial Completion.

END OF SECTION 09 91 23

SECTION 31 22 19 – FINISH GRADING

PART 1 – GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide all labor, materials, equipment, and services necessary or incidental to the completion of all work of this section as shown on the drawings, herein specified, or otherwise required.
   a. Section Includes:

      1) Provide imported topsoil
      2) Spread topsoil

B. Alternate Bid: None

1.2 RELATED DOCUMENTS

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

1.3 SUBMITTALS

A. Materials

1. Location and representative ½ cu.ft. sample of topsoil for approval.

B. Equipment

1. List of proposed equipment to be used. Equipment must avoid excess soil compaction.

1.4 QUALITY ASSURANCE

A. All work described in this Section is to be done by a firm specializing in such work with documented 5 years' experience in similar work. The personnel of the firm shall be experienced in the work specified and shall work under the direction of a skilled foreman.

B. Contractor is responsible to protect and avoid all existing above ground and underground utilities during construction operations. Repair of any utilities damaged by installation shall be the responsibility of the Contractor.

C. Contractor is responsible to protect all existing conditions including structures, pavement, and plant material from damage during project installation and maintenance. Any damages occurring are the responsibility of the Contractor to replace, repair or compensate General contractor for damages.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Topsoil

1. Loamy soil from the A horizon soil profile of local prairie-type soils.
2. Imported to the site, on-site topsoil not available.
3. Organic content between 8 and 10 percent.
4. Free from roots, sticks, weeds, stones, etc. larger than 1 inch in dimension.
5. Entirely free of foreign material including construction waste, litter, and contaminating products.
6. At least 90 percent must pass the 2.00 mm sieve.
7. pH between 6.0 and 8.0.

PART 3 – EXECUTION

3.1 SCHEDULE OF WORK

A. Execution

1. When subsoil grade is approved by General contractor's Representative and all foreign construction materials have been removed from the site.
2. When ground is not frozen, and temperatures are consistently above freezing.
3. When soil is relatively dry and friable to avoid clotting and compaction.

3.2 EXCAVATION AND TOPSOIL BACKFILL FOR PLANTS

A. Operations

1. Test excavated area for water percolation. If beds do not adequately percolate as determined by the Landscape Architect, auger hole below the excavation to a depth determined necessary and backfill with pea gravel as shown on plan.
2. Back fill with approved topsoil in 12" lifts compacting moderately to 86-90% compaction.
3. Dispose of excavated material off the site, if not meeting topsoil standards.

3.3 TOP SOILING

A. Subsoil Preparation

1. Till subsoil to a minimum depth of 4".
2. Remove all roots, sticks, weeds, stones, etc. larger than 1 inch in dimension.
3. Remove all foreign material including construction waste, litter, and contaminating products.
4. Make any necessary grade adjustments
5. Till to a uniform 4" depth.

B. Depositing Topsoil

1. Deposit approved topsoil on the site.
2. Spread with light weight, lawn-scale equipment to avoid excess compaction of subsoil and topsoil.
3. Spread topsoil along improvements such as curbs, sidewalks, and fences with hand tools to avoid

damage to the improvements.
4. All areas for seeding to have a minimum 12 inches of topsoil.
5. Soil clods to be no greater than 2” in any dimension.

C. Finish Grading

1. Finish to lines and grades shown on the plans (match existing adjacent grades).
2. Surfaces to be smooth with no rises or wrinkles.
3. All areas are to drain with slope away from structures and pavement unless shown otherwise.
4. Grade to meet the elevations of surrounding pavement.
5. Remove all roots, sticks, weeds, stones, etc. larger than 1 inch in dimension. Dispose of off-site.
6. Remove all foreign material including construction waste, litter, and contaminating products. Dispose of off-site.
7. Leave site in a smooth, stable condition. Roll any powdered soils to stabilize.
8. Final compaction to be 86-90%.

END OF SECTION 31 22 19

SECTION 31 23 23 – FILL

PART 1- GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide all labor, materials, equipment, and services necessary or incidental to the completion of all work of this section as shown on the drawings, herein specified, or otherwise required.
   a. Section Includes:
      1) Preparation of subgrade for pavements, sidewalks and curb and gutters.
      2) Backfill for basement, site utilities, and building removal.
      3) Fill for over-excavation.
      4) Consolidation and compaction of all fill material.

B. Alternate Bid 1: Fill at Garage and Mech/Boiler Building.

1.2 RELATED WORK

A. Section 31 22 19 – Finish Grading

1.3 REFERENCE TO STANDARDS

A. ASTM D698 - Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3).

B. ASTM D4253 - Maximum Index Density and Unit Weights of Soils Using a Vibratory Table.

C. Illinois Department of Transportation (IDOT): Standard Specifications for Road and Bridge Construction, Latest Edition.

D. Illinois Department of Transportation (IDOT) – Project Procedures Guide, Latest Edition.

1.4 REGULATORY REQUIREMENTS

A. Conform to the applicable portions of Sections 202, 205 and 301 of the Illinois Department of Transportation (IDOT): Standard Specifications for Road and Bridge Construction, including all Supplemental Specifications and Recurring Special Provisions.

1.5 SUBMITTALS

A. Submit copies of Standard Proctor Density Test results to General contractor or General contractor's Representative a minimum of seven business days prior to backfilling any excavations.

1.6 QUALITY ASSURANCE

A. Compaction Testing

1. Standard Proctor Density Testing and Compaction Testing of fill materials and inspection of subgrades and fill layers will be performed by the Contractor's testing service, using Proctor information furnished by the Contractor.

2. If, in opinion of General contractor or General contractor's Representative, based on testing service reports and inspection, subgrade or fills, which have been graded or placed on-site are below specified density, provide additional compaction and testing at no additional expense to the General contractor.

3. When, during progress of work, tests indicate that compacted materials will not meet specifications, remove defective work, replace, and retest at no additional cost to the General contractor.

4. Ensure that all compacted fills are tested before proceeding with placement of surface materials.

1.7 FIELD TESTS

A. Compaction Tests

1. Contractor shall make arrangements with an independent laboratory for making compaction tests and shall pay for those tests. They shall also make arrangements with testing firm to have sufficient number of personnel from the testing laboratory and testing equipment in good working order during all placement and compaction operations. Name of testing firm chosen by Contractor shall be submitted to General contractor or General contractor's Representative for approval prior to beginning of backfilling. General contractor or General contractor's Representative reserves right to reject testing firm at any time during construction and to require another testing firm to perform tests.

1.8 PROTECTION

A. Protect and avoid all existing underground utilities during construction operations. Repair of any utilities designated to remain and damaged shall be the responsibility of the Contractor performing the damage to coordinate and pay for repairs.

PART 2 - PRODUCTS

2.1 DEFINITIONS

A. Suitable Soil

1. Suitable soil is a soil having less than 5% organic matter by weight as determined by the Loss on Ignition Test (determine weight loss caused by heating sample to 500 deg C for 6 hours after drying in accordance with ASTM D-2216, “Laboratory Determination of Moisture Content of Soil").

B. Unsuitable Soil

1. Unsuitable soil is a soil that contains 5% or more organic matter as determined by the Loss of Ignition Test previously specified, rubbish, vegetable matter of every kind, roots, and boulders larger than 5 inches in dimension which might interfere with the proper bonding to adjacent contact surfaces, or as otherwise determined unsuitable by the testing laboratory.

C. Cohesive Soil

1. Cohesive soil is a soil containing more than 50 percent fine material passing the No. 200 standard sieve, and with more than 15 percent clay-size particles smaller than 0.002 mm (2 microns). The soil matrix passing the No. 40 standard sieve exhibits dry (crushing) strength in the dry state and cohesive shear strength in the moist state, as well as being plastic in the moist state.

2.2 ENGINEERED FILL MATERIALS

A. General

1. Fill shall meet the requirements of IDOT CA-6 (Class C quality or better) or shall be composed of suitable lean (silty or sandy) clay with liquid limit no greater than 50% and plasticity index no greater than 25%. The on-site clay materials obtained from excavations may be allowed as engineered fill if the material meets these requirements.

2. Engage a qualified independent testing laboratory to test materials from on-site and off-site sources to test materials for conformance to this specification. The name of the testing laboratory shall be submitted to the General contractor or General contractor’s Representative for review prior to conducting any tests. Results of tests shall be submitted to the General contractor or General contractor’s Representative for review prior to engineered fill material being placed.

2.3 TRENCH BACKFILL MATERIALS

A. General Fill and Cohesive Backfill

1. Provide acceptable soil materials for backfill, free of clay lumps, rock, or gravel larger than two inches in dimension, debris, waste, frozen materials, vegetable, and other deleterious matter.

B. Granular Backfill and Trench Backfill

1. Granular backfill shall consist of IDOT FA-1, FA-2, FA-5, FA-6, CA-6, or CA-7. Granular backfill shall be used under steps, stoops, walks, roads, parking lots and against structure walls. (Minimum for inch depth below walks, steps, etc.).

PART 2 - PRODUCTS

3.1 EXAMINATION

A. Prior to placement of any fill or backfill and prior to placement of all subsequent fill lifts, contact General contractor or General contractor's Representative for inspection and testing of excavation subgrade and testing of each compacted layer of fill and backfill material. Provide proctor information necessary for the General contractor or General contractor's Representative to perform density testing on in-place backfill material.

3.2 PREPARATION

A. Backfilling and compaction shall not occur until the following conditions are satisfied:

1. Acceptance by General contractor or General contractor's Representative of construction below finish grade.

2. Inspection, testing, approval and recording locations of underground utilities.

3. Removal of concrete formwork.

4. Removal of trash and debris, vegetation, snow or ice, water, unsatisfactory soil materials, obstructions, and deleterious materials.

5. Removal of shoring and bracing and backfilling of voids with satisfactory material.

6. Ensure that ground surface within excavated area to be backfilled is not frozen.

7. When existing ground surface has a density less than that specified under Article 3.03-C of this Section for area classification, break up ground surface, pulverize, moisture- condition to optimum moisture content and compact to required depth and percentage of maximum density.

3.3 BACKFILLING AND COMPACTING

A. General

1. Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.

   a. In existing turf areas, use satisfactory excavated or borrow exterior fill material.

B. Placement and Compaction

1. Place backfill, base and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches in loose depth for material compacted by hand operated tampers. Heavy equipment including compaction equipment shall not operate within 2 feet of unbraced substructure walls. Compaction in these areas shall be obtained with hand operated compaction equipment or devices. Earth backfill and native soil backfill shall be compacted with sheepsfoot compaction equipment.

2. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen or contain frost or ice.

3. Place backfill and fill materials evenly adjacent to structure to required elevations. Take necessary precautions to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.

C. Percentage of Maximum Density Requirements

1. Unless otherwise noted on the plan sheets, compact each layer of soil to not less than the following percentages of maximum density for soils which exhibit a well- defined moisture density relationship (cohesive soils) determined in accordance with ASTM D698, Standard Proctor Compaction Test; and not less than the following percentages of relative density, determined in

accordance with ASTM D 4253 and ASTM D 4254, for soils which will not exhibit a well-defined moisture-density relationship (cohesion less soils).

REQUIRED COMPACTIVE EFFORT				
MATERIAL TESTED	PROCTOR TYPE	MIN % DRY DENSITY	MOISTURE CONTENT	MIN FREQUENCY OF TESTING
Engineered Fill	Standard	97%	-2 to +3%	1 per 2,500 sf of fill placed
Landscape Fill (non-load bearing)	Standard	90%	-2 to +3%	2 per 5,000 sf of fill placed
Utility Trench	Standard	97%	-2 to +3%	1 per 100 elves of backfill placed

D. Moisture Control

1. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water top surface or subgrade or layer of soil material, to prevent free water appearing on surface during or after compaction operations. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.

E. Grading

1. General

a. Uniformly grade areas within limits of excavation under this Section, including adjacent transition areas. Compact with uniform levels or slopes between such points and existing grades.

b. Remove stones over 1-1/2" in any dimension and sticks, roots, rubbish and other extraneous matter.

c. Rough grade to 6" - 12" below finish, grades and elevations indicated in the drawings.

d. Grading Outside Structure Lines

1. Grade areas adjacent to building lines to drain away from structures and to prevent ponding.

2. Finish surfaces free from irregular surface changes, and as follows:

a. Slabs: Shape surface of areas under slabs to line, grade, and cross-section, with finish surface not more than 1/2" above or below required subgrade elevation.

2. Grading Surface of Backfill Under Walks and Slabs.

a. Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/4” when tested with a 10’ straightedge.

3. Compaction

a. After grading, compact subgrade surfaces to the depth and percentage of maximum or relative density for each area classification.

F. Maintenance

1. Protection of Graded Areas

a. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

b. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.

2. Reconditioning Compacted Areas

a. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

3. Settling

a. Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality and condition of surface or finish to match adjacent work and eliminate evidence of restoration to greatest extent possible.

3.4 FIELD QUALITY CONTROL

A. Quality Control Testing During Construction

1. Allow the General contractor or General contractor's Representative to inspect subgrades and fill layers before further construction work is performed.

2. If in opinion of General contractor or General contractor's Representative, based on field density testing and inspection, subgrade or fills which have been placed are below specified density, provide additional compaction and testing at no additional expense to the General contractor.

END OF SECTION 31 23 23

SECTION 31 25 00 – EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide all labor, materials, equipment, and services necessary or incidental to the completion of all work of this section as shown on the drawings, herein specified, or otherwise required.

1.2 RELATED DOCUMENTS

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

1.3 SUMMARY

A. Section addresses the minimum requirements for soil erosion and sedimentation control on all project sites where soil will be disturbed.

1.2 RELATED WORK

A. Specified elsewhere:

1. Section 31 23 23 – Fill.

3 LAWS, REGULATIONS, AND GUIDELINES

A. The following laws, permits, regulations and guidelines apply to the erosion and sedimentation control requirements described in this Section:

1. 415 Illinois Compiled Statutes 5/13(b)(1): Illinois Environmental Protection Act
2. 40 Codified Federal Regulations Part 122: EPA Administered Permit Programs: The National Pollutant Discharge Elimination System
3. 63 Federal Register 15630-15634

4. USEPA Summary Guidance Document 833-R-92-001: Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices
5. Illinois Urban Manual (1995 or most current edition) See: http://www.il.nrcs.usda.gov/technical/engineer/urban/contents.html
6. Illinois Environmental Protection Agency (IEPA) National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10 for Storm Water Discharges Associated with Construction Site Activities See:http://www.epa.state.il.us/water/permits/storm-water/general-construction- permit.pdf
7. IEPA General NPDES Permit No. ILR40 For Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) See: http://www.epa.state.il.us/water/permits/storm-water/general-ms4-permit.pdf

1.4 SUMMARY OF REQUIREMENTS

A. All Construction Sites:

1. Construction activities shall not cause a discharge that alters the physical, thermal, chemical, biological, or radioactive properties of any waters of the State; or discharge a contaminant that is likely to cause a nuisance or be harmful to public health, wildlife, or other legitimate uses.
2. To the extent practicable, all construction sites shall provide on-site methods to prevent sediment from entering the existing storm water system. Discharge of cloudy or sediment-laden water from any construction site to surface waters or any part of the sewer system is prohibited.
3. All construction sites shall have stabilized construction site ingress and egress to limit tracking of sediment off-site.
4. If sediment escapes the construction site, off-site accumulations of sediment shall be removed by the end of the day.
5. Sediment shall be removed from sediment traps or sedimentation basins when design capacity has been reduced by 50%.
6. Existing vegetation shall be preserved where possible to minimize erosion.

B. Construction Sites that Disturb One or More Acres:

1. Construction sites with a disturbed area of one or more acres shall meet all applicable state and federal storm water discharge laws, regulations, and guidelines specified in this section. This includes construction sites less than 1 acre if part of a larger common development plan that is equal to or greater than 1 acre.
2. Required Documents
   a. Storm Water Pollution Prevention Plan: A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the project Professional Services Consultant (PSC) to minimize the discharge of pollutants in storm water.
      (a) The SWPPP shall include all elements required by the Illinois Environmental Protection Agency (IEPA) NPDES Storm Water Permit ILR10. (See: http://www.epa.state.il.us/water/permits/storm-water/general-construction- permit.pdf) The SWPPP consists of a site map and a separate narrative document.
      (b) The USEPA Summary Guidance document 833-R-92-001, entitled *Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices* may also be used as a guide to develop the SWPPP.

(c) Best management practices, controls, and other provisions contained in the SWPPP shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event and at least as protective as the requirements contained in the IEPA Illinois Urban Manual (1995 or most current edition).

(d) The following items shall be included in the SWPPP; however, this is not a comprehensive list:

(i) Dates for the following:

1. Major grading activities,
2. Construction activities temporarily (less than 14 days) or permanently ceased on any portion of the site,
3. Site stabilization measures initiated, and
4. SWPPP revisions.

(ii) Description of how litter, construction debris, and construction chemicals exposed to storm water will be prevented from becoming a pollutant source for storm water discharges.

(iii) Requirement for fuel storage tanks to have secondary containment to protect storm water from exposure to leaks and spills. The containment shall be designed to hold at least 110% of the volume of the largest stored container.

(iv) Requirement that adequate amounts of spill containment and cleanup equipment are provided to prevent a spill (fuel or other chemical) from entering a waterway.

(v) Description of how off-site material storage areas (i.e., for soil/aggregate stockpiles, chemicals, paints, etc.) used solely by the project will be managed.

(vi) Construction and maintenance areas for concrete and mortar washout if trucks or equipment will be cleaned on site.

b. Notice of Permit Coverage: The General contractor will provide the Notice of Permit Coverage. Prior to site disturbance, the Contractor shall post a notice to the public. The notice shall be placed in a location where the public can view it without entering the project site.

1.5 BUDGETING

A. Contractor shall provide a separate budgetary line item in the Contractor's Schedule of Values identifying funds scheduled to implement the SWPPP.

PART 2 - PRODUCTS

2.1 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. The SWPPP shall include all elements required by the Illinois Environmental Protection Agency (IEPA) NPDES Storm Water Permit ILR10 (See: http://www.epa.state.il.us/water/permits/storm-water/general-construction-permit.pdf)

B. The SWPPP consists of a site map and a separate narrative document. For a template see: http://www.fs.uiuc.edu/stormwatermanagement/PDFs/swppptemplate.doc

2.2 INSPECTION REPORT CHECKLISTS

A. See *Exhibit 31 2500-1, SWPPP Inspection Report Checklists.*

2.3 INCIDENT OF NONCOMPLIANCE (ION) FORMS as necessary

A. See *Exhibit 31 2500-2, Construction Site Storm Water Discharge Incidence of Noncompliance (ION) Report Forms.*

2.4 REPORT FORM FOR CHANGES IN SWPPP

A. *See Exhibit 31 2500-3, Report Form for Changes in SWPPP.*

PART 3 - EXECUTION

3.1 POST NOTICE OF PERMIT COVERAGE PRIOR TO SITE DISTURBANCE

3.2 SWPPP IMPLEMENTATION

A. The Contractor shall implement the SWPPP prepared by the PSC and maintain all erosion and sedimentation measures specified in the SWPPP. If full implementation of the SWPPP does not provide effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source and the SWPPP shall be updated within 7 days to reflect the additional measures. Use the Report Form for Changes in SWPPP.

B. The Contractor shall provide a signed copy of the SWPPP to the General contractor within 7 days of receiving a Notice to Proceed and may not begin any site disturbance until the following conditions are met:

1. The Contractor reviews, approves, and certifies the SWPPP.
2. The General contractor reviews, approves, and certifies the SWPPP.
3. The Contractor begins SWPPP implementation (i.e., perimeter sedimentation controls, erosion control materials on-site, etc.).

C. In the event that an inspection reveals a departure from the SWPPP requirements, the Contractor shall remedy the deficiency within 7 calendar days.

D. The project SWPPP and all attachments and drawings shall be turned over to the Owner upon completion of the project.

3.3 CONTRACTOR SITE INSPECTIONS

A. Inspection Protocol: The Contractor is responsible for conducting and documenting inspections of the construction site once every 7 calendar days AND within 24 hours after a rainfall event of 0.5 inch or greater or equivalent snowfall. At a minimum, the following areas shall be inspected, if applicable, according to the above schedule:

1. disturbed areas.

2. waste and hazardous material storage areas.
3. construction material storage.
4. fuel and oil storage.
5. concrete wash-out stations.
6. locations where vehicles/equipment enter and exit the site.
7. structural sediment and erosion control measures (i.e., sedimentation basin, silt fence, inlet protection, seeding, etc.).
8. on-site and adjacent stormwater inlets.
9. adjacent streets and gutters; and
10. soil stockpiles.

B. Inspection Documentation: Use the inspection checklist in *Exhibit 31 2500-1, SWPPP Inspection Report Checklists*. The Contractor shall retain completed inspection checklists with the SWPPP on-site. All inspection checklists shall be turned over to the General contractor upon completion of the project. The PSC or Contractor shall revise the SWPPP and erosion control site map as necessary within 7 calendar days following an inspection that indicates a change in or failure of design, construction, operation, or maintenance that has a significant effect on the potential for pollutants to be discharged into storm sewers or surface water. Use the Report Form for Changes in SWPPP.

C. Incidence of Noncompliance (ION): Use the ION report in *Exhibit 31 2500-2, Construction Site Storm Water Discharge Incidence of Noncompliance (ION) Report Forms*. Should the Contractor observe any violations of the SWPPP, including those not required by the Plan, the Contractor shall complete and submit an ION report to the General contractor within 5 calendar days

END OF SECTION 31 25 00

SECTION 32 92 00 – TURF AND GRASSES

1. GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide all labor, materials, equipment and services necessary or incidental to the completion of all work of this section as shown on the drawings, herein specified, or otherwise required.

a. Section Includes:

1) Lawn work as indicated on plans and as herein specified including, spreading of topsoil, finish grading, seeding, sodding, lawn restoration, and maintenance operations.
2) Lawn restoration work in existing lawn areas disturbed by construction must provide the quality of landscape equal to or better than that which existed before initiation of the Project.

B. Alternate Bid: None

1.2 RELATED WORK

1. Section 03 33 00 – Architectural Concrete

1.3 QUALITY ASSURANCE

A. General: Conduct preconstruction conference at the project site.

1. Review General Contractor's schedule and phasing for areas to receive work.
2. Review maintenance procedures for surrounding streets, walks, paving and site amenities.
3. Review procedures for work on public property.
4. Review plant locations and procedures for adjustment.
5. Provide temporary landscape protection and maintenance as needed to establish lawn to meet performance standards.

B. Quality:

1. Seed to comply with State and Federal laws with respect to inspection for plant diseases and insect infestation. Seed installation must be performed by personnel experienced in lawn installation procedures. Include submittal of Sod Contractor qualifications and proof of projects of similar scope and conditions.
2. Provide on-site, full-time qualified foreman, fluent in the English language representing Contractor performing the work during sod installations. Contractor performing work's Foreman must be accessible by phone during working hours.

C. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

D. Protect adjacent and adjoining areas from damage and overspray. Provide erosion-control measures to prevent erosion or displacement of soils due to discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

E. Ability to Deliver:

1. Investigate sources of supply and confirm they can supply materials in quantity, variety, and quality noted and specified before submitting bid.

a. If sod and materials are required to be inspected are located outside radius of 25 miles from Project site, Using Agency's direct and indirect cost including normal profit must be borne and paid by General Contractor.

2. Failure to take this precaution will not relieve responsibility for furnishing and installing these materials in accordance with Contract documents without additional expense to this contract.

F. Inspection:

1. Owner may inspect sod at source before cutting. Such inspection may be in addition to inspection at job site.

1.4 SUBMITTALS

A. Certificates of Conformance or Compliance

1. Nursery Certificates
2. Sod and Seed blend. Certification of Live Seed Mix.
3. Fertilizer: bag label with guaranteed analysis.
4. Certificates of Inspection as required by governmental authorities, including certificate stating plants are free of disease or hazardous insects as described by ASTM-Z-60.
5. Seeding method to be used with list of equipment.

B. Samples and Analyses:

1. Submit samples and certified analyses by approved laboratory for fertilizer, herbicide, insecticide, and limestone before delivery to project.

C. Manufacturer's analysis for standard products will be acceptable. Approval of samples will not be construed as project acceptance. Using Agency may have samples taken of materials delivered to site of work and analyzed for compliance with specifications. Planting Schedule: Indicating anticipated planting dates.

1. Qualification Data: For landscape installer. Include seeding method to be used with list of equipment, schedule indicating duration of various activities including site preparation, watering, seeding, fertilization, projected maintenance through establishment.

2. Furnish seed bag certification tags stating seed species, mix composition, documentation of PLS (pure live seed) testing, percentage by weight, and percentages of purity, germination and weed seed for each seed species.

D. Prior to end of maintenance period, furnish.

1. Two copies of written maintenance instructions and care of installed lawn areas.
2. Copies of submittals; place in Maintenance Binder.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Protect materials against weather-related damage or other injuries occurring during transit and job storage in such manner that their effectiveness will not be impaired.

B. Deliver fertilizer to site in unopened, original containers, each bearing name and address of manufacturer, name brand, or trademark, and manufacturer's guaranteed analysis. Do not use fertilizer which becomes caked or otherwise damaged. Do not expose fertilizer to weather prior to delivery on site and after delivery until used. Protect fertilizer and do not store in direct contact with ground.

C. Seed:

1. Ship, store, and handle seed to ensure protection from moisture, heat, rodents, and other conditions that jeopardize viability and cause germination before installation. Discard damaged seeds.
2. Sod: Protect and maintain during transit or storage onsite as necessary to ensure vigorous growth after placement.
3. Inform Architect 24 hours in advance of delivery of sod. Each shipment shall be accompanied by an invoice from vendor giving quantity and certifying that sod received meets requirements as contained in these specifications, together with analysis of seed from which sod was grown. Provide copy of invoice to Architect for delivery of sod. Remove from site and dispose of, in a legal manner, sod remaining on site unplaced after 48 hours, without extra cost to Using Agency. Remove from site and dispose of in legal manner any yellowing or otherwise discolored sod without extra cost to Using Agency.

1.6 PROTECTION

A. Protect existing property and improvements within this site and adjacent property.

B. Repair damage created by operations or those of subcontractors.

C. Provide temporary landscape protection as needed to protect turf areas from damage. Repair damage created by operations or those of subcontractors.

D. Only vehicles and equipment necessary to perform the Work may be permitted on lawn areas.

1.7 JOB CONDITIONS

A. Wherever landscape work is executed in conjunction with construction of other work, coordinate schedule that will permit execution of landscape work.

2. PRODUCTS

2.1 MATERIALS

A. Topsoil: Topsoil which has been stripped from on-site may be utilized as topsoil on the project. Additional topsoil required shall be furnished as specified below :

1. Fertile, friable, loamy surface soil without admixture of subsoil and free of stones, stumps, root, trash, debris, and other materials deleterious to plant growth.
2. The pH range shall be 6.5 to 7.8. Topsoil that does not meet this pH range will be amended by the addition of pH adjusters approved by the Using Agency.
3. Nutrient data as follows:

a.	Phosphorus	Min. 75 lb./Ac
b.	Potassium	Min. 300 lb./Ac
c.	Calcium	Min. 1,500 ppm
d.	Magnesium	Min. 100 ppm
e.	Cation Exchange Capacity	Min. 20 mea/100g
f.	Soluble Salt	Max. 1,000 ppm

4. Organic content shall not be less than 3 percent and not greater than 10 percent determined by loss through ignition.
5. Gradation:
   a. Sieve Designation Percent Passing:

1" screen	100
¼" screen	97-100
No. 10 US sieve	95-100
No. 140 US sieve	60-90

   b. Clay content determined by Bouyoucous Hydrometer Test shall range between 5 percent and 15 percent.

B. Soil Amendments:

1. Use prescribed amounts following soil tests indicating amendments required for seed or sod application. Notify Using Agency of amendments to be applied and rates.

C. Fertilizer:

1. Commercial fertilizer uniform in composition, free flowing, and suitable for application with distribution equipment.
2. Fertilizer shall be high phosphorous fertilizer of ratio 1:2:1 at a rate of 0.5 lbs. of nitrogen per 1000 sq.ft One-quarter of nitrogen must be in form of nitrates, one-quarter in form of ammonia salts, and one-half in form of organic nitrogen.
3. Available phosphoric acid must be derived from super-phosphate having minimum guaranteed analysis of 20% available phosphate or bone meal.
4. Potash must be in form of sulphate of potash.
5. Make up balance of fertilizer of nonharmful materials normally present in such product and free from dust, sticks, sand, stone or other harmful debris.
6. LimestoneASTM C 602, class T agricultural limestone containing a minimum 80% total carbonates, by weight. Limestone must be graded within following limits:

Sieve Size by Weight	% Passing
No. 8	99

No. 60 75

D. Aluminum Sulfate:

1. Commercial grade, unadulterated and delivered in containers with material and manufacturer, names and weight of contents.

E. Seed:

1. Seed mixture:

a. Seed blend to consist of Three premium turf type tall fescues with at least 3 drought tolerant varieties. Hydromulch seeding is acceptable. Seeding is preferred over sodding.

F. Sod:

1. Fresh cut, live nursery grown sod having well matted roots.
2. Root zone shall be of good, fertile, natural mineral soil free from stones and debris.
3. Peat sod will not be acceptable.
4. Use top quality, 12 to 18 month old turf type tall fescue blend sod consisting of a minimum of 3 varieties evenly blended. Fescue Blend mixture to be drought tolerant and containing no bent or quack grass or other noxious weed growth.

a. Source and submit sod species mix for Using Agency review and approval.

5. Sod Sections: Standard in size (18 in. wide by 6 ft in length) 3/4 in. thick, strong enough to support its own weight and retain its size and shape when suspended vertically from firm grasp on upper 10% of section.
6. Mowed at least twice with final mowing not more than 7 days before being cut andlifted.
7. Obtain sod from nurseries having growing conditions similar to job site.
8. Schedule sod cutting and delivery so that sod may be placed within 24 hours of cutting.

G. Erosion Control Netting: should only be used on slopes when necessary. Provide single net straw blanket constructed using biodegradable wheat straw distributed evenly between biodegradable jute netting with a functional longevity of up to 45 days to not interfere with mowing operations.

H. Straw mulch:

1. Straw mulch must be weed-free straw of wheat, rye, or oats evenly spread over the seed to retain moisture. Spread must be even and of a depth that will allow proper growth of seed. Hay is not permitted.

I. Water:

1. General Contractor to provide water if not available from Using Agency. Existing water supply from hose bibs at the project building may be used for all planting operations. Provide hose and equipment necessary for proper watering of plant material, including meters, back-flow preventers, and any other connections necessary to perform watering needs..

J. Wood Stakes:

1. Wood lath or similar material, minimum of 10-1/2 in. long, pointed at one end.

3. EXECUTION

3.1 INSPECTION

A. Confirm location of sod/seed areas on-site with Using Agency, and as shown on drawings. Confirm areas have received topsoil to a depth of 12 inches minimum beneath lawn areas, have existing soil to be reused, or areas require additional soil placement prior to fine grading and sodding.

B. Examine areas and conditions under which lawn work is to be performed and notify Using Agency in writing of conditions detrimental to proper and timely completion of work.

C. Do not begin site preparation until boulders, debris, and similar materials have been removed; depressions and ruts filled; and entire area has been shaped, trimmed and finished uniformly to lines, grades, and cross-sections shown on drawings. Final grade must be met to a tolerance of +/- .35 inches, and stones or clumps removed which are in excess of 1" maximum diameter. Remain grading stakes and lines for Using Agency examination and approval.

D. Do not proceed with work until unsatisfactory conditions have been corrected.

E. Verify location of underground utilities with appropriate sources. Contact J.U.L.I.E. at least 48 hours before commencing with construction. Repair damaged utilities.

3.2 SITE PREPARATION

A. Subgrade Preparation: Maintain rough grades in the areas to be topsoiled in a uniform condition so as to prevent future depressions. Prior to placing topsoil, repair disturbances to previously graded areas, remove surplus subgrade material associated with any landscape construction.

B. Scarify compacted subgrade areas to a depth of 18-inches. Grade subgrade away from and around buildings and towards drain structures and natural drainage locations, omitting closed depressions.

C. Till the 12" interface of subsoil and topsoil prior to adding topsoil. Contractor performing work must work the soil down to pea sized particles prior to lawn installation.

D. Topsoil depth for lawn areas must be a minimum of 12" after compaction and finish grading. Place topsoil in 6-inch lifts. Compact each lift to the extent necessary to prevent settlement. Use only topsoil meeting criteria provided. Topsoil must be spread, cultivated, lightly compacted to prevent future settlement, dragged, and graded to finish grade. Topsoil must not be used while in a frozen or muddy condition. The Contractor performing work must properly dispose of surplus materials.

E. Roll the area with an appropriately sized roller used in landscaping to firm the turf bed, prior to releveling to line and grade.

F. Finished Grades must slope to drain, be free of depressions or other irregularities after thorough settlement and compaction of soil and must be uniform in slope between grading controls and the

elevations indicated. Finished grade for seeded areas must meet existing grades at contract limits and must allow seed to be ½" below top of paved areas or as required for seeded areas. Final grade for sod areas must be reviewed by Using Agency prior to seeding. Retain line and grade stakes in place as part of review.

G. Cleanup:

1. Ongoing as part of work operations, keep work area clear of stones, stumps, roots, brush, wire, grade stakes, construction materials, and other objects which hinder planting, installation, and maintenance operations. Remove on a daily basis or temporarily store as directed by the General Contractor.
2. Keep adjacent paved areas clean.
3. Remove and dispose of soil or other materials that have been brought to surface off-site in legal manner.

H. Fertilizer Spreading:

1. Use mechanical spreader wherever practicable.
2. 20 lbs of active ingredients per 1,000 sq. ft.
3. Spread uniformly in two passes at right angles to each other.
4. Incorporate fertilizer into soil to depth of 2 in. by disking, harrowing or other methods which produce similar results.

3.3 SEEDING

A. Timing of work must be done between April 15 and May 15 or between August 15 and October 15 when temperatures are mild and establishment can be completed.

B. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at 45 degrees from one another. Do not use wet seed or seed that is moldy or otherwise damaged.

C. Sow seed at the rate recommended by the seed supplier.

D. Rake seed lightly into top 1/8 inch of topsoil, roll lightly for good soil contact.

E. Water with sprinklers or fine spray whenever soil surface is dry and until small puddles just begin to form. Open-ended hoses will not be accepted. Continue proper watering schedule until the Project is accepted. Protect seeded areas with slopes exceeding 1:6 with erosion-control fiber mesh installed and stapled according to manufacturer's written instructions.

F. Fertilize immediately prior to or immediately after seeding.

G. Maintain lawn for 30 days after installation, including watering, weeding, reseeding, mowing, trimming, and edging. Mow grass at regular intervals to maintain at a maximum height of 2.5 inches. Do not cut off more than 1/3 of the height at any one mowing.

1. Fill any depressions or settlement that occurs within 60 days following installation. Reseed bare spots which occur during the maintenance period.
2. Irrigate as required to supplement natural rainfall so that all lawn areas receive sufficient water for normal plant growth. Furnish all irrigation equipment needed for watering and be

responsible for securing adequate supply of water.

3. Refertilization must be repeated after the first two lawn mowings have been made. Use this same analysis commercial fertilizer as required by the soil test, applied at a rate of 0.5 pounds of actual nitrogen per 1,000 square feet.

H. Damage resulting from erosion, washouts, drought, diseases, or other causes must be repaired by filling with topsoil, tamping, fertilizing, and seeding by the General Contractor at no additional compensation. Seed operations must be repeated until a satisfactory uniform stand of grass is obtained as determined by the Using Agency.

3.4 SODDING

A. Planting Season for Sod Installation

1. March 15 to June 15.
2. August 15 to November 15.
3. Weather conditions within season shall govern actual planting periods. Work shall be done when temperatures are mild and establishment can be completed.
4. Seasons may be extended upon approval by Architect, however, such time extensions shall not change General Contractor's responsibility for establishing healthy appearing and vigorous growing turf.

B. Site Conditions:

1. Scarify and cultivate ground until surface is smooth, friable and of uniformly fine texture immediately before laying of sod.
2. Surface on which sod is to be laid shall be firm and free from depressions, to allow for positive drainage. During periods of high temperature, lightly moisten soil immediately prior to laying sod.

C. Laying Sod:

1. Handle and lay sod by hand.
2. Lay first row of sod in straight line. Place subsequent rows parallel to and tightly against each other.
3. Stagger lateral joints.
4. Do not stretch or pull to distort length as cut in field.
5. Butt joints together tightly in order to prevent voids which would cause air drying of sod roots, and weed growth.
6. On sloping areas (3:1 or greater), lay sod parallel to slope contours, stagger lateral joints, and secure sod with wood stakes at minimum of four stakes per sq yd and at least one per piece of sod.

    a. Drive stakes with flat side against slope and 10 in. into groundleaving approximately 1/2 in. above grade.
    b. Begin sod laying on sloping areas at toe of slope.

7. Water sod immediately after installation to prevent excessive drying during progress of work and whenever sod shows signs of drying or wilting.

8. Rework disturbed joints or depressions to conform to proper grade.

3.5 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walsk, or other paved areas.

B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.

C. Remove erosion-control measures after grass establishment period.

3.6 RESTORATION AND REPAIR

A. Repair existing lawns damaged by operations under the contract. Repair must include finish grading, seeding or sodding as required to match existing grade and lawn, and maintenance of repaired areas.

3.7 REQUIRED MAINTENANCE: Watering as needed to establish grass and maintain through Final Completion.

A. Mowing:

1. Maintain lawn for 30 days after installation including watering, weeding, resodding, mowing, trimming, and edging.
2. Mow after grass has reached an average height of 2.5 in.
3. Mow to maintain grass at height of 2 to 2-1/2 in.
4. Do not remove more than 1/3 of leaf blade by moving.

B. Fertilizer Spreading:

1. Fertilize immediately prior to or immediately after the sodding operation.
2. 15 lbs of active ingredients per 1,000 sq ft (650 lbs/acre).
3. Use mechanical spreader where practicable.
4. Spread uniformly in two passes at right angles to each other.

C. Reworking:

1. Reseed grass which are dead, or in unhealthy, unsightly or badly impaired condition using same type and source of sod/seed, and installed in accordance with procedures herein specified without extra cost to this contract.
2. Repeat as necessary until areas display acceptable stand of grass.
3. Damage resulting from erosion, washouts, drought, diseases or other causes shall be repaired by filling with topsoil, tamping, fertilizing, and sodding by the General Contractor at no additional compensation.

D. Protect turf areas as needed through Final Completion, to ensure quality and acceptance of project.

3.8 SUBSTANTIAL COMPLETION:

A. Substantial Completion will be granted upon conformance with following:

1. Turf must be reasonably free from weeds, diseases, or other visible imperfections.
2. Turf shall display uniform color, quality, and coverage, with even germination and growth covering 95% of any square yard, and a minimum of one plant per 2 square inches. The remaining 5% must be overseeded and germinated prior to Final Acceptance.
3. Reestablish turf in areas that do not have 95% ground cover of the established species. Repair rejected areas of turn within acceptable planting dates as directed by Using Agency's Representative.
4. Performed one mowing.
5. Performed fertilizing operation after mowing.
6. Turf not meeting requirements of Substantial Completion as notified in writing by the Using Agency's Representative, will be maintained and repaired as needed by the Contractor, at no additional cost to the contract.
7. The Using Agency has inspected and approved the work in writing.

3.9 FINAL COMPLETION

A. Final Completion shall occur within 30 days after Substantial Completion.

B. Prior to Final Completion, the Using Agency shall inspect the landscape work for acceptance. Final Completion will be granted upon conformance with the following:

1. All requirements of Substantial Completion have been fulfilled, including repairs, corrections, and mowing durations.
2. The General Contractor will be notified in writing by the Using Agency when Final Completion is met and work for this contract is completed.

3.10 WARRANTY:

A. Following written approval of Final Completion, Contractor must warranty that turf must be of vigorous growth, meet substantial completion requirements, and be free from disease throughout warranty period and at the end of one year plus one growing season.

B. During Warranty Period, General Contractor must provide watering and weed removal as needed, and provide turf coverage as specified in substantial completion requirements through the end of the Warranty Period to prevent plants from going into dormancy in periods of drought or low rain, or planting to become infested with weeds, as part of this work.

C. General Contractor to notify Using Agency in writing upon Project Acceptance of turf, so that the Using Agency knows to take over responsibility of turf mowing.

D. Exclusions:

1. General Contractor is not liable for replacement of plants damaged by deicing compounds, fertilizers, pesticides, or other materials not applied by the landscaper.
2. General Contractor is not liable for replacement of plants due to acts of vandalism or acts of God.

E. Notify in writing Using Agency to perform Warranty Inspection. Submit a Final Maintenance Report

for the final warranty month as approved by the Using Agency. The final report must include a summary of maintenance activities and recommendations for future maintenance, including: anticipated labor and material quantities, schedule for weeding, fertilization, irrigation, plant replacement, trash and debris removal, soil replacement on an annual basis.

F. At time of Warranty Inspection review summary of maintenance activities with Using Agency and future maintenance contractors. Following Warranty Inspection, the Using Agency will take over responsibility of removal of trash and weeds within turf areas, and general monitoring of turf areas.

END OF SECTION 32 92 00