



CHAMPAIGN COUNTY BOARD
FACILITIES COMMITTEE AGENDA
County of Champaign, Urbana, Illinois

Tuesday, February 3, 2026, at 6:30p.m.

Shields-Carter Meeting Room
Bennett Administrative Center
102 E. Main St., Urbana, IL 61801

Committee Members:

Jenny Lokshin – Chair	Stephanie Fortado
Jeff Wilson – Vice Chair	Elly Hanauer-Friedman
Dennise Arres	Bethany Vanichtheeranont
Ben Crane	Daniel Wiggs

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All meetings are at the Bennett Administrative Center – 102 E. Main Street in Urbana – unless otherwise noted. Champaign County will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities. Please contact Administrative Services, 217-384-3776, as soon as possible but no later than 48 hours before the scheduled meeting.



**CHAMPAIGN COUNTY BOARD
FACILITIES COMMITTEE AGENDA
County of Champaign, Urbana, Illinois**

8 **MINUTES – *Subject to Approval***

9 **DATE:** Tuesday, January 6, 2026
10 **TIME:** 6:33 p.m.
11 **PLACE:** Shields-Carter Meeting Room
12 Bennett Administrative Center
13 102 E. Main St., Urbana IL 61801

14 **Committee Members**

15 **Present:** Stephanie Fortado, Elly Hanauer-Friedman, Jenny Lokshin, Bethany Vanichtheeranont, Daniel
16 Wiggs, and Dennise Arres

17 **Absent:** Jeff Wilson and Ben Crane

18 **County Staff:** Michelle Jett (Acting Facilities Director), Steve Summers (County Executive), Jennifer Locke
19 (Board Chair), and Mary Ward (Recording Clerk)

20 **Others Present:** None

21 **Agenda**

22 I. Call to Order and Roll Call

23 Chair Lokshin called the meeting to order at 6:33 p.m. Roll call was taken and a quorum was
24 declared present.

25 II. Approval of Agenda/Addenda

26 **MOTION** by Ms. Vanichtheeranont to approve the agenda; seconded by Ms. Hanauer-Friedman.
27 Upon voice vote, the **MOTION CARRIED** unanimously.

28 III. Approval of Minutes –

- 29 A. December 2, 2025 – Regular Meeting
30 B. December 2, 2025 – Closed Session

31 **MOTION** by Mr. Wiggs to approve the December 2, 2025 Regular Meeting Minutes; seconded by
32 Ms. Vanichtheeranont. Upon voice vote, the **MOTION CARRIED** unanimously.

33 **MOTION** by Mr. Wiggs to approve the December 2, 2025 Closed Session Minutes; seconded by
34 Mx. Arres. Upon voice vote, the **MOTION CARRIED** unanimously.

35 IV. Public Input

36 There was no public input.

50 V. Communications

51
52 County Board Chair Locke spoke briefly on the Courthouse space issues. The report is back and
53 there will be a meeting next week with all the stakeholders.

54
55 VI. New Business

56
57 A. Discussion and Approval of ILEAS AHU RFP

58
59 Ms. Jett presented the ILEAS AHU RFP. It now includes all the standard County procurement
60 language. Representatives from GHR were present to answer any questions.

61
62 **MOTION** by Ms. Vanichtheeranont to approve the ILEAS AHU RFP; seconded by Mr. Wiggs.
63 Upon voice vote, the **MOTION CARRIED** unanimously.

- 64
65 B. Discussion and Approval of recommendation of award of contract pursuant to RFP 2025-014
66 for Mechanical, Electrical, Plumbing and Engineering Services
- 67 C. Discussion and Approval of recommendation of award of contract(s) pursuant to RFP 2025-
68 015 for Architectural Services

69
70 Ms. Jett presented the Memo stating the Facilities Department recommendations for both
71 the Engineering and Architectural Services contract. The recommendation for the
72 Engineering contract is GHR Engineers. The recommendations for the Architectural Services
73 contracts are Reifsteck Wakefield Fanning & Company, IGW Architecture and Bailey Edward.

74
75 Mx. Arres asked for clarification on what was going to the County Board for approval. It is
76 only the recommended firms.

77
78 Mr. Wiggs asked about what other companies applied. There was one other engineering firm,
79 Dewberry Engineers, that applied. The other architectural firms included 1919 Architects,
80 FutureFirm, Wold Architects and Senga Architects.

81
82 This will go to the full County Board.

83
84 D. Brookens Update

85
86 Ms. Jett just wanted to let the committee know that Brookens was officially on the market.
87 Although, she figured most everyone knew as it was in the news over the weekend.

88
89 E. ARPA Spending Update

90
91 Ms. Jett passed out a spreadsheet showing ARPA spending. Ms. Fortado asked if it showed
92 the actual amount spent or what was allocated. It shows the actual amount spent. Ms.
93 Fortado would like to see a column added that shows what is allocated.

98 F. Department Structure Update
99

100 Ms. Jett passed out the proposed draft memo of what will be sent to the Policy, Personnel
101 and Appointments committee. It proposed the elimination of the Facilities Director and
102 Building and Grounds Manager and creating three positions: Maintenance Manager,
103 Custodial and Grounds Manager and Facilities Project Manager. The proposed positions will
104 go to the JEC on January 8th. It will then be presented to the Committee of the Whole and
105 then to the County Board.

106
107 Ms. Hanauer-Friedman asked if it could include how this will impact the budget. Ms. Jett
108 replied that the Memo says we are not requesting additional funds. Ms. Hanauer-Friedman
109 asked if more emphasis could be put on that.

110
111 VII. Other Business

112
113 Ms. Fortado referred to item VI. B. and C and asked that when presented to the full Board if the
114 rate sheets, including those not selected, could be included in the packet. This would allow the
115 Board to see how prices compare. Ms. Lokshin said that she would like to see which ones are
116 local or have a local presence.

117
118 Ms. Fortado asked for an analysis of the PLAs we've had. She would like them presented either at
119 a Study Session or a future County Board meeting, once we get through the referendum issue.
120 Ms. Jett added that she would also like a re-write of the resolution so it's part of our policy and
121 would not need to come before the Board for a vote each time.

122
123 VIII. Presiding Officer's Report

124
125 There was no presiding officer's report.

126
127 A. Future Meeting – **February 3, 2026** @ 6:30 pm

128
129 Ms. Lokshin announced that the next meeting will be on February 3 at 6:30 p.m.

130
131 IX. Designation of Items to be Placed on the Consent Agenda

132
133 There were no items for the Consent Agenda.

134
135 X. Adjournment

136
137 Ms. Lokshin adjourned the meeting at 6:57 p.m.

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-XXX

February 9, 2026

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

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32 92 00 TURF AND GRASSES

SPECIFIER(S): Karla Smalley, Bailey Edward Design, Inc.
217.363.3375 Email: ksmalley@baileyledward.comJake Wolf, Engineering Resource Associates, Inc.
217.351.6268 Email: 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 building
- Select removal of sidewalks
- Removal of utilities and hazardous materials
- Infill of basement, grading, compaction, and establishment of grass
- Modifications at connection to existing facility 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 thirty (30) 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 thirty (30) 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# 2025-008

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

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.

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- 3 BIDDING DOCUMENTS
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- 7 PERFORMANCE BOND AND PAYMENT BOND
- 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

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
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.6 Specifications

Section	Title	Date	Pages
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.7 Addenda:

Number	Date	Pages
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.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
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Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.9 Other documents listed below:

(List here any additional documents that are intended to form part of the Proposed Contract Documents.)



General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Champaign County Select Demolition
ITB# 2025-008

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

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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.

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES

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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, 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
- 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 BIDDOCUMENT 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 _____
SIGNATURE _____

BY _____
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 (SINGLE-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 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

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

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

- 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 _____)
)
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.

RETURN WITH BID

- 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

Trade Title	Rg	Type	C	Base	Overtime								Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
					Foreman	M-F	Sa	Su	Hol	H/W	Pension	Vac				
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

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

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.

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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
- Complete demolition of building
- Select removal of sidewalks
- Removal of utilities and hazardous materials
- Infill of basement, grading, compaction, and establishment of grass
- Modifications at connection to existing facility including construction of area well

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.
 - 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 completely, infill foundation 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.

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 will not use the facility during construction. Portions of the parking lot may be used during construction. Some limited closure or barricades are expected for portions of the work. Contractor is responsible for coordinating all closures 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. 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.
 - 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 (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 from 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 F&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 Contract 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 _____

(_____) _____
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:

Written Amount _____ Dollars (\$ _____)
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

For Use by Owner:

- Approved
 Not Approved
 Approved as Noted

By: _____

By: _____

Date: _____

Date: _____

END OF FORM

SECTION 01 66 00 - STORAGE AND PROTECTION

1. GENERAL

A. REQUIREMENTS INCLUDE

1. General Contractor 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 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 Contractor, remove all waste, debris, rubbish, tools, equipment, machinery and surplus materials. Clean all sight exposed surfaces; leave work clean and ready for occupancy.

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 workmen 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.

C. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed surfaces, and of concealed spaces to ensure performance.

D. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.

E. 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.

F. Contractor to replace air handling filters at completion of cleaning and just prior to Owner occupancy.

G. 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.
- B. General Contractor is responsible for providing the penetrations, and patching required to complete their work in the Contractor'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. 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, 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 33 00 - ARCHITECTURAL CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes cast-in-place architectural 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.

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: 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] [Type II] [Type I/II] [Type III], [gray] [white].
 - 2. Fly Ash: ASTM C 618, [Class C] [Class F].
 - 3. Slag Cement: ASTM C 989/C 989M, Grade 100 or Grade 120.
 - 4. Silica Fume: ASTM C 1240 amorphous silica.
 - 5. Blended Hydraulic Cement: ASTM C 595/C 595M, [Type IS, portland blast-furnace slag] [Type IP, portland-pozzolan] [Type IL, portland-limestone] cement.
- C. Normal-Weight Aggregates: ASTM C 33/C 33M, [Class 5S] [Class 5M] [Class 1N] coarse aggregate or better, graded. Provide aggregates from single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch (19 mm)
 - 2. Gradation: [Uniformly] graded.
- D. Normal-Weight Fine Aggregate: [ASTM C 33/C 33M] [or] [ASTM C 144], manufactured or natural sand, from same source for entire Project.
- E. Air-Entraining Admixture: ASTM C 260/C 260M.
- F. 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.
- G. 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. [Use fly ash, pozzolan, slag cement, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.]
- C. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.
- D. Concrete Mixtures:
 1. Compressive Strength (28 Days): [4500 psi (31 MPa)] [4000 psi (27.6 MPa)]
 2. Maximum W/C Ratio: 0.46.
 3. Slump Limit: [3 inches (75 mm)] [4 inches (100 mm)]
 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. In addition to ACI 303.1 limits on form-facing panel deflection, limit cast-in-place architectural concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
 1. Class A, 1/8 inch (3 mm)
- D. Construct forms to result in cast-in-place architectural concrete that complies with ACI 117 (ASI 117M).
- E. Chamfer exterior corners and edges of cast-in-place architectural concrete.
- F. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- G. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- H. 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. General: Comply with Section 033000 "Cast-in-Place Concrete" for fabricating and installing steel reinforcement. 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.
- 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 FIELD QUALITY CONTROL

- A. General: Comply with field quality-control requirements in Section 033000 "Cast-in-Place Concrete."

3.9 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 03 35 11 - CONCRETE FLOOR 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: Janitor Closets.

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 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 paring and a cove at bottom.
- C. Damp-cure paring for at least 24 hours and protect paring 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 05 12 00 - STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Structural steel.
 - 2. Grout.

1.2 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project Site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
- C. Shop Drawings: Show fabrication of structural-steel components.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For [Installer] [fabricator] [testing agency].
- B. Welding certificates.
- C. Mill test reports for structural steel, including chemical and physical properties.
- D. Source quality-control reports.
- E. Field quality-control[and special inspection] reports.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD[or is accredited by the IAS Fabricator Inspection Program for Structural Steel (AC 172)].
- B. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category CSE.
- C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- D. Comply with applicable provisions of the following specifications and documents:
 1. AISC 303.
 2. AISC 360.
 3. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Connections: Provide details of simple shear connections required by the Contract Documents to be selected or completed by structural-steel fabricator to withstand loads indicated and comply with other information and restrictions indicated.
 1. Select and complete connections using [schematic details indicated] [and] [AISC 360] <Insert source>.
 2. Use [Load and Resistance Factor Design; data are given at factored-load level] [Allowable Stress Design; data are given at service-load level].
- B. Moment Connections: [Type PR, partially] [Type FR, fully] restrained.
- C. Construction: [Moment frame] [Braced frame] [Shear wall system] [Combined system of moment frame and braced frame] [Combined system of moment frame and shear walls] [Combined system of braced frame and shear walls] [Combined system of moment frame, braced frame, and shear walls].

2.2 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes: [ASTM A 992/A 992M] [ASTM A 572/A 572M, Grade 50 (345)].
- B. Channels, Angles[, M] [, S]-Shapes: [ASTM A 36/A 36M] [ASTM A 572/A 572M, Grade 50 (345)].
- C. Plate and Bar: [ASTM A 36/A 36M] [ASTM A 572/A 572M, Grade 50 (345)].
- D. Cold-Formed Hollow Structural Sections: ASTM A 500/A 500M, [Grade B] [Grade C], structural tubing.
- E. Steel Pipe: ASTM A 53/A 53M, Type E or Type S, Grade B.

F. Welding Electrodes: Comply with AWS requirements.

2.3 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C, (ASTM A 563M, Class 8S) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M), Type 1, hardened carbon-steel washers; all with plain finish.
 - 1. Direct-Tension Indicators: ASTM F 959, Type 325 (ASTM F 959M, Type 8.8), compressible-washer type with plain finish.
- B. High-Strength Bolts, Nuts, and Washers: ASTM A 490 (ASTM A 490M), Type 1, heavy-hex steel structural bolts[or tension-control, bolt-nut-washer assemblies with splined ends]; ASTM A 563, Grade DH, (ASTM A 563M, Class 10S) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M), Type 1, hardened carbon-steel washers with plain finish.
 - 1. Direct-Tension Indicators: ASTM F 959, Type 490 (ASTM F 959M, Type 10.9), compressible-washer type with plain finish.
- C. Zinc-Coated High-Strength Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade DH (ASTM A 563M, Class 10S) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M), Type 1, hardened carbon-steel washers.
 - 1. Finish: [Hot-dip zinc coating] [Mechanically deposited zinc coating] [Hot-dip or mechanically deposited zinc coating].
 - 2. Direct-Tension Indicators: ASTM F 959, Type 325 (ASTM F 959M, Type 8.8), compressible-washer type with [mechanically deposited zinc coating] [mechanically deposited zinc coating, baked epoxy-coated] finish.
- D. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, [heavy-hex] [round] head assemblies consisting of steel structural bolts with splined ends, heavy-hex carbon-steel nuts, and hardened carbon-steel washers.
 - 1. Finish: [Plain] [Mechanically deposited zinc coating].
- E. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- F. Unheaded Anchor Rods: [ASTM F 1554, Grade 36] [ASTM F 1554, Grade 55, weldable].
 - 1. Configuration: [Straight] [Hooked].
 - 2. Finish: [Plain] [Hot-dip zinc coating, ASTM A 153/A 153M, Class C] [Mechanically deposited zinc coating, ASTM B 695, Class 50].
- G. Headed Anchor Rods: [ASTM F 1554, Grade 36] [ASTM F 1554, Grade 55, weldable], straight.
 - 1. Finish: [Plain] [Hot-dip zinc coating, ASTM A 153/A 153M, Class C] [Mechanically deposited zinc coating, ASTM B 695, Class 50].
- H. Threaded Rods: [ASTM A 36/A 36M] [ASTM A 193/A 193M, Grade B7].

1. Finish: [Plain] [Hot-dip zinc coating, ASTM A 153/A 153M, Class C] [Mechanically deposited zinc coating, ASTM B 695, Class 50].
 - I. [Clevises] [and] [Turnbuckles]: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1035.

2.4 PRIMER

- A. Primer: Comply with [Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."] [Section 099600 "High-Performance Coatings."] [Section 099113 "Exterior Painting," Section 099123 "Interior Painting," and Section 099600 "High-Performance Coatings."]
- B. Primer: SSPC-Paint 25, [Type I] [Type II], zinc oxide, alkyd, linseed oil primer.
- C. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.

2.5 GROUT

- A. Metallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.
- B. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.6 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.
- B. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.

2.7 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 1. Joint Type: [Snug tightened] [Pretensioned] [Slip critical].
- B. Weld Connections: Comply with AWS D1.1/D1.1M[and AWS D1.8/D1.8M] for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

2.8 SHOP PRIMING

- A. Shop prime steel surfaces except the following:

1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches (50 mm).
 2. Surfaces to be field welded.
 3. Surfaces of high-strength bolted, slip-critical connections.
 4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
 5. Galvanized surfaces.
 6. Surfaces enclosed in interior construction.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
1. SSPC-SP 2, "Hand Tool Cleaning."
 2. SSPC-SP 3, "Power Tool Cleaning."
 3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

2.9 SOURCE QUALITY CONTROL

- A. Testing Agency: [Owner will engage] [Engage] a qualified testing agency to perform shop tests and inspections.
1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Bolted Connections: Inspect[and test] shop-bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Visually inspect shop-welded connections according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
1. Liquid Penetrant Inspection: ASTM E 165.
 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 3. Ultrasonic Inspection: ASTM E 164.
 4. Radiographic Inspection: ASTM E 94.
- D. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Baseplates [Bearing Plates] [and] [Leveling Plates]: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. [Snug-tighten] [Pretension] anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. [Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.]
- C. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

3.3 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: [Snug tightened] [Pretensioned] [Slip critical].
- B. Weld Connections: Comply with AWS D1.1/D1.1M[and AWS D1.8/D1.8M] for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
 - 2. Remove backing bars or runoff tabs[where indicated], back gouge, and grind steel smooth.
 - 3. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," for mill material.

3.4 FIELD QUALITY CONTROL

- A. Special Inspections: [Owner will engage] [Engage] a qualified special inspector to perform the following special inspections:
 - 1. Verify structural-steel materials and inspect steel frame joint details.
 - 2. Verify weld materials and inspect welds.
 - 3. Verify connection materials and inspect high-strength bolted connections.
- B. Testing Agency: [Owner will engage] [Engage] a qualified testing agency to perform tests and inspections.
- C. Bolted Connections: Inspect[and test] bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

D. Welded Connections: Visually inspect field welds according to AWS D1.1/D1.1M.

1. In addition to visual inspection, test and inspect field welds according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.

END OF SECTION 05 12 00

SECTION 05 31 00 - STEEL DECKING**PART 1 - GENERAL****1.1 SUMMARY****A. Section Includes:**

1. Roof deck.
2. Composite floor deck.
3. Noncomposite form deck.

1.2 ACTION SUBMITTALS**A. Product Data:** For each type of deck, accessory, and product indicated.**B. Sustainable Design Submittals:****C. Shop Drawings:**

1. Include layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.

1.3 INFORMATIONAL SUBMITTALS**A. Welding certificates.****B. Product Certificates:** For each type of steel deck.**C. Evaluation reports.****D. Field quality-control reports.****1.4 QUALITY ASSURANCE****A. Testing Agency Qualifications:** Qualified according to ASTM E 329 for testing indicated.**B. Welding Qualifications:** Qualify procedures and personnel according to AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."

2.2 ROOF DECK

- A. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 31, and with the following:

1. Prime-Painted Steel Sheet: ASTM A 1008/A 1008M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)] minimum, shop primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: [Manufacturer's standard] [Gray] [White] [Gray top surface with white underside].
2. Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)], [G60 (Z180)] [G90 (Z275)] zinc coating.
3. Galvanized and Shop-Primed Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)], G60 (Z180) zinc coating; cleaned, pretreated, and primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: [Manufacturer's standard] [Gray] [White] [Gray top surface with white underside].
4. Deck Profile: [As indicated] [Type NR, narrow rib] [Type IR, intermediate rib] [Type WR, wide rib] [Type 3DR, deep rib] [Long span].
5. Profile Depth: [As indicated] [1-1/2 inches (38 mm)] [2 inches (51 mm)] [3 inches (76 mm)] [4-1/2 inches (114 mm)] [6 inches (152 mm)] [7-1/2 inches (190 mm)].
6. Design Uncoated-Steel Thickness: [As indicated] [0.0295 inch (0.75 mm)] [0.0358 inch (0.91 mm)] [0.0474 inch (1.20 mm)] [0.0598 inch (1.52 mm)] [0.0747 inch (1.90 mm)].

2.3 COMPOSITE FLOOR DECK

- A. Composite Floor Deck: Fabricate panels, with integrally embossed or raised pattern ribs and interlocking side laps, to comply with "SDI Specifications and Commentary for Composite Steel Floor Deck," in SDI Publication No. 31, with the minimum section properties indicated, and with the following:

1. Prime-Painted Steel Sheet: ASTM A 1008/A 1008M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)] minimum, with top surface phosphatized and unpainted and underside surface shop primed with manufacturers' standard [gray] [or] [white] baked-on, rust-inhibitive primer.
2. Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 (230), [G30 (Z90)] [G60 (Z180)] [G90 (Z275)] zinc coating.
3. Galvanized and Shop-Primed Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 (230), [G30 (Z90)] [G60 (Z180)] zinc coating; with unpainted top surface and cleaned and pretreated bottom surface primed with manufacturer's standard [gray] [white] baked-on, rust-inhibitive primer.

4. Profile Depth: [1-1/2 inches (38 mm)] [2 inches (51 mm)] [3 inches (76 mm)] [As indicated].
5. Design Uncoated-Steel Thickness: [0.0295 inch (0.75 mm)] [0.0358 inch (0.91 mm)] [0.0474 inch (1.20 mm)] [0.0598 inch (1.52 mm)].

2.4 NONCOMPOSITE FORM DECK

- A. Noncomposite Form Deck: Fabricate ribbed-steel sheet noncomposite form-deck panels to comply with "SDI Specifications and Commentary for Noncomposite Steel Form Deck," in SDI Publication No. 31, with the minimum section properties indicated, and with the following:
1. Uncoated Steel Sheet: ASTM A 1008/A 1008M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)] minimum.
 2. Prime-Painted Steel Sheet: ASTM A 1008/A 1008M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)] minimum, with [top and] underside surface shop primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: [Manufacturer's standard] [Gray] [White] [Gray top surface with white underside].
 3. Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), [Grade 33 (230)] [Grade 40 (275)] [Grade 80 (550)], [G30 (Z90)] [G60 (Z180)] [G90 (Z275)] zinc coating.
 4. Galvanized and Shop-Primed Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), [Grade 33 (230)] [Grade 80 (550)], G60 (Z180) zinc coating; cleaned, pretreated, and primed with manufacturer's standard baked-on, rust-inhibitive primer.
 - a. Color: [Manufacturer's standard] [Gray] [White] [Gray top surface with white underside].
 5. Profile Depth: [9/16 inch (14 mm)] [15/16 inch (24 mm)] [1-5/16 inches (33 mm)] [1-1/2 inches (38 mm)].
 6. Design Uncoated-Steel Thickness: [0.0149 inch (0.38 mm)] [0.0179 inch (0.45 mm)] [0.0239 inch (0.61 mm)] [0.0295 inch (0.75 mm)] [0.0358 inch (0.91 mm)] [0.0474 inch (1.20 mm)] [0.0598 inch (1.52 mm)].

2.5 ACCESSORIES

- A. General: Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.
- B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws.
- C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 (4.8-mm) minimum diameter.
- D. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.
- E. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi (230 MPa), not less than 0.0359-inch (0.91-mm) design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.

- F. Flat Sump Plates: Single-piece steel sheet, 0.0747 inch (1.90 mm) thick, of same material and finish as deck. For drains, cut holes in the field.
- G. Galvanizing Repair Paint: [ASTM A 780/A 780M] [SSPC-Paint 20 or MIL-P-21035B, with dry film containing a minimum of 94 percent zinc dust by weight].
- H. Repair Paint: Manufacturer's standard rust-inhibitive primer of same color as primer.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 31, manufacturer's written instructions, and requirements in this Section.
- B. Place deck panels flat and square and fasten to supporting frame without warp or deflection.
- C. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.
- D. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work.
- E. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.
- F. Mechanical fasteners may be used in lieu of welding to fasten deck. Locate mechanical fasteners and install according to deck manufacturer's written instructions.
- G. Roof Sump Pans and Sump Plates: Install over openings provided in roof deck and [weld] [mechanically fasten] flanges to top of deck. Space [welds] [mechanical fasteners] not more than 12 inches (305 mm) apart with at least one [weld] [fastener] at each corner.
 - 1. Install reinforcing channels or zees in ribs to span between supports and [weld] [or] [mechanically fasten].
- H. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. [Weld] [or] [mechanically fasten] to substrate to provide a complete deck installation.
 - 1. Weld cover plates at changes in direction of roof-deck panels unless otherwise indicated.
- I. Pour Stops and Girder Fillers: Weld steel sheet pour stops and girder fillers to supporting structure according to SDI recommendations unless otherwise indicated.
- J. Floor-Deck Closures: Weld steel sheet column closures, cell closures, and Z-closures to deck, according to SDI recommendations, to provide tight-fitting closures at open ends of ribs and sides of deck.

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: [Owner will engage] [Engage] a qualified testing agency to perform tests and inspections.
- B. Field welds will be subject to inspection.
- C. Prepare test and inspection reports.

3.3 PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780/A 780M and manufacturer's written instructions.
- B. Repair Painting: Wire brush and clean rust spots, welds, and abraded areas on [both surfaces] [top surface] of prime-painted deck immediately after installation, and apply repair paint.

END OF SECTION 05 31 00

SECTION 05 52 13 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Steel [pipe] [and] [tube] railings.
2. Aluminum [pipe] [and] [tube] railings.
3. Stainless-steel [pipe] [and] [tube] railings.

B. Related Requirements:

1. Section 055112 "Metal Pan Stairs" for steel tube railings associated with metal pan stairs.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Manufacturer's product lines of mechanically connected railings.
2. Railing brackets.
3. Grout, anchoring cement, and paint products.

B. Sustainable Design Submittals:

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

D. Samples: For each type of exposed finish required.

E. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Steel Pipe and Tube Railings:

B. Aluminum Pipe and Tube Railings:

C. Stainless-Steel Pipe and Tube Railings:

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design railings, including attachment to building construction.
- B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
 - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 2. Infill of Guards:
 - a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
 - b. Infill load and other loads need not be assumed to act concurrently.

2.3 METALS, GENERAL

- A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.
 - 1. Provide type of bracket with [flange tapped for concealed anchorage to threaded hanger bolt] [predrilled hole for exposed bolt anchorage] and that provides 1-1/2-inch (38-mm) clearance from inside face of handrail to finished wall surface.

2.4 STEEL AND IRON

- A. Tubing: [ASTM A 500 (cold formed)] [or] [ASTM A 513].
- B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
 - 1. Provide galvanized finish for exterior installations and where indicated.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.
- E. Expanded Metal: ASTM F 1267, [Type I (expanded)] [Type II (expanded and flattened)], Class 1 (uncoated).
 - 1. Style Designation: [3/4 number 13] [1-1/2 number 10] <Insert designation>.

- F. Perforated Metal: Cold-rolled steel sheet, ASTM A 1008/A 1008M, or hot-rolled steel sheet, ASTM A 1011/A 1011M, commercial steel Type B, [0.060 inch (1.52 mm)] <Insert dimension> thick, [with 1/4-inch (6.4-mm) holes 3/8 inch (9.5 mm) o.c. in staggered rows] <Insert description>.
 - 1. Basis-of-Design Product: Provide product with perforations matching [product indicated on Drawings] <Insert manufacturer's name; product name or designation>.
- G. Woven-Wire Mesh: Intermediate-crimp, [diamond] [square] pattern, 2-inch (50-mm) woven-wire mesh, made from 0.134-inch- (3.42-mm-) diameter wire complying with ASTM A 510 (ASTM A 510M).

2.5 ALUMINUM

- A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of alloy and temper designated below for each aluminum form required.
- B. Extruded [Bars] [and] [Tubing]: ASTM B 221 (ASTM B 221M), Alloy 6063-T5/T52.
- C. Extruded Structural [Pipe] [and] [Round Tubing]: ASTM B 429/B 429M, Alloy 6063-T6.
- D. Drawn Seamless Tubing: ASTM B 210 (ASTM B 210M), Alloy 6063-T832.
- E. Plate and Sheet: ASTM B 209 (ASTM B 209M), Alloy 6061-T6.
- F. Die and Hand Forgings: ASTM B 247 (ASTM B 247M), Alloy 6061-T6.
- G. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.
- H. Perforated Metal: Aluminum sheet, ASTM B 209 (ASTM B 209M), Alloy 6061-T6, [0.063 inch (1.60 mm)] <Insert dimension> thick, [with 1/4-inch (6.4-mm) holes 3/8 inch (9.5 mm) o.c. in staggered rows] <Insert description>.
 - 1. Basis-of-Design Product: Provide product with perforations matching [product indicated on Drawings] <Insert manufacturer's name; product name or designation>.
- I. Woven-Wire Mesh: Intermediate-crimp, [diamond] [square] pattern, 2-inch (50-mm) woven-wire mesh, made from 0.162-inch- (4.1-mm-) diameter wire complying with ASTM B 211 (ASTM B 211M), Alloy 6061-T94.

2.6 STAINLESS STEEL

- A. Tubing: ASTM A 554, [Grade MT 304] [Grade MT 316L].
- B. Pipe: ASTM A 312/A 312M, [Grade TP 304] [Grade TP 316L].
- C. Castings: ASTM A 743/A 743M, [Grade CF 8 or CF 20] [Grade CF 8M or CF 3M].
- D. Plate and Sheet: ASTM A 240/A 240M or ASTM A 666, [Type 304] [Type 316L].

- E. Expanded Metal: ASTM F 1267, [Type I (expanded)] [Type II (expanded and flattened)], Class 3 (corrosion-resistant steel), made from stainless-steel sheet, ASTM A 240/A 240M or ASTM A 666, [Type 304] [Type 316].
 - 1. Style Designation: [3/4 number 13] [1-1/2 number 10] <Insert designation>.
- F. Perforated Metal: Stainless-steel sheet, ASTM A 240/A 240M or ASTM A 666, [Type 304] [Type 316L], [0.062 inch (1.59 mm)] <Insert dimension> thick, [with 1/4-inch (6.4-mm) holes 3/8 inch (9.5 mm) o.c. in staggered rows] <Insert description>.
 - 1. Basis-of-Design Product: Provide product with perforations matching [product indicated on Drawings] <Insert manufacturer's name; product name or designation>.

2.7 FASTENERS

- A. General: Provide the following:
 - 1. Ungalvanized-Steel Railings: Plated steel fasteners complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5 for zinc coating.
 - 2. Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/A 153M or ASTM F 2329 for zinc coating.
 - 3. Aluminum Railings: [Type 304] [Type 316] stainless-steel fasteners.
 - 4. Stainless-Steel Railings: [Type 304] [Type 316] stainless-steel fasteners.
- B. Post-Installed Anchors: [Torque-controlled expansion anchors] [or] [chemical anchors] capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing according to ASTM E 488/E 488M, conducted by a qualified independent testing agency.
 - 1. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.
 - 2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy [Group 1 (A1)] [Group 2 (A4)] stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

2.8 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- D. Shop Primers: Provide primers that comply with [Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."] [Section 099600 "High-Performance Coatings."] [Section 099113 "Exterior Painting," Section 099123 "Interior Painting," and Section 099600 "High-Performance Coatings."]
- E. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

- F. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.
- G. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
- H. Epoxy Intermediate Coat: Complying with MPI #77 and compatible with primer and topcoat.
- I. Polyurethane Topcoat: Complying with MPI #72 and compatible with undercoat.
- J. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.
- K. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.9 FABRICATION

- A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- B. Form work true to line and level with accurate angles and surfaces.
- C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- D. Welded Connections for Aluminum Pipe: Fabricate railings to interconnect members with concealed internal welds that eliminate surface grinding, using manufacturer's standard system of sleeve and socket fittings.
- E. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
- F. Form changes in direction [by bending] [or] [by inserting prefabricated elbow fittings].
- G. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- H. Close exposed ends of railing members with prefabricated end fittings.
- I. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated.

- J. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
 - 1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.
- K. Expanded-Metal Infill Panels: Fabricate infill panels from expanded metal made from same metal as railings in which they are installed.
 - 1. Orient expanded metal with long dimension of diamonds [parallel to top rail] [perpendicular to top rail] [horizontal] [vertical] [as indicated on Drawings].
- L. Perforated-Metal Infill Panels: Fabricate infill panels from perforated metal made from [steel] [galvanized steel] [aluminum] [stainless steel] [same metal as railings in which they are installed].
 - 1. Orient perforated metal with pattern [parallel to top rail] [perpendicular to top rail] [horizontal] [vertical] [as indicated on Drawings].
- M. Woven-Wire Mesh Infill Panels: Fabricate infill panels from woven-wire mesh crimped into 1-by-1/2-by-1/8-inch (25-by-13-by-3-mm) metal channel frames. Make wire mesh and frames from same metal as railings in which they are installed.
 - 1. Orient wire mesh with [diamonds vertical] [diamonds perpendicular to top rail] [wires perpendicular and parallel to top rail] [wires horizontal and vertical] [as indicated on Drawings].

2.10 STEEL AND IRON FINISHES

- A. Galvanized Railings:
 - 1. Hot-dip galvanize [exterior] [indicated] steel railings, including hardware, after fabrication.
 - 2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
 - 3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.
- B. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.
- C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with [SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."] [SSPC-SP 3, "Power Tool Cleaning."]
- D. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.
 - 1. Do not apply primer to galvanized surfaces.
- E. High-Performance Coating: Apply epoxy intermediate and polyurethane topcoats to prime-coated surfaces. Comply with coating manufacturer's written instructions and with requirements in SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," for shop painting. Apply at spreading rates recommended by coating manufacturer.

1. Color: [As indicated by manufacturer's designations] [Match Architect's sample] [As selected by Architect from manufacturer's full range].

2.11 ALUMINUM FINISHES

- A. 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 unacceptable. 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.
- B. Mill Finish: AA-M12, nonspecular as fabricated.
- C. Clear Anodic Finish: AAMA 611, [AA-M12C22A41] [AA-M12C22A31].
- D. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm). Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
 1. Color and Gloss: [As indicated by manufacturer's designations] [Match Architect's sample] [As selected by Architect from manufacturer's full range] <Insert color and gloss>.

2.12 STAINLESS-STEEL FINISHES

- A. Stainless Steel Tubing Finishes:
 1. 180-Grit Polished Finish: Uniform, directionally textured finish.
 2. 320-Grit Polished Finish: Oil-ground, uniform, fine, directionally textured finish.
 3. Polished and Buffed Finish: 320-grit finish followed by buffing [to a high luster finish] [to a mirror-like finish] [to match Architect's sample].
- B. Stainless Steel Sheet and Plate Finishes:
 1. Directional Satin Finish: ASTM A 489/A 480, No. 4.
 2. High Luster Finish: ASTM A 480/A 480M, No. 7.
 3. Mirror Finish: ASTM A 480/A 480M, No. 8.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).

3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (6 mm in 3.5 m).
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
 1. Coat, with a heavy coat of bituminous paint, concealed surfaces of aluminum that are in contact with grout, concrete, masonry, wood, or dissimilar metals.

3.2 ANCHORING POSTS

- A. Use metal sleeves preset and anchored into concrete for installing posts. After posts are inserted into sleeves, fill annular space between post and sleeve with [nonshrink, nonmetallic grout] [or] [anchoring cement], mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Form or core-drill holes not less than 5 inches (125 mm) deep and 3/4 inch (20 mm) larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with [nonshrink, nonmetallic grout] [or] [anchoring cement], mixed and placed to comply with anchoring material manufacturer's written instructions.
- C. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members.

3.3 ATTACHING RAILINGS

- A. Attach railings to wall with wall brackets[, except where end flanges are used]. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- B. Secure wall brackets and railing end flanges to building construction as follows:
 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
 2. For hollow masonry anchorage, use toggle bolts.
 3. For wood stud partitions, use hanger or lag bolts set into studs or wood backing between studs. Coordinate with carpentry work to locate backing members.
 4. For steel-framed partitions, use hanger or lag bolts set into [fire-retardant-treated]wood backing between studs. Coordinate with stud installation to locate backing members.
 5. For steel-framed partitions, use self-tapping screws fastened to steel framing or to concealed steel reinforcements.
 6. For steel-framed partitions, use toggle bolts installed through flanges of steel framing or through concealed steel reinforcements.

3.4 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shop-painted surfaces.

- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.

END OF SECTION 05 52 13

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, DCX.
- 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. Comply with recommendations of the American Plywood Association (APA) for the installation of plywood.

END OF SECTION 06 10 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 SUMMARY

- A. Section includes:

1. Interior standard steel doors and frames.
2. Exterior standard steel doors and frames.
3. Interior custom hollow-metal doors and frames.
4. Exterior custom hollow-metal doors and frames.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
- C. Shop Drawings: Include the following:
 1. Elevations of each door type.
 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
- D. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.4 INFORMATIONAL SUBMITTALS

- A. Product test reports.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings[and temperature-rise limits] indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
 - 1. Smoke- and Draft-Control Assemblies: Provide assemblies with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
 - 2. Temperature-Rise Limit: [Where indicated] [At vertical exit enclosures and exit passageways], provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
- B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.
- C. Thermally Rated Door Assemblies: Provide door assemblies with U-factor of not more than [0.50 deg Btu/F x h x sq. ft. (2.84 W/K x sq. m)] [0.40 deg Btu/F x h x sq. ft. (2.27 W/K x sq. m)] [0.38 deg Btu/F x h x sq. ft. (2.16 W/K x sq. m)] <Insert U-factor> when tested according to ASTM C 518.

2.3 INTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Standard-Duty Doors and Frames: SDI A250.8, Level 1; SDI A250.4, Level C. [At locations indicated in the Door and Frame Schedule] <Insert locations>.
 - 1. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: [1-3/4 inches (44.5 mm)] [1-3/8 inches (34.9 mm)].
 - c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.032 inch (0.8 mm).
 - d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless].
 - e. Core: [Manufacturer's standard] [Kraft-paper honeycomb] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
 - f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated]doors.
 - 2. Frames:
 - a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.042 inch (1.0 mm).
 - b. [Sidelite] [and] [Transom] Frames: Fabricated from same thickness material as adjacent door frame.
 - c. Construction: [Knocked down] [Slip-on drywall] [Face welded] [Full profile welded].
- C. Heavy-Duty Doors and Frames: SDI A250.8, Level 2; SDI A250.4, Level B. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.042 inch (1.0 mm).
- d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless].
- e. Core: [Manufacturer's standard] [Kraft-paper honeycomb] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
- f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated] doors.

2. Frames:

- a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.053 inch (1.3 mm).
- b. [Sidelite] [and] [Transom] Frames: Fabricated from same thickness material as adjacent door frame.
- c. Construction: [Knocked down] [Slip-on drywall] [Face welded] [Full profile welded].

D. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3; SDI A250.4, Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.053 inch (1.3 mm).
- d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless] [Model 3, Stile and Rail].
- e. Core: [Manufacturer's standard] [Kraft-paper honeycomb] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
- f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated] doors.

2. Frames:

- a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.053 inch (1.3 mm).
- b. [Sidelite] [and] [Transom] Frames: Fabricated from same thickness material as adjacent door frame.
- c. Construction: [Knocked down] [Slip-on drywall] [Face welded] [Full profile welded].

E. Maximum-Duty Doors and Frames: SDI A250.8, Level 4; SDI A250.4, Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.067 inch (1.7 mm).
- d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless].

- e. Core: [Manufacturer's standard] [Kraft-paper honeycomb] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
- f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated] doors.

2. Frames:

- a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.067 inch (1.7 mm).
- b. [Sidelite] [and] [Transom] Frames: Fabricated from same thickness material as adjacent door frame.
- c. Construction: [Knocked down] [Slip-on drywall] [Face welded] [Full profile welded].

2.4 EXTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Heavy-Duty Doors and Frames: SDI A250.8, Level 2; SDI A250.4, Level B. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch (1.0 mm), with minimum [A40 (ZF120)] [A60 (ZF180)] coating.
- d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless].
- e. Edge Bevel: [Bevel lock and hinge edges 1/8 inch in 2 inches (3.2 mm in 51 mm)] [Bevel lock edge 1/8 inch in 2 inches (3.2 mm in 51 mm)] [Provide manufacturer's standard beveled or square edges].
- f. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
- g. Bottom Edges: Close bottom edges of doors[where required for attachment of weather stripping] with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
- h. Core: [Manufacturer's standard] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
- i. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener with insulation] [laminated mineral board] core for fire-rated doors.

2. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum [A40 (ZF120)] [A60 (ZF180)] coating.
- b. Construction: [Knocked down] [Face welded] [Full profile welded].

- C. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3; SDI A250.4, Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum [A40 (ZF120)] [A60 (ZF180)] coating.
- d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless] [Model 3, Stile and Rail].
- e. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
- f. Bottom Edges: Close bottom edges of doors[where required for attachment of weather stripping] with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
- g. Core: [Manufacturer's standard] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
- h. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener with insulation] [laminated mineral board] core for fire-rated doors.

2. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum [A40 (ZF120)] [A60 (ZF180)] coating.
- b. Construction: [Knocked down] [Face welded] [Full profile welded].

D. Maximum-Duty Doors and Frames: SDI A250.8, Level 4; SDI A250.4, Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: Metallic-coated steel sheet, minimum thickness of 0.067 inch (1.7 mm), with minimum [A40 (ZF120)] [A60 (ZF180)] coating.
- d. Edge Construction: [Model 1, Full Flush] [Model 2, Seamless].
- e. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
- f. Bottom Edges: Close bottom edges of doors[where required for attachment of weather stripping] with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
- g. Core: [Manufacturer's standard] [Polystyrene] [Polyurethane] [Polyisocyanurate] [Vertical steel stiffener].
- h. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener with insulation] [laminated mineral board] core for fire-rated doors.

2. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.067 inch (1.7 mm), with minimum [A40 (ZF120)] [A60 (ZF180)] coating.
- b. Construction: [Knocked down] [Face welded] [Full profile welded].

2.5 INTERIOR CUSTOM HOLLOW-METAL DOORS AND FRAMES

A. Hollow-Metal Doors and Frames: NAAMM-HMMA 860; SDI A250.4, Physical Performance Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of [0.032 inch (0.8 mm)] [0.042 inch (1.0 mm)] [0.053 inch (1.3 mm)].
- d. Edge Construction: [Continuously welded with no] [Projection or tack welded with no] [Interlocking with] [Projection or tack welded with] visible seam.
- e. Core: Steel stiffened.
- f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated] doors.

2. Frames:

- a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.053 inch (1.3 mm).
- b. [Sidelite] [and] [Transom] Frames: Fabricated from same thickness material as adjacent door frame.
- c. Construction: [Knocked down] [Slip-on drywall] [Face welded] [Full profile welded].

B. Commercial Doors and Frames: NAAMM-HMMA 861; SDI A250.4, Physical Performance Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.042 inch (1.0 mm).
- d. Edge Construction: Continuously welded with no visible seam.
- e. Core: Steel stiffened.
- f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated] doors.

2. Frames:

- a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.053 inch (1.3 mm), except 0.067 inch (1.7 mm) for openings exceeding 4 feet (1219 mm) wide.
- b. [Sidelite] [and] [Transom] Frames: Fabricated from same material as adjacent door frame.
- c. Construction: [Face] [Full profile] welded.

C. Commercial Laminated Doors and Frames: NAAMM-HMMA 867; SDI A250.4, Physical Performance Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.

1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.

- b. Thickness: 1-3/4 inches (44.5 mm).
 - c. Face: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of [0.032 inch (0.8 mm)] [0.042 inch (1.0 mm)] [0.053 inch (1.3 mm)].
 - d. Edge Construction: [Continuously welded with no visible seam] [Interlocking with visible seam] [Interlocking with no visible seam] [Projection, spot, or tack welded with or without visible seams].
 - e. Core: [Kraft-paper honeycomb] [Polyisocyanurate] [Polystyrene] [Polyurethane] [Vertical steel stiffener].
 - f. Fire-Rated Core: Manufacturer's standard [vertical steel stiffener] [laminated mineral board] core for fire-rated [and temperature-rise-rated] doors.
2. Frames:
- a. Materials: [Uncoated] [Metallic-coated] steel sheet, minimum thickness of 0.053 inch (1.3 mm).
 - b. [Sidelite] [and] [Transom] Frames: Fabricated from same thickness material as adjacent door frame.
 - c. Construction: [Knocked down] [Slip-on drywall] [Face welded] [Full profile welded].

2.6 EXTERIOR CUSTOM HOLLOW-METAL DOORS AND FRAMES

- A. Commercial Doors and Frames: NAAMM-HMMA 861; SDI A250.4, Physical Performance Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.
1. Doors:
- a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: 1-3/4 inches (44.5 mm).
 - c. Face: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.30 mm), with minimum G60 or A60 (ZF180) coating.
 - d. Edge Construction: Continuously welded with no visible seam.
 - e. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
 - f. Bottom Edges: Close bottom edges of doors[where required for attachment of weather stripping] with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
 - g. Core: Steel stiffened.
2. Frames:
- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), except 0.067 inch (1.7 mm) for openings exceeding 4 feet (1219 mm) wide; with minimum G60 or A60 (ZF180) coating.
 - b. Construction: [Face] [Full profile] welded.
- B. Commercial Laminated Doors and Frames: NAAMM-HMMA 867; SDI A250.4, Physical Performance Level A. [At locations indicated in the Door and Frame Schedule] <Insert locations>.
1. Doors:

- a. Type: As indicated in the Door and Frame Schedule.
- b. Thickness: 1-3/4 inches (44.5 mm).
- c. Face: Metallic-coated steel sheet, minimum thickness of [0.053 inch (1.3 mm)] [0.042 inch (1.0 mm)], with minimum G60 or A60 (ZF180) coating.
- d. Edge Construction: [Continuously welded with no visible seam] [Interlocking with visible seam] [Interlocking with no visible seam] [Projection, spot, or tack welded with or without visible seams].
- e. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets. Seal joints against water penetration.
- f. Bottom Edges: Close bottom edges of doors[where required for attachment of weather stripping] with end closures or channels of same material as face sheets. Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape.
- g. Core: [Kraft-paper honeycomb] [Polyisocyanurate] [Polystyrene] [Polyurethane] [Vertical steel stiffener].

2. Frames:

- a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum G60 or A60 (ZF180) coating.
- b. Construction: [Knocked down] [Face welded] [Full profile welded].

2.7 BORROWED LITES

- A. Fabricate of [uncoated] [metallic-coated] steel sheet, minimum thickness of [0.053 inch (1.3 mm)] [0.042 inch (1.0 mm)].
- B. Construction: [Knocked down] [Face welded] [Full profile welded].
- C. Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as metal as frames.
- D. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

2.8 FRAME ANCHORS

- A. Jamb Anchors:
 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches (610 mm) of frame height above 7 feet (2.1 m).
 3. Postinstalled Expansion Anchor: Minimum 3/8-inch- (9.5-mm-) diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.
- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

- C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch (51-mm) height adjustment. Terminate bottom of frames at top of underlayment.
- D. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.9 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- E. 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 hollow-metal frames of type indicated.
- F. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- G. Glazing: Comply with requirements in Section 08 80 00 "Glazing."

2.10 FABRICATION

- A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch (19 mm) beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.
- B. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
 - 1. [Sidelite] [and] [Transom Bar] Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by welding[, or by rigid mechanical anchors].
 - 2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - 3. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.

- b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
- C. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
 - 1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
 - 2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.
- D. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with [butted] [or] [mitered] hairline joints.
 - 1. Provide stops and moldings flush with face of door, and with [beveled] [square] stops unless otherwise indicated.
 - 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
 - 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.
 - 4. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
 - 5. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.

2.11 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 - 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

- A. Hollow-Metal Frames: Comply with [SDI A250.11] [NAAMM-HMMA 840].

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
 - a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
 - b. Install frames with removable stops located on secure side of opening.
 2. Fire-Rated Openings: Install frames according to NFPA 80.
 3. Floor Anchors: Secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 4. Solidly pack mineral-fiber insulation inside frames.
 5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
 6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. [Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.]
 7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.
- B. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
1. Non-Fire-Rated Steel Doors: Comply with [SDI A250.8] [NAAMM-HMMA 841 and NAAMM-HMMA guide specification indicated].
 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
 3. Smoke-Control Doors: Install doors according to NFPA 105.
- C. Glazing: Comply with installation requirements in Section 08 80 00 "Glazing" and with hollow-metal manufacturer's written instructions.
- 3.3 CLEANING AND TOUCHUP
- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

- C. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

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 BASIS OF DESIGN -- SWINGING DOORS

- A Medium Stile, Monolithic Glazing:
- 1 Thickness: 1-3/4 inches.

2.3 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.
- 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

2.4 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).
- 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 SUMMARY

- A. Section Includes:
 - 1. Mechanical door hardware for the following:
 - a. Swinging doors.
 - 2. Cylinders for door hardware specified in other Sections.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project Site.
- B. Keying Conference: Conduct conference at Project Site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For electrified door hardware.
 - 1. Include diagrams for power, signal, and control wiring.
 - 2. Include details of interface of electrified door hardware and building safety and security systems.
- C. Samples: For each exposed product in each finish specified.
- D. Door hardware schedule.
- E. Keying schedule.

1.4 INFORMATIONAL SUBMITTALS

- A. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.6 QUALITY ASSURANCE

- A. 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. Scheduling Responsibility: Preparation of door hardware and keying schedule.
 - 2. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. 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)] [Architectural Hardware Consultant (AHC) and an Electrified Hardware Consultant (EHC)] [Architectural Openings Consultant (AOC)].

1.7 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. Warranty Period: [Three] <Insert number> years from date of Substantial Completion unless otherwise indicated below:
 - a. [Electromagnetic] [and] [Delayed-Egress] Locks: [Five] <Insert number> years from date of Substantial Completion.
 - b. Exit Devices: [Two] <Insert number> years from date of Substantial Completion.
 - c. Manual Closers: [10] <Insert number> years from date of Substantial Completion.
 - d. Concealed Floor Closers: [Five] [10] [25] <Insert number> years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 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)] <Insert rate> at the tested pressure differential of [0.3-inch wg (75 Pa)] <Insert value> of water.
- C. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

- D. 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.
- E. Accessibility Requirements: For door hardware on doors in an accessible route, comply with [the DOJ's "2010 ADA Standards for Accessible Design"] [the DOT's "ADA Standards for Transportation Facilities"] [the ABA standards of the Federal agency having jurisdiction] [ICC A117.1] [HUD's "Fair Housing Accessibility Guidelines"] [and] <Insert regulation>.

2.2 SCHEDULED DOOR HARDWARE

- A. Provide products for each door that comply with requirements indicated in Part 2 and door hardware schedule.
 - 1. Door hardware is scheduled [in Part 3] [on Drawings] <Insert location>.

2.3 HINGES

- A. Hinges: BHMA A156.1.[Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.]

2.4 SELF-CLOSING HINGES AND PIVOTS

2.5 CENTER-HUNG AND OFFSET PIVOTS

- A. Center-Hung and Offset Pivots: BHMA A156.4.

2.6 CONTINUOUS HINGES

- A. Continuous Hinges: BHMA A156.26; minimum 0.120-inch- (3.0-mm-) thick, hinge leaves with minimum overall width of 4 inches (102 mm); fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.
- B. Pin-and-Barrel-Type Hinges:
- C. Continuous, Gear-Type Hinges: Extruded-aluminum, pinless, geared hinge leaves joined by a continuous extruded-aluminum channel cap; with concealed, self-lubricating thrust bearings.

2.7 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)] [1.25-inch (32-mm)] <Insert dimension> bolt throw.
- C. Lock Backset: 2-3/4 inches (70 mm) unless otherwise indicated.
- D. Lock Trim:
 1. Description: [As indicated on Drawings] <Insert description or manufacturer's design designation>.
 2. Levers: [Wrought] [Forged] [Cast].
 - a. <Insert model number and description>.
 3. Escutcheons (Roses): [Wrought] [Forged] [Cast].
 4. Dummy Trim: Match lever lock trim and escutcheons.
- 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. Bored Locks: BHMA A156.2; [Grade 1] [Grade 2]; Series 4000.
- G. Mortise Locks: BHMA A156.13; [Operational Grade 1] [Security Grade 1] [Operational Grade 2] [Security Grade 2]; stamped steel case with steel or brass parts; Series 1000.

2.8 AUXILIARY LOCKS

- A. Bored Auxiliary Locks: BHMA A156.36: [Grade 1] [Grade 2]; with strike that suits frame.
- B. Mortise Auxiliary Locks: BHMA A156.36; [Grade 1] [Grade 2]; with strike that suits frame.
- C. Narrow Stile Auxiliary Locks: BHMA A156.36; [Grade 1] [Grade 2]; with strike that suits frame.
- D. Push-Button Combination Locks: BHMA A156.36; cylindrical; Grade 1; lock opens by entering a one- to five-digit code by pushing correct buttons in correct sequence; automatically relocks when door is closed; with strike that suits frame.

2.9 ELECTRIC STRIKES

- A. Electric Strikes: BHMA A156.31; [Grade 1] [Grade 2]; with faceplate to suit lock and frame.

2.10 ELECTROMAGNETIC LOCKS

- A. Electromagnetic Locks: BHMA A156.23; electrically powered; with electromagnet attached to frame and armature plate attached to door; full-exterior or full-interior type, as required by application indicated.

- B. Delayed-Egress Electromagnetic Locks: BHMA A156.24, electrically powered, with electromagnet attached to frame and armature plate attached to door; depressing push bar for more than three seconds initiates irreversible alarm and adjustable time delay for egress. When integrated with fire alarm, fire alarm voids time delay.

2.11 ELECTROMECHANICAL LOCKS

- A. Electromechanical Locks: BHMA A156.25; [Grade 1] [Grade 2]; motor or solenoid driven; with strike that suits frame.
1. Type: [Bored] [Mortise latchbolt] [Mortise deadbolt] [Mortise deadlocking latchbolt].

2.12 SELF-CONTAINED ELECTRONIC LOCKS

- A. Self-Contained Electronic Locks: BHMA A156.25, [bored] [mortise]; with internal, battery-powered, self-contained electronic locks; consisting of complete lockset, motor-driven lock mechanism, and actuating device; enclosed in zinc-dichromate-plated, wrought-steel case, and strike that suits frame. Provide key override, low-battery detection and warning, LED status indicators, and ability to program at the lock.

2.13 EXIT LOCKS AND EXIT ALARMS

- A. Exit Locks and Alarms: BHMA A156.29, Grade 1.

2.14 SURFACE BOLTS

- A. Surface Bolts: BHMA A156.16.

2.15 MANUAL FLUSH BOLTS

- A. Manual Flush Bolts: BHMA A156.16; minimum 3/4-inch (19-mm) throw; designed for mortising into door edge.

2.16 AUTOMATIC AND SELF-LATCHING FLUSH BOLTS

- A. Automatic and Self-Latching Flush Bolts: BHMA A156.16; minimum 3/4-inch (19-mm) throw; designed for mortising into door edge. [Include wear plates.]

2.17 EXIT DEVICES AND AUXILIARY ITEMS

- A. Exit Devices and Auxiliary Items: BHMA A156.3.

2.18 LOCK CYLINDERS

- A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver. [Provide cylinder from same manufacturer of locking devices.]

- B. Standard Lock Cylinders: BHMA A156.5; [Grade 1] [Grade 1A] [Grade 2] permanent cores; face finished to match lockset.
 - 1. Core Type: [Interchangeable] [Removable].
- C. High-Security Lock Cylinders: BHMA A156.30; [Grade 1] [Grade 2] [Grade 3] permanent cores that are removable; face finished to match lockset.
 - 1. Type: [M, mechanical] [E, electrical].
- D. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.
- E. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

2.19 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. No Master Key System: Only change keys operate cylinders.
 - a. Provide three cylinder change keys.
 - 2. Master Key System: Change keys and a master key operate cylinders.
 - a. Provide three cylinder change keys and five master keys.
 - 3. Grand Master Key System: Change keys, a master key, and a grand master key operate cylinders.
 - a. Provide three cylinder change keys and five each of master and grand master keys.
 - 4. Great-Grand Master Key System: Change keys, a master key, a grand master key, and a great-grand master key operate cylinders.
 - a. Provide three cylinder change keys and five each of master, grand master, and great-grand master keys.
 - 5. Existing System:
 - a. Master key or grand master key locks to Owner's existing system.
 - b. Re-key Owner's existing master key system into new keying system.
 - 6. Keyed Alike: Key all cylinders to same change key.
- B. Keys: [Nickel silver] [Brass].
 - 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

a. Notation: ["DO NOT DUPLICATE."] [Information to be furnished by Owner.]

2.20 KEY CONTROL SYSTEM

- A. Key Control Cabinet: BHMA A156.28; metal cabinet with baked-enamel finish; containing key-holding hooks, labels, two sets of key tags with self-locking key holders, key-gathering envelopes, and temporary and permanent markers; with key capacity of [150] <Insert number> percent of the number of locks.
1. Multiple-Drawer Cabinet: [Grade 1] [Grade 2] cabinet with drawers equipped with key-holding panels and key envelope storage, and progressive-type ball-bearing suspension slides. Include single cylinder lock to lock all drawers.
 2. Wall-Mounted Cabinet: [Grade 1] [Grade 2] cabinet with hinged-panel door equipped with key-holding panels and pin-tumbler cylinder door lock.
 3. Portable Cabinet: [Grade 1] [Grade 2] tray for mounting in file cabinet, equipped with key-holding panels, envelopes, and cross-index system.

2.21 OPERATING TRIM

- A. Operating Trim: BHMA A156.6; [aluminum] [brass] [bronze] [stainless steel] unless otherwise indicated.

2.22 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.

2.23 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.

2.24 CONCEALED CLOSERS

- A. Concealed Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves. 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.

2.25 CLOSER HOLDER RELEASE DEVICES

- A. Closer Holder Release Devices: BHMA A156.15; Grade 1; closer connected with separate or integral releasing and fire- or smoke-detecting devices. Door shall become self-closing on interruption of signal to release device. Automatic release is activated by [smoke detection system] [loss of power].

2.26 MECHANICAL STOPS AND HOLDERS

- A. Wall- and Floor-Mounted Stops: BHMA A156.16.

2.27 ELECTROMAGNETIC STOPS AND HOLDERS

- A. Electromagnetic Door Holders: BHMA A156.15, Grade 1; [wall-mounted electromagnetic single] [floor-mounted electromagnet single] [floor-mounted electromagnet double] unit with strike plate attached to swinging door; coordinated with fire detectors and interface with fire-alarm system for labeled fire-rated door assemblies.

2.28 OVERHEAD STOPS AND HOLDERS

- A. Overhead Stops and Holders: BHMA A156.8.

2.29 DOOR GASKETING

- A. Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.
- B. Maximum Air Leakage: When tested according to ASTM E 283 with tested pressure differential of 0.3-inch wg (75 Pa), as follows:
 1. Smoke-Rated Gasketing: 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) of door opening.
 2. Gasketing on Single Doors: 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) of door opening.
 3. Gasketing on Double Doors: 0.50 cfm per foot (0.000774 cu. m/s per m) of door opening.

2.30 THRESHOLDS

- A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

2.31 SLIDING DOOR HARDWARE

- A. Sliding Door Hardware: BHMA A156.14; consisting of complete sets including rails, hangers, supports, bumpers, floor guides, and accessories indicated.

2.32 FOLDING DOOR HARDWARE

- A. General: BHMA A156.14; complete sets including overhead rails, hangers, supports, bumpers, floor guides, and accessories indicated.

2.33 METAL PROTECTIVE TRIM UNITS

- A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch- (1.3-mm-) thick [aluminum] [brass] [bronze] [stainless steel]; with manufacturer's standard machine or self-tapping screw fasteners.

2.34 AUXILIARY DOOR HARDWARE

- A. Auxiliary Hardware: BHMA A156.16.

2.35 AUXILIARY ELECTRIFIED DOOR HARDWARE

- A. Auxiliary Electrified Door Hardware:

2.36 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights [indicated on Drawings] [to comply with the following] unless otherwise indicated or required to comply with governing regulations.
 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 2. Custom Steel Doors and Frames: HMMA 831.
 3. Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- 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.
- 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 [indicated in keying schedule] [directed by Owner].
 - 2. Furnish permanent cores to Owner for installation.
- F. Key Control Cabinet: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- G. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, [above accessible ceilings] [in equipment room]. Verify location with Architect.
 - 1. Configuration: Provide [one power supply for each door opening] [least number of power supplies required to adequately serve doors] with electrified door hardware.
- H. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 07 92 00 "Joint Sealants."
- I. 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.
- J. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
 - 1. Do not notch perimeter gasketing to install other surface-applied hardware.
- K. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- L. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.2 ADJUSTING

- A. 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.

3.3 DOOR HARDWARE SCHEDULE

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 Laminated glass interlayers.
- D Glazing compounds.
- E 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 - INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A Surface preparation.
- B Field application of paints.
- C Materials for backpriming woodwork.
- D 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.
- E 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

- A Section 09 91 13 - Exterior Painting.

1.03 DEFINITIONS

- 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 ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating 2005 (Reapproved 2017).
- D ASTM D4259 - Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application 2018.
- E ASTM D4260 - Standard Practice for Liquid and Gelled Acid Etching of Concrete 2005 (Reapproved 2017).
- F ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials 2020.
- G CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board 2020.
- H MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association Current Edition.
- I MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.
- J SCAQMD 1113 - Architectural Coatings 1977, with Amendment (2016).
- K SSPC V1 (PM1) - Good Painting Practice: Painting Manual Volume 1 2016.
- L SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual Volume 2 2021.
- M SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).
- N SSPC-SP 2 - Hand Tool Cleaning 2018.
- O SSPC-SP 3 - Power Tool Cleaning 2018.
- P SSPC-SP 6 - Commercial Blast Cleaning 2007.

Q SSPC-SP 13 - Surface Preparation of Concrete 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 PAINT SYSTEMS - INTERIOR

A Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, wood, plaster, uncoated steel, shop primed steel, galvanized steel, aluminum, 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)

PART 3 EXECUTION

3.01 EXAMINATION

- A Do not begin application of paints and finishes until substrates have been adequately prepared.
- B Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D Test shop-applied primer for compatibility with subsequent cover materials.
- E Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 1. Gypsum Wallboard: 12 percent.
 2. Plaster and Stucco: 12 percent.
 3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
 4. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
 5. Concrete Floors and Traffic Surfaces: 8 percent.

3.02 PREPARATION

- A Clean surfaces thoroughly and correct defects prior to application.
- B Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C Remove or 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 methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

3.03 APPLICATION

A Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

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

3.04 CLEANING

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

3.05 PROTECTION

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

END OF SECTION 09 91 23

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.
- D. **Temporary Landscape Protection Fence: See Section 31 13 00. At time of delivery to site:**
 - 1. 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.

E. 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.

F. LEED CERTIFICATION

1. LEED Credit MR 4.1 and Credit MR 4.2: Submit product data for products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
 - a. Include statement indicating costs for each product having recycled content.
2. LEED Credit MR 5.1 and Credit MR 5.2: Submit product data for products that have extracted, harvested, or recovered, as well as manufactured within 500 miles of the Project site.
 - a. Include a statement indicating the percentage by weight which is extracted, harvested, or recovered within 500 miles of the Project site.

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
1/4" screen	97-100
No. 10 US sieve	95-100
No. 140 US sieve	60-90

- b. Clay content determined by Bouyoucos 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:

<u>Sieve Size</u> <u>by Weight</u>	<u>% Passing</u>
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 $\frac{1}{2}$ " 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 ground leaving 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, walk, 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 mowing.

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

CHAMPAIGN COUNTY - SELECT BUILDING DEMOLITION

**1701 E Main St,
Urbana, IL 61802**

95% CONSTRUCTION DOCUMENTS - 01/30/2026

ABBREVIATIONS		DRAWING MATRIX		SCOPE OF WORK SUMMARY	
A					
ACT	ACOUSTICAL CEILING TILE	I		THE PROJECT IS LOCATED IN CHAMPAIGN COUNTY IN URBANA, ILLINOIS. THE PRIMARY SCOPE OF WORK INCLUDES DEMOLISHING THE ENTIRE NURSING HOME BUILDING THAT IS CURRENTLY CONNECTED TO THE ILEAS FACILITY. CONNECTIONS BETWEEN THE OCCUPIED ILEAS SPACE IN THE AREA TO BE REMOVED IS TO BE MODIFIED TO PROVIDE A WATERPROOF BARRIER.	
AD	AREA DRAIN	INSUL	INSULATION / INSULATED	RELATED WORK GENERALLY INCLUDES, BUT IS NOT LIMITED TO:	
AFF	ABOVE FINISHED FLOOR	INT	INTERIOR	<ul style="list-style-type: none"> • SELECT REMOVAL OF EXTERIOR ELEMENTS • COMPLETE DEMOLITION OF BUILDING • SELECT REMOVAL OF SIDEWALKS • REMOVAL OF UTILITIES AND HAZARDOUS MATERIALS • INFILL OF BASEMENT, GRADING, COMPACTION, AND ESTABLISHMENT OF GRASS • MODIFICATIONS AT CONNECTION TO EXISTING FACILITY INCLUDING CONSTRUCTION OF AREA WELL 	
ALUM	ALUMINUM	IRGBW	IMPACT RESISTANT GYPSUM WALLBOARD		
ANOD	ANODIZED	L			
APPROX	APPROXIMATE	LAV	LAVATORY		
B		M			
BSMT	BASEMENT	MATL	MATERIAL		
BTTM/	BOTTOM OF	MAX	MAXIMUM		
C		MECH	MECHANICAL		
C/C	CENTER TO CENTER	MFR	MANUFACTURER		
CIP	CAST IN PLACE	MIN	MINIMUM		
CJ	CONTROL JOINT	MO	MASONRY OPENING		
CLG	CEILING	MRGBW	MOISTURE-RESISTANT GYPSUM WALL BOARD		
CLR	CLEAR	MTD	MOUNTED		
CMU	CONCRETE MASONRY UNIT	MTL	METAL		
CO	CLEAN OUT	N			
COL	COLUMN	NIC	NOT IN CONTRACT		
CONC	CONCRETE	NO	NUMBER		
CONST JT	CONSTRUCTION JOINT	NOM	NOMINAL		
CONT	CONTINUOUS	O			
CPT	CARPET	OC	ON CENTER		
CT	CERAMIC TILE	OH	OPPOSITE HAND		
D		OZ	OUNCE		
DBL	DOUBLE	P			
DEMO	DEMOLISH	PCC	PRE-CAST CONCRETE		
DIA	DIAMETER	PLUMB	PLUMBING		
DIMS	DIMENSIONS	PNT	PAINT/PAINTED		
DN	DOWN	PSI	POUNDS PER SQUARE INCH		
DTL	DETAIL	PT	PRESSURE TREATED		
DWG	DRAWING	PVC	POLYVINYL CHLORIDE		
E		R	RADIUS		
EA	EACH	RBR	RUBBER		
EJ	EXPANSION JOINT	RCP	REFLECTED CEILING PLAN		
EL	ELEVATION	RD	ROOF DRAIN		
ELEC	ELECTRICAL	REINF	REINFORCED		
ELEV	ELEVATOR / ELEVATION	REQD	REQUIRED		
EPDM	ETHYLENE PROPYLENE DIENE ROOFING	RM	ROOM		
EQ	EQUAL	S			
EXIST	EXISTING	SF	SQUARE FOOT		
EXT	EXTERIOR	SIM	SIMILAR		
F		SOG	SLAB ON GRADE		
FD	FLOOR DRAIN	SPEC	SPECIFIED OR SPECIFICATION		
FE	FIRE EXTINGUISHER	SPK	SPRINKLER		
FEC	FIRE EXTINGUISHER CABINET	SQ	SQUARE		
FFE	FINISHED FLOOR ELEVATION	SSTL	STAINLESS STEEL		
FIN	FINISH	STC	SOUND TRANSMISSION COEFFICIENT		
FLR	FLOOR	STL	STEEL		
FND	FOUNDATION	STRUCT	STRUCTURAL		
FO	FACE OF	T			
FTG	FOOTING	T&G	TONGUE & GROOVE		
G		T/	TOP OF		
GA	GAUGE	T/D	TELEPHONE/DATA		
GALV	GALVANIZED	TELE	TELEPHONE		
GWB	GYPSUM WALL BOARD	TLT	TOILET		
H		TOC	TOP OF CONCRETE		
HC	HOLLOW CORE	TOS	TOP OF STEEL / STRUCTURE		
HM	HOLLOW METAL	TOW	TOP OF WALL		
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING	TYP	TYPICAL		
DRAWING MATRIX					
Sheet Number		Sheet Name		95% CONSTRUCTION DOCUMENTS - 01.30.2026	
GENERAL					
G000	COVER				
G002	SITE LOGISTIC PLAN				
ARCHITECTURAL					
D100	DEMOLITION PLANS				
A100	RESTORATION PLANS				
A500	PARTIAL BUILDING SECTIONS, ELEVATION, AND PLAN DETAIL				
A900	DOOR SCHEDULES AND DETAILS				
SCOPE OF WORK SUMMARY					
THE PROJECT IS LOCATED IN CHAMPAIGN COUNTY IN URBANA, ILLINOIS. THE PRIMARY SCOPE OF WORK INCLUDES DEMOLISHING THE ENTIRE NURSING HOME BUILDING THAT IS CURRENTLY CONNECTED TO THE ILEAS FACILITY. CONNECTIONS BETWEEN THE OCCUPIED ILEAS SPACE IN THE AREA TO BE REMOVED IS TO BE MODIFIED TO PROVIDE A WATERPROOF BARRIER.					
RELATED WORK GENERALLY INCLUDES, BUT IS NOT LIMITED TO:					
<ul style="list-style-type: none"> • SELECT REMOVAL OF EXTERIOR ELEMENTS • COMPLETE DEMOLITION OF BUILDING • SELECT REMOVAL OF SIDEWALKS • REMOVAL OF UTILITIES AND HAZARDOUS MATERIALS • INFILL OF BASEMENT, GRADING, COMPACTION, AND ESTABLISHMENT OF GRASS • MODIFICATIONS AT CONNECTION TO EXISTING FACILITY INCLUDING CONSTRUCTION OF AREA WELL 					
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Owner Champaign County 1776 Washington St. Urbana, IL 61802					
REVISION SCHEDULE					
DATE	DRAWING SET TITLE				
10.20.26	95% CONSTRUCTION DOCUMENTS				

SYMBOLS LEGEND	PROJECT AXON - FOR INFORMATION ONLY	LOCATION MAP	COVER
			<p>CHAMPAIGN COUNTY- SELECT BUILDING DEMOLITION</p> <p>170 E Main St, Urbana, IL 61802</p> <p>Drawing Title:</p> <p>COVER</p> <p>Expiration date of Seal: 11-30-2026</p> <p>Proj. No. 02402</p> <p>Drawn By: Author</p> <p>Drawn No. 000</p> <p>Site Address</p>



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Owner
Champaign County
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Urbana, IL 61802

REVISION SCHEDULE	
DATE	DRAWING SET TITLE
1.30.2026	95% CONSTRUCTION DOCUMENTS

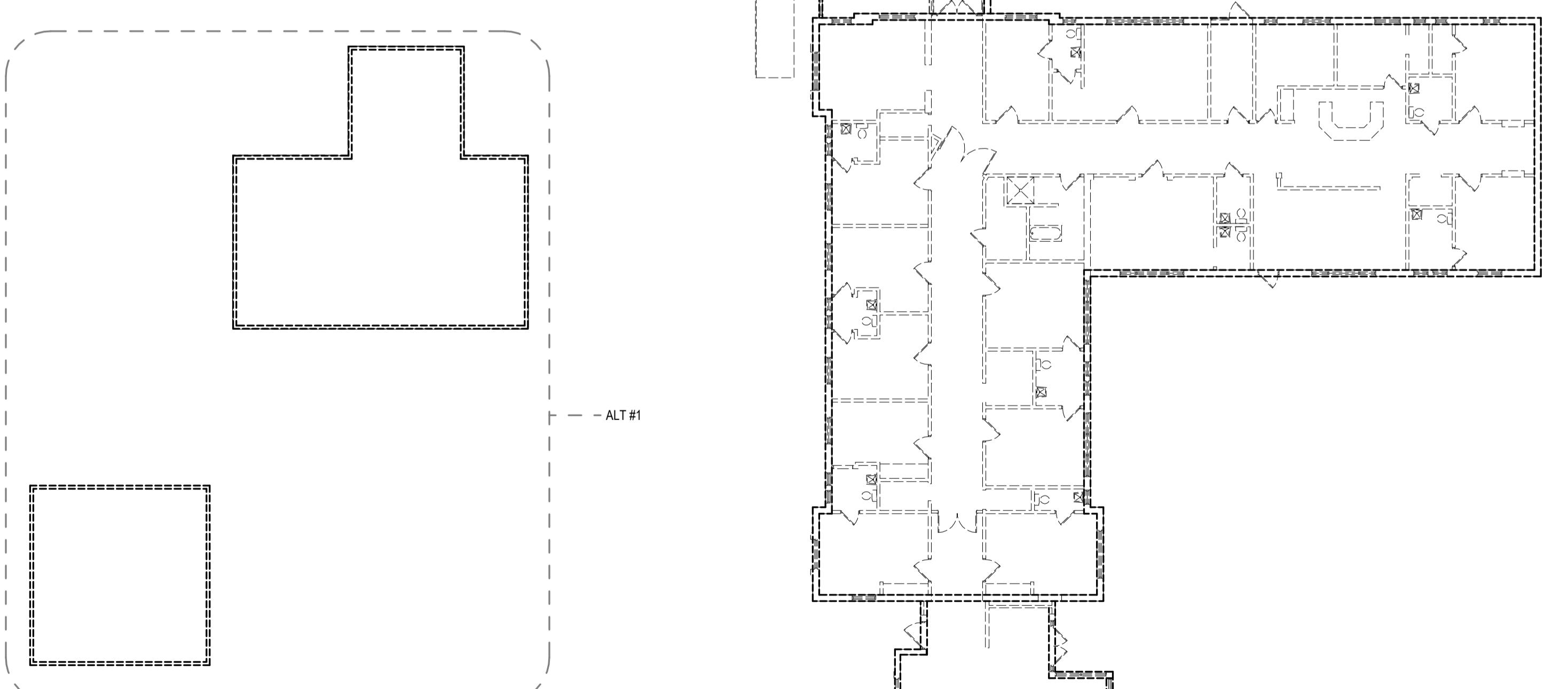
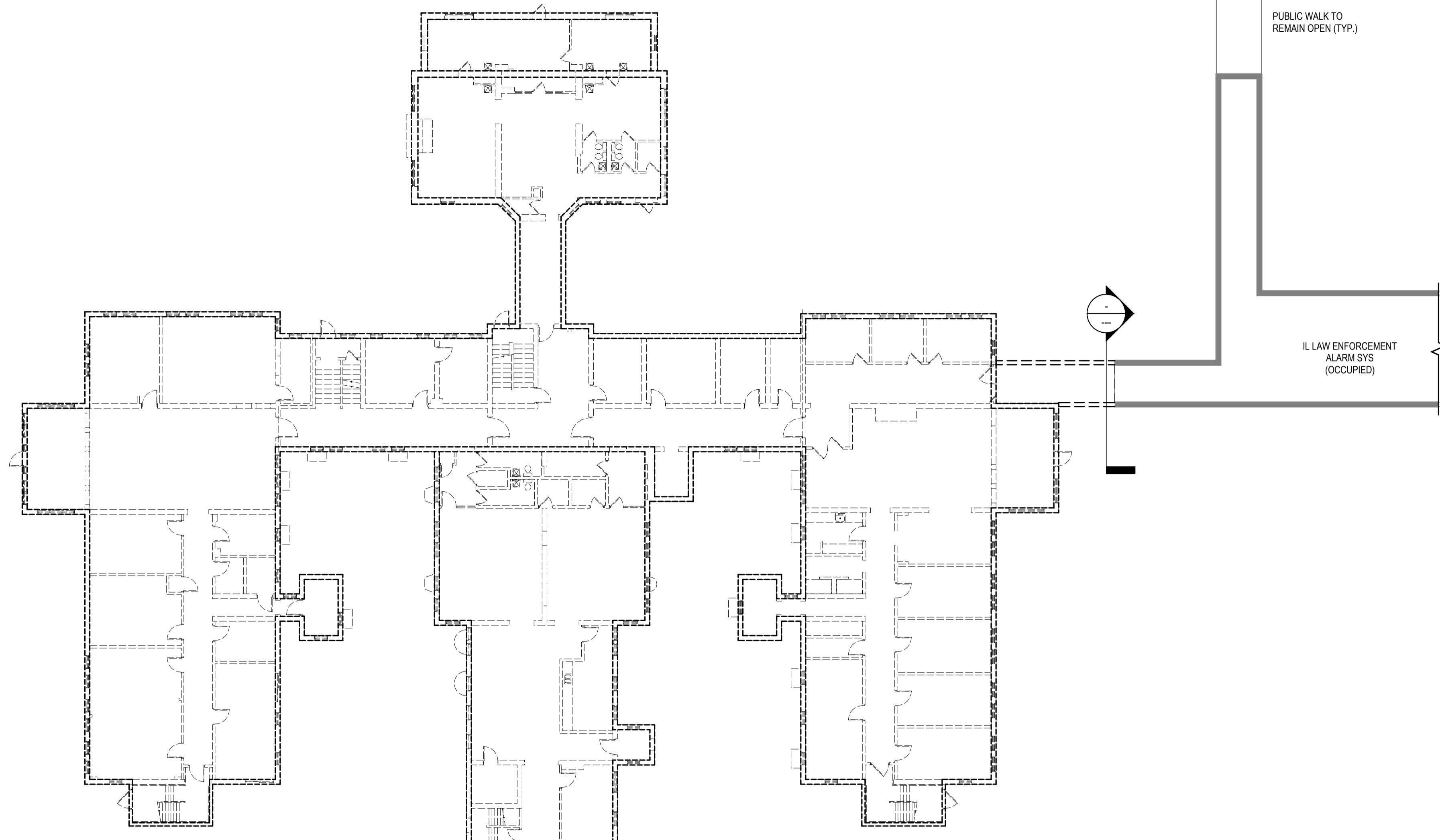
CHAMPAIGN COUNTY - SELECT BUILDING DEMOLITION

1701 E Main St,
Urbana, IL 61802

Drawing Title

SITE LOGISTIC PLAN

Expiration Date of Seal: 11-30-2026	BE Project No: 024002
Drawn By:	LG
Drawing No:	G002



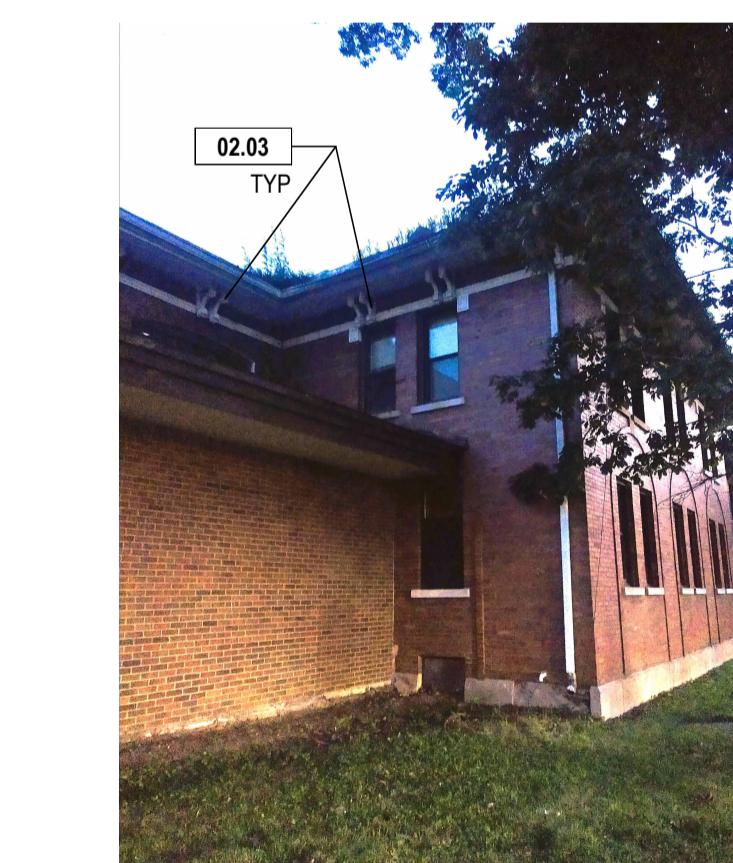
THE CONTRACTOR'S STAGING AREA IS LOCATED AT
THE LOWER PORTION OF THE SITE.
COORDINATE WITH THE COUNTY (TYP.).

① SITE LOGISTIC PLAN

1/16" = 1'-0"



② PHOTO - NORTHWEST VIEW
NOT TO SCALE



③ PHOTO - NORTHEAST VIEW
NOT TO SCALE

GENERAL SITE NOTES

- THE ILEAS BUILDING WILL BE OCCUPIED BY THE USING AGENCY DURING CONSTRUCTION. GENERAL CONTRACTOR SHALL PROVIDE REASONABLE ACCESS TO THE BUILDING TO ALLOW NORMAL OPERATION AND USE.
- THE PUBLIC WAY AND EXISTING SIDEWALK SHALL REMAIN OPEN AND ACCESSIBLE IN THE EVENT OF AN EMERGENCY OR AS REQUIRED BY THE USING AGENCY AND THE AUTHORITIES HAVING JURISDICTION. COORDINATE WITH THE PHASING AND SCHEDULING OF THE WORK.
- THE GENERAL CONTRACTOR/AGENT SHALL PROVIDE TEMPORARY PROTECTION OF ALL SITE ELEMENTS. LANDSCAPE AND EXISTING BUILDING ELEMENTS SHOULD TO REMAIN TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY CEASE WORK AND CONTACT THE USING AGENCY AND THE ARCHITECT IF SITE CONDITIONS OR EXISTING BUILDING CONDITIONS IMPEDE THE WORK. SHOULD THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT AND/OR REPAIR OF ANY ELEMENT DAMAGED DURING CONSTRUCTION AND RESTORE SUCH ELEMENTS TO A NEW-LIKE CONDITION, AESTHETICALLY MATCHING EXISTING CONDITIONS, ACCEPTABLE TO THE ARCHITECT AND THE OWNER. THE CONTRACTOR'S REPLACEMENT/REPAIR MAY EXTEND BEYOND THE ORIGINAL ELEMENTS DAMAGED BY NEARBY CONSTRUCTION OR CONTROL JOINTS. CONTRACTOR TO RE-SEED ANY DAMAGED LANDSCAPING DUE TO CONSTRUCTION.
- DIMENSIONS TO BE VERIFIED IN FIELD. FIELD VERIFY BEFORE ORDERING MATERIALS OR BEGINNING ANY WORK. REPORT ANY VARIANCES TO ARCHITECT.
- ALL CONTRACTORS SHALL VISIT PROJECT SITE PRIOR TO BIDDING.
- GENERAL CONTRACTOR SHALL REPAIR ALL EXISTING LAWN AREAS, LANDSCAPE MATERIALS, CURBS AND PAVING, WALKS, AND OTHER SITE ITEMS, CUT OR DAMAGED DURING CONSTRUCTION OPERATIONS.
- GENERAL CONTRACTOR TO PROVIDE SECURITY FENCING AROUND DEMOLITION OPERATION AND STORAGE AREAS.
- DO NOT BEGIN DEMOLITION OPERATIONS UNTIL MATERIALS TO IMMEDIATELY BEGIN RECONSTRUCTION ARE ON SITE.
- GENERAL CONTRACTOR SHALL CONFINING OPERATIONS TO WITHIN THE DISTURBED LIMITS.
- SEE PLUMBING, VENTILATING, AND ELECTRICAL SHEETS FOR RELATED REMOVALS. COORDINATE REMOVALS WITH ALL TRADES.
- GENERAL CONTRACTOR TO PROVIDE ALL DIRECTIONAL SIGNAGE, ACCESSIBLE SIGNAGE, AND LIGHTING TO KEEP SITE AND ITS CONTEXT FUNCTIONAL AND SAFE THROUGHOUT THE SCHEDULE OF THE PROJECT.
- GENERAL CONTRACTOR TO KEEP GROUND PLANE AND PEDESTRIAN WALKING AREAS SAFE AND FREE FROM OBSTRUCTIONS, CROSS SLOPES, AND OTHER IMPEDIMENTS THAT COULD MAKE THE WALKING SURFACES UNSAFE OR IN CONTRADICTION WITH FEDERAL ACCESSIBILITY CODES.



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Owner
Champaign County
1776 E Washington St.,
Urbana, IL 61802

SHEET KEYNOTES

- 03.01 PROVIDE CONCRETE WALL TO ENCLOSE EXISTING BASEMENT AS SHOWN ON DRAWINGS.
 - 07.01 PROVIDE AN AREA WELL ACCESS LADDER.
 - 31.01 AFTER REMOVAL OF BUILDING, FOUNDATIONS AND UTILITIES, FILL AND COMPACT IN 8" LIFTS. FINISH ELEVATION TO MATCH ADJACENT. TYPICAL ENTIRE BUILDING FOOTPRINT.

RESTORATION GENERAL NOTES

- ALL CONTRACTORS SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK. EXISTING CONDITIONS SHOWN ARE BASED ON INFORMATION PROVIDED BY THE OWNER; FIELD VERIFICATION IS REQUIRED. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING.
 - DO NOT PROCEED WITH ANY WORK WHERE HAZARDOUS MATERIALS ARE ENCOUNTERED. IMMEDIATELY NOTIFY THE ARCHITECT IF SUCH MATERIALS ARE DISCOVERED. WORK SHALL NOT CONTINUE UNTIL PROPER REMEDIATION HAS BEEN COMPLETED.
 - HAZARDOUS MATERIALS MAY EXIST ONSITE. REFER TO ANY ASBESTOS, LEAD-BASED PAINT, AND HAZARDOUS MATERIAL REPORTS INCLUDED IN THE PROJECT MANUAL. DO NOT PROCEED WITH WORK IN AFFECTED AREAS UNTIL MATERIALS ARE IDENTIFIED, TESTED, AND, IF NEEDED, PROPERLY ABATED. NOTIFY THE ARCHITECT IMMEDIATELY IF ADDITIONAL HAZARDOUS MATERIALS ARE DISCOVERED.
 - FIELD-VERIFY ALL EXISTING CONSTRUCTION BEFORE COMMENCING WORK.
 - ALL DEMOLITION DEBRIS BECOMES THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE DAILY UNLESS OTHERWISE NOTED. MAINTAIN A CLEAN AND SAFE WORKSITE AT ALL TIMES.
 - EXECUTION OF WORK IMPLIES ACCEPTANCE OF EXISTING CONDITIONS. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE CONSIDERED DUE TO UNVERIFIED FIELD CONDITIONS.

REVISION SCHEDULE

DATE	DRAWING SET TITLE
1.30.2026	95% CONSTRUCTION DOCUMENTS

CHAMPAIGN COUNTY SELECT BUILDING DEMOLITION

1701 E Main St,
Urbana, IL 61802

RESTORATION PLANS

Expiration Date of Seal: 11-30-2026	BE Project No. 024002
-------------------------------------	---------------------------------

Drawn By: **Author**

Drawing No. 1-12-2

233

This architectural site plan illustrates the layout of a project site, including the project site fence and disturbed limit line. The site is bounded by a dashed line representing the disturbed limit line and an outer solid line representing the project site fence. Several '31.01' labels are placed within the fenced area, indicating specific survey points or areas. A detailed security alarm system (IL LAW ENFORCEMENT ALARM SYS) is shown on the right side, featuring a main floor and a basement. The main floor contains three A500 sensors (labeled 1, 2, and 3) and two A100 sensors (labeled 1 and 2). The basement contains one A100 sensor (labeled 1). A legend indicates that dashed lines represent 'ALT #1'. A note at the bottom states: 'THE CONTRACTOR'S STAGING AREA IS LOCATED AT THE LOWER PORTION OF THE SITE'. A detailed elevation drawing of a wall section is provided on the right, showing dimensions of 9'-6" and 5'-0" for the wall height, and 2'-3 1/4" for the thickness. A note '1'-7 1/4"' is also present.

2 PARTIAL MAIN FLOOR RESTORATION PLAN

1/4" = 1'-0"

Architectural floor plan showing a vertical stack of rooms and an alarm system layout. The plan includes the following dimensions and features:

- Vertical Dimensions:** 9'-6" (top) and 8'-0" (bottom).
- Horizontal Dimensions:** 2'-3 1/4" and 7'-4" R.O.
- Rooms:** V.I.F. (top room), 002 (middle room), and a room at the bottom.
- Alarms:** 03.01 (top), 002 (middle), and 07.01 (bottom).
- Walls:** Vertical walls are shown on the left and right sides, with a central vertical stack of rooms.
- Windows:** A window is located in the bottom room, indicated by a small rectangle with a cross.
- Doors:** A door is located in the bottom room, indicated by a small rectangle with a cross.
- Stairs:** A staircase is located in the bottom room, indicated by a small rectangle with a cross.
- Annotations:** A circled "002" is located in the middle room area.

1 V.I.F PARTIAL BASEMENT RESTORATION PLAN

1/4" = 1'-0" 0' 4' 8' 16'

A diagram showing a building footprint. It consists of a main rectangular area with a width of 32', indicated by a vertical dimension line. A horizontal extension of 16' is shown on the right side, and another horizontal extension of 8' is shown on the left side. A circular arrow symbol is located at the end of the footprint.



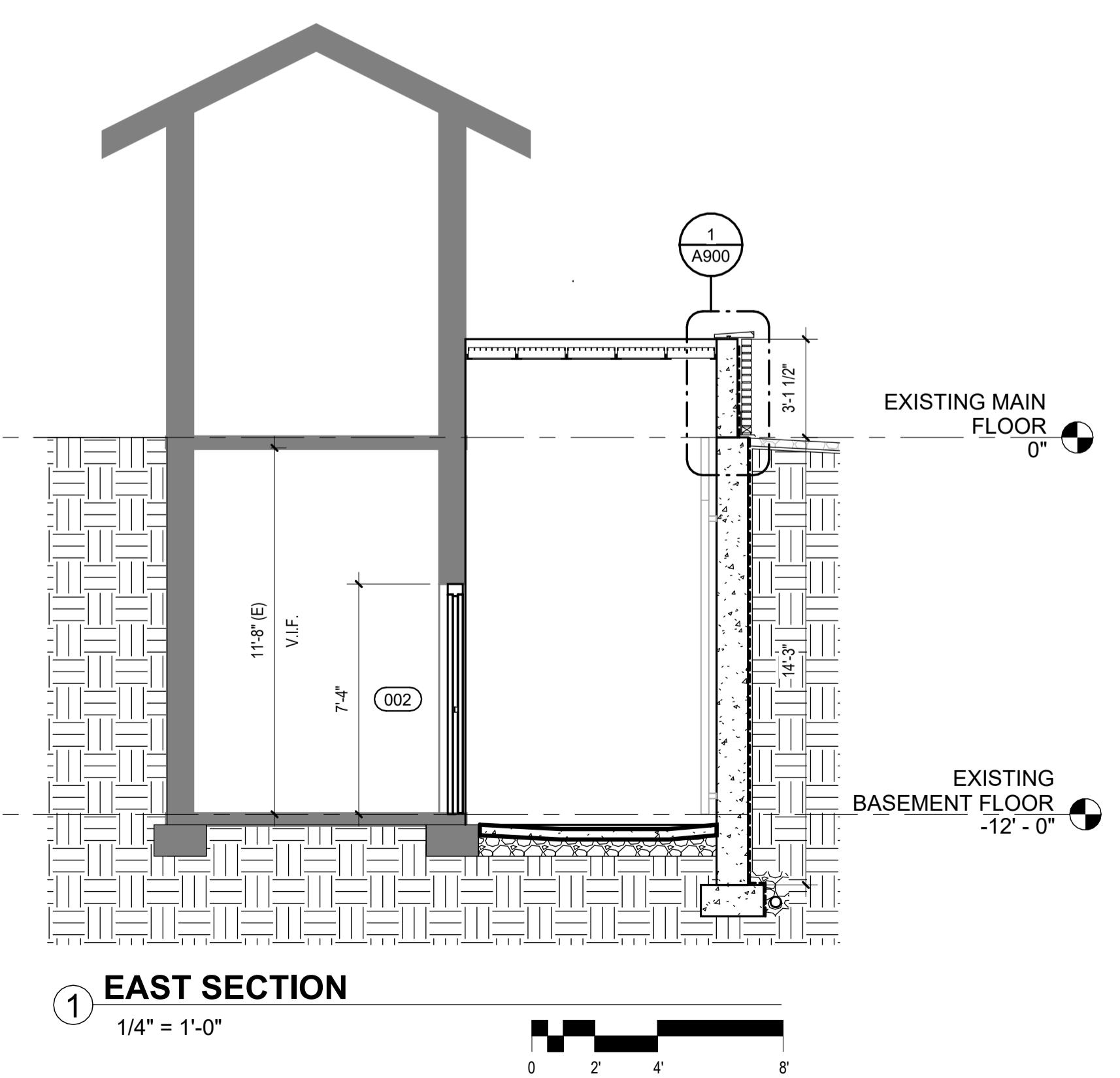
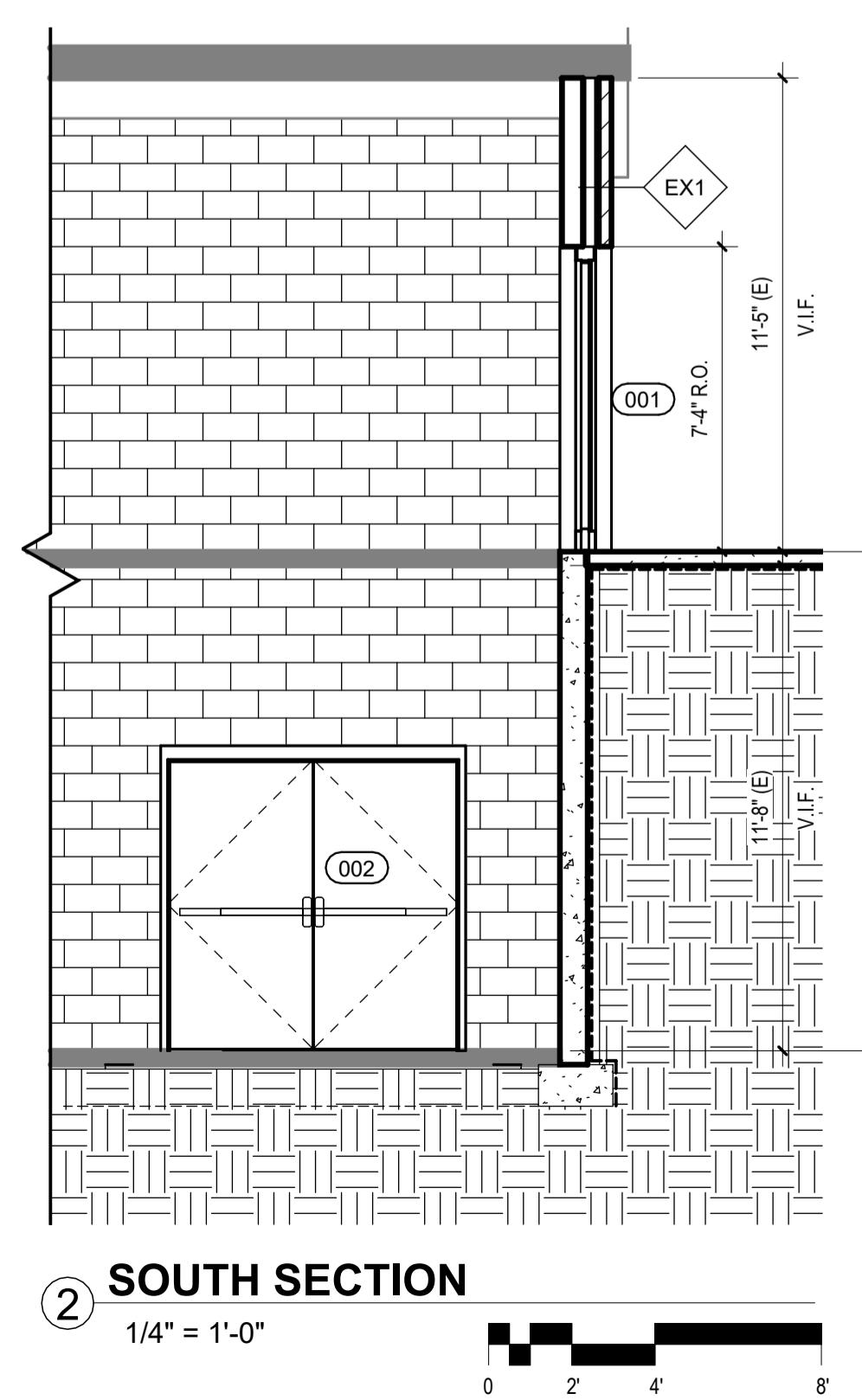
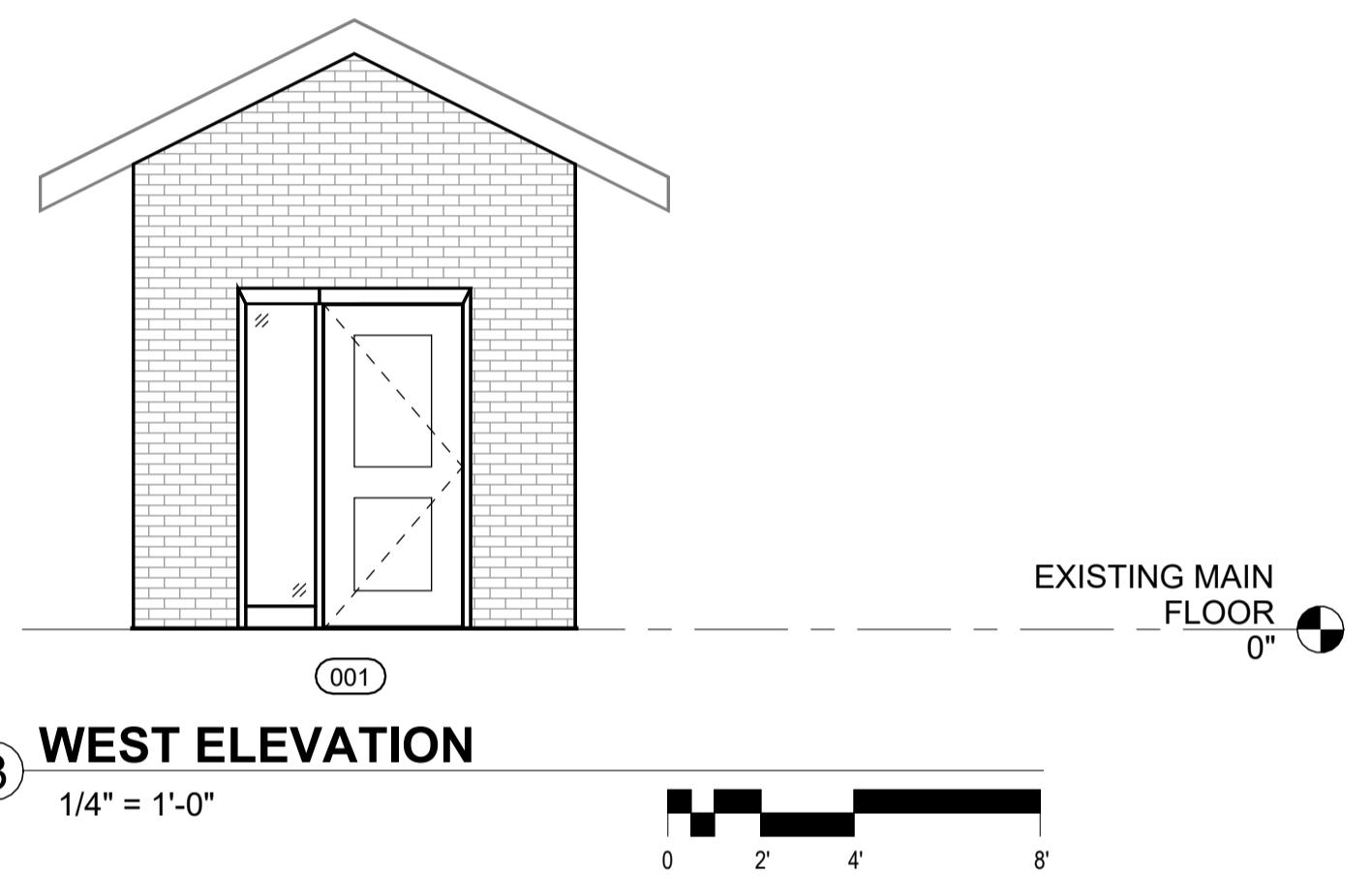
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Owner
Champaign County
1776 E Washington St.,
Urbana, IL 61802



REVISION SCHEDULE	
DATE	DRAWING SET TITLE
1.30.2026	95% CONSTRUCTION DOCUMENTS

CHAMPAIGN COUNTY -
SELECT BUILDING
DEMOLITION

1701 E Main St,
Urbana, IL 61802

Drawing Title

PARTIAL BUILDING
SECTIONS,
ELEVATION, AND
PLAN DETAIL

Expiration Date of Seal: 11-30-2026 BE Project No. 024002

Drawn By: Author

Drawing No.

A500

234



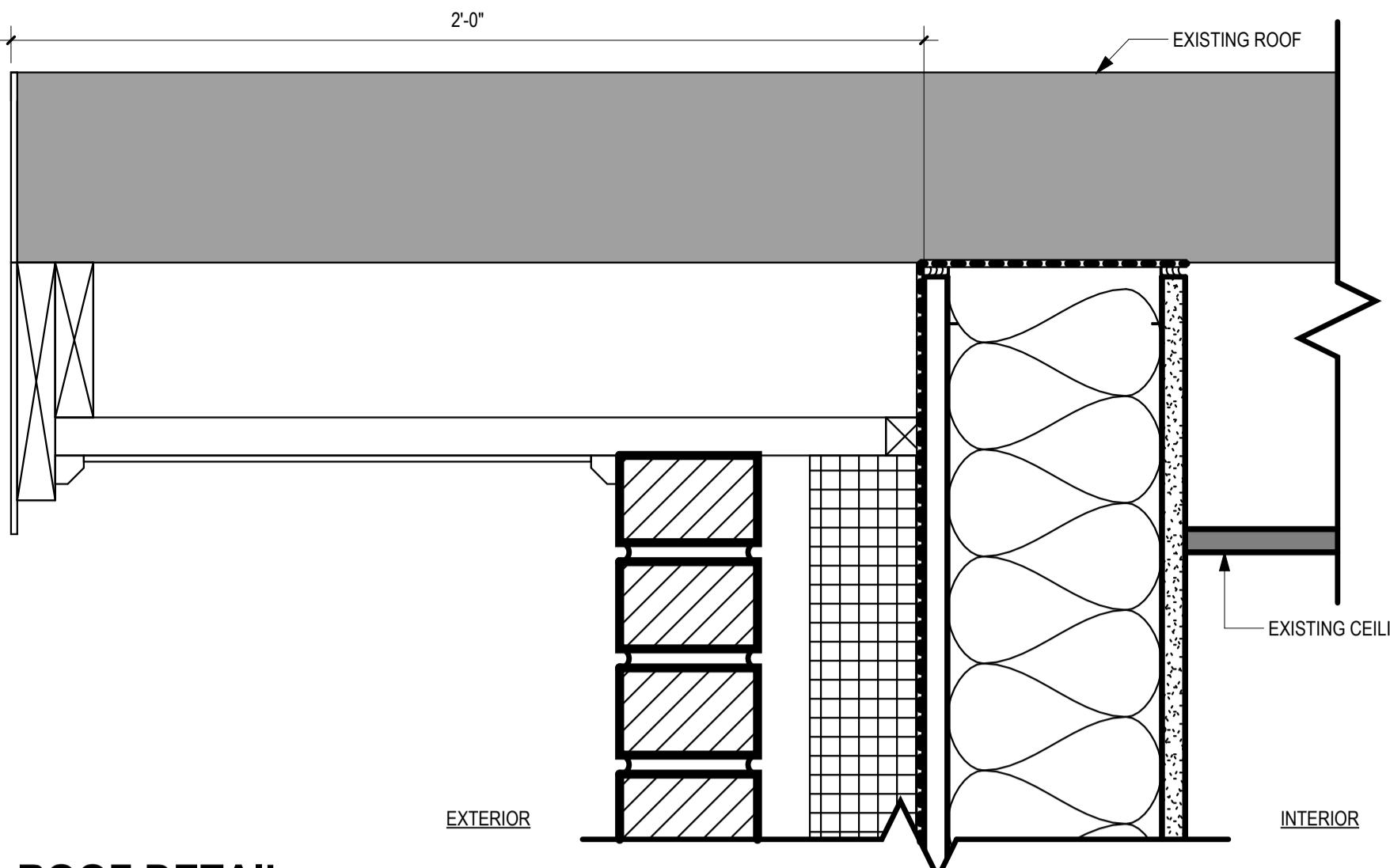
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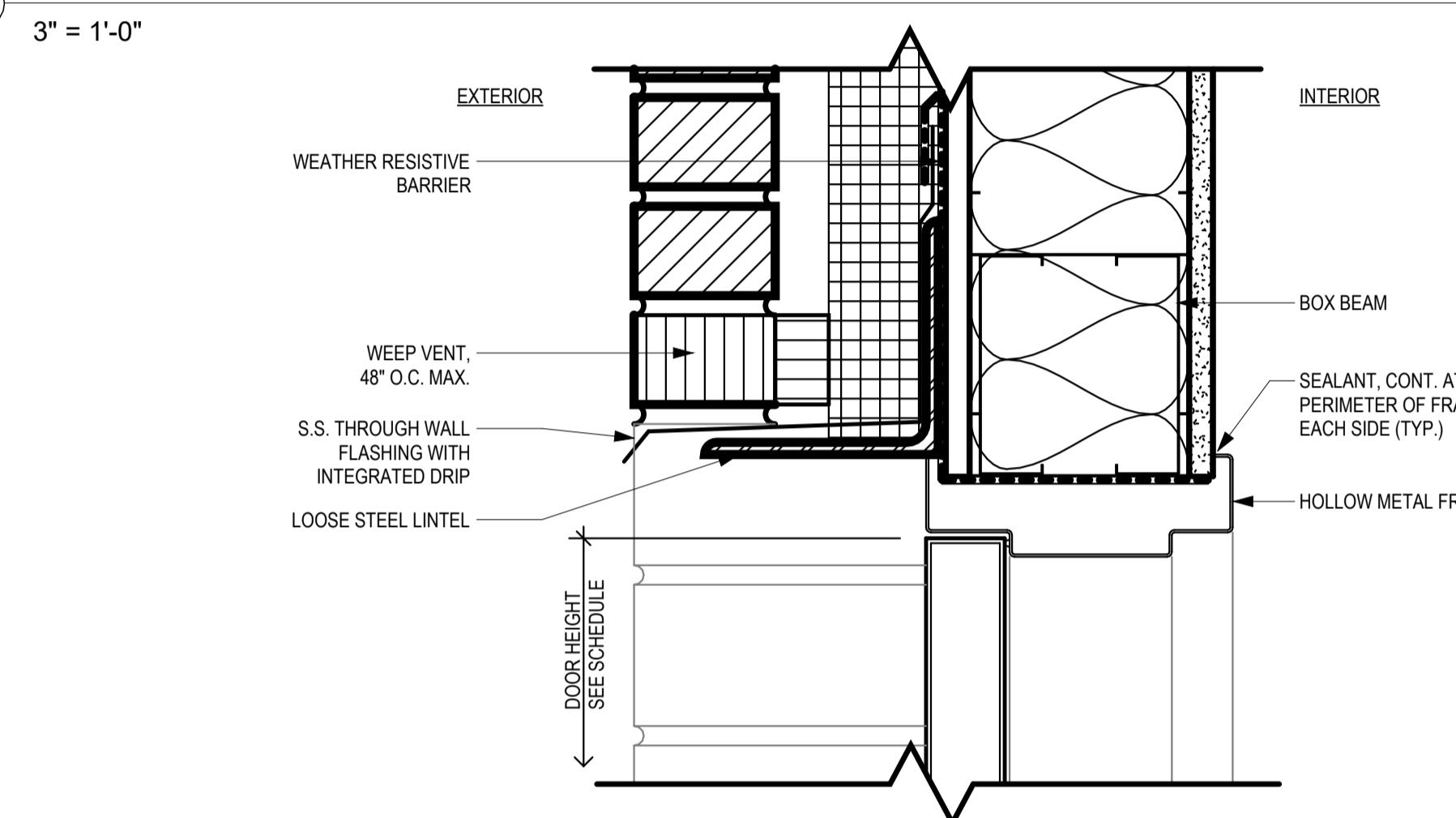
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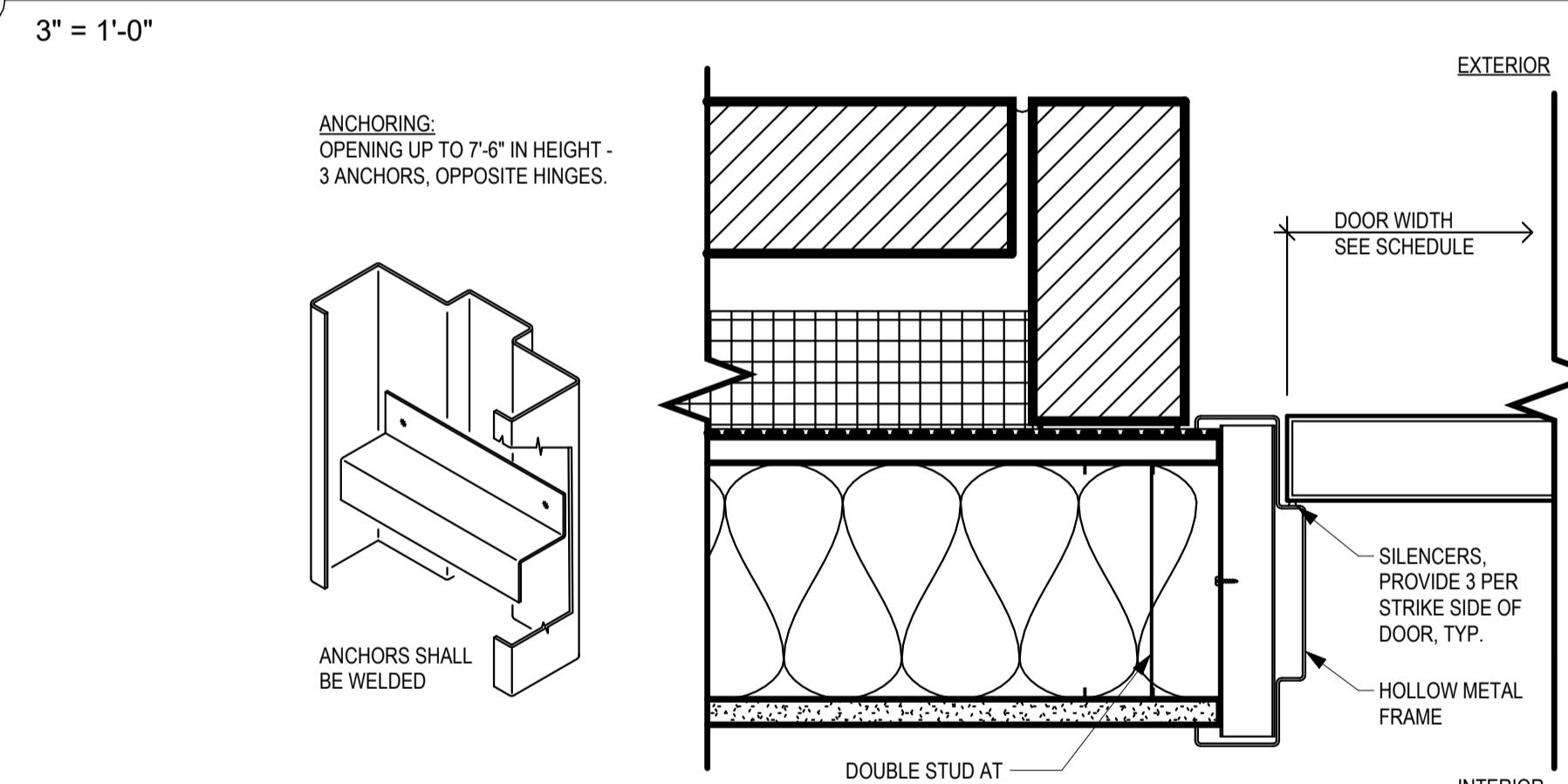
Owner
Champaign County
1776 E Washington St.,
Urbana, IL 61802



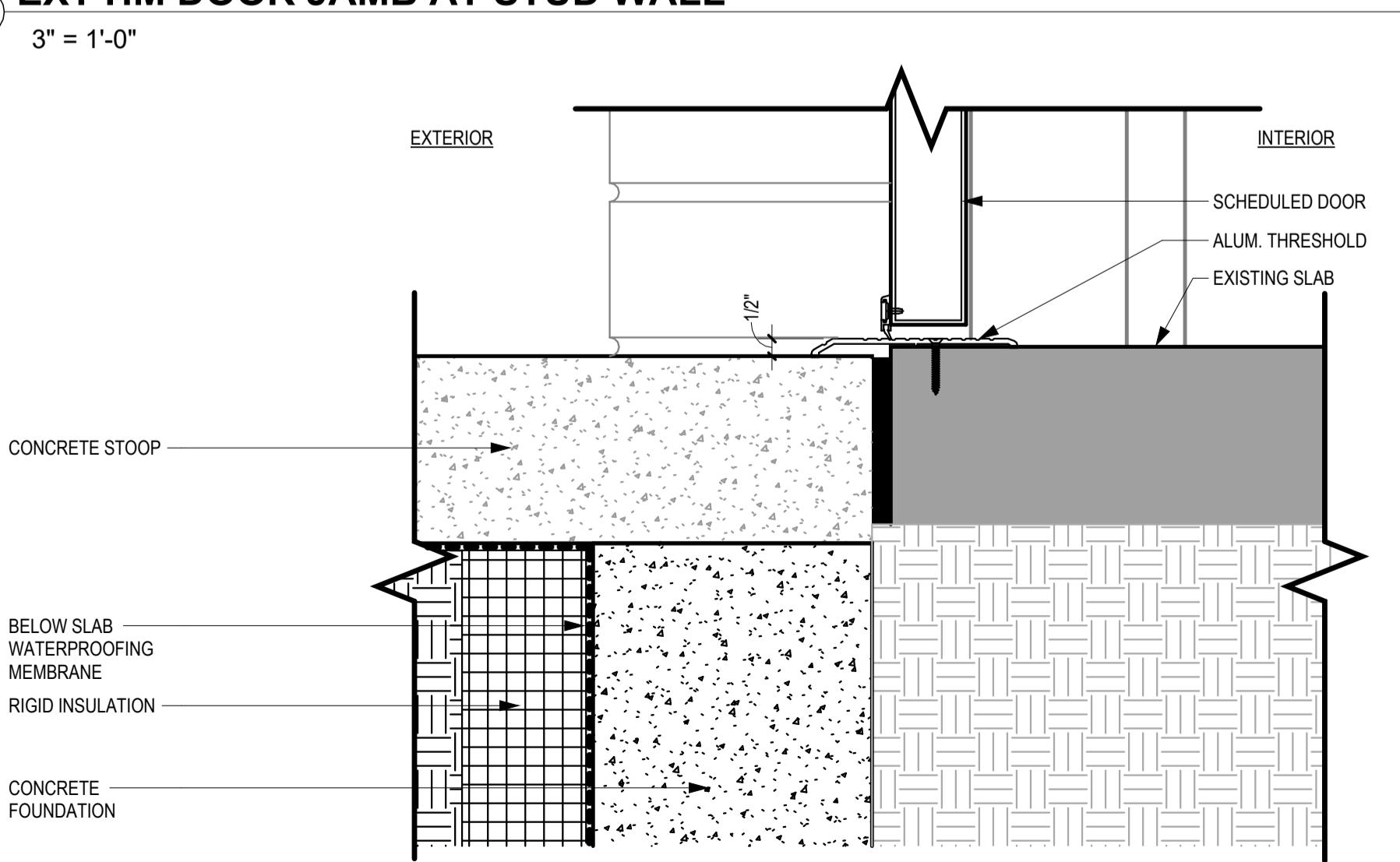
⑨ ROOF DETAIL



⑦ EXT HM DOOR HEAD AT STUD WALL

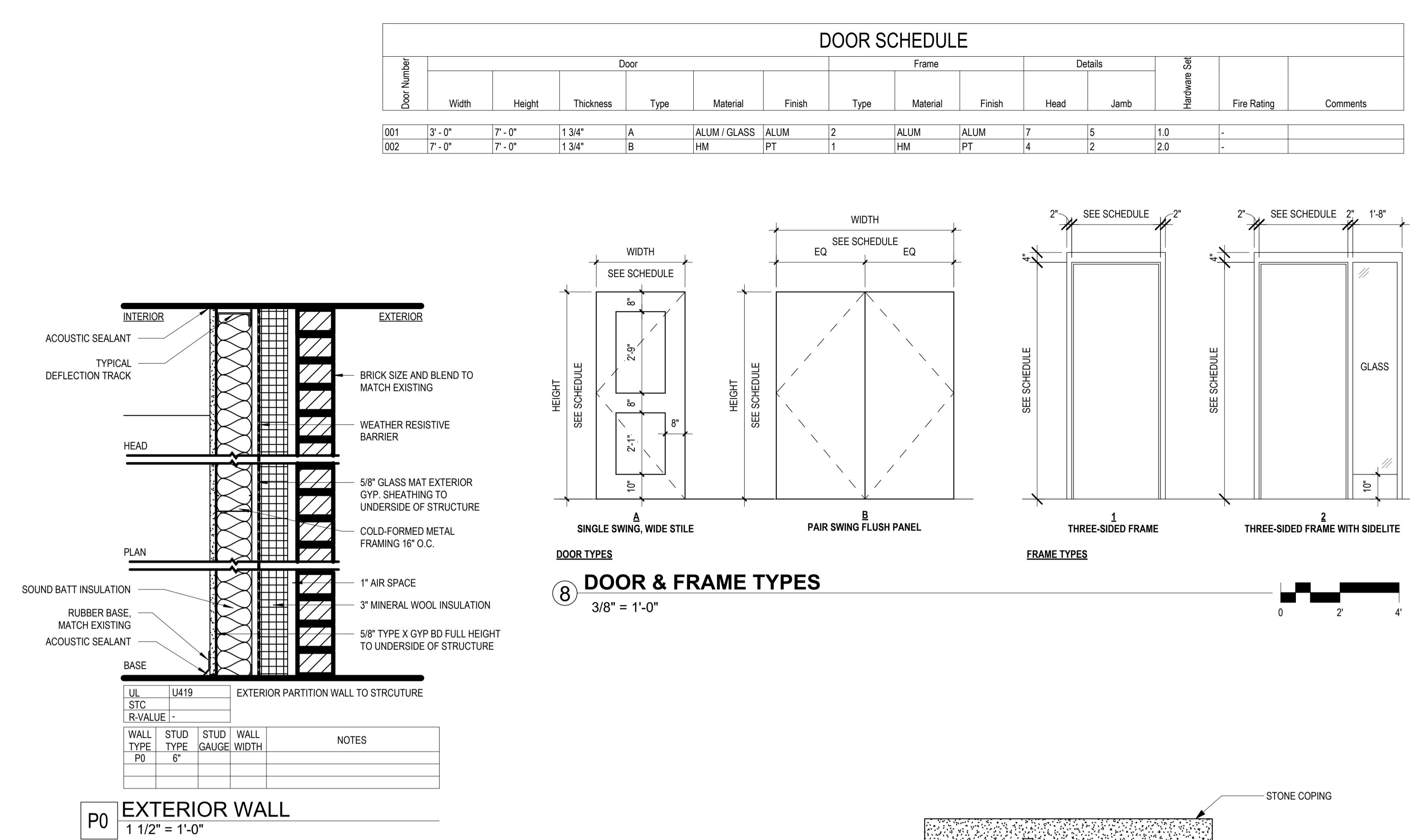


⑤ EXT HM DOOR JAMB AT STUD WALL



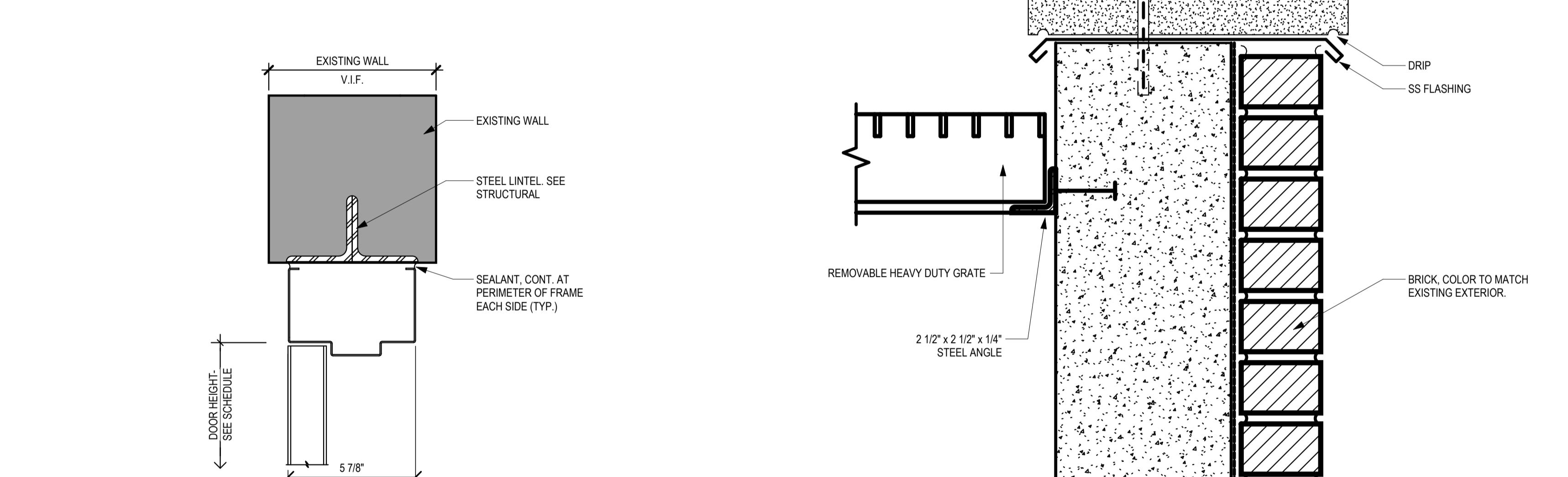
③ DOOR SILL AT STUD WALL (GROUND FLOOR)

3' = 1'-0"

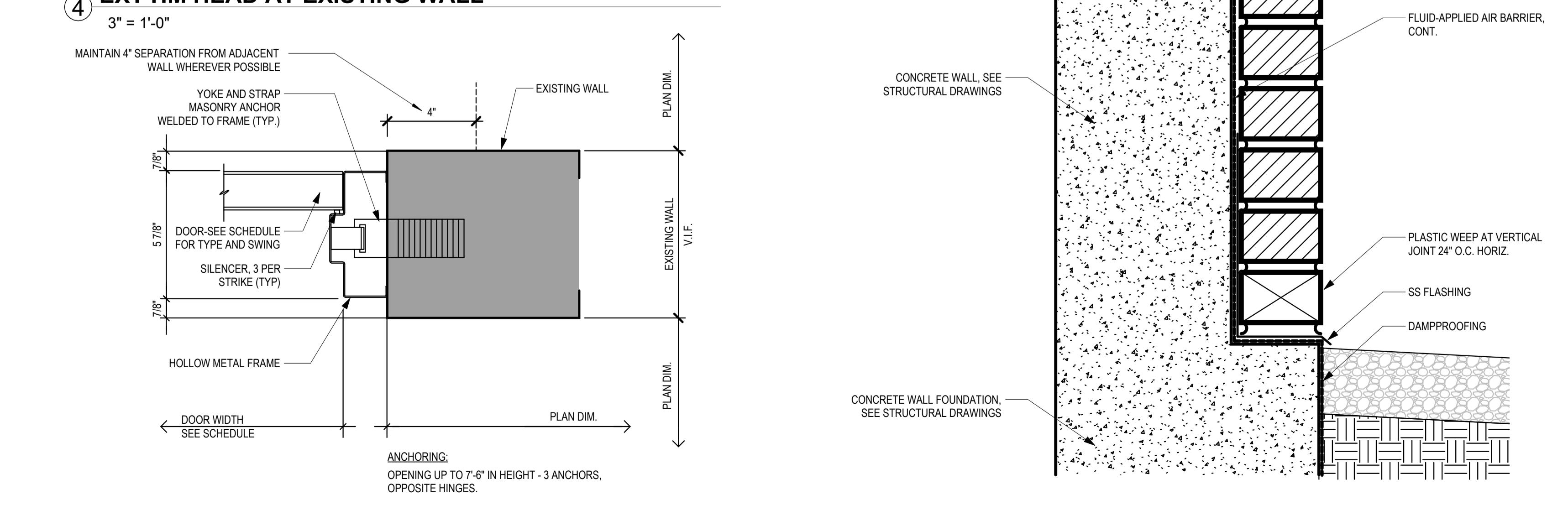


P0 EXTERIOR WALL

1 1/2" = 1'-0"

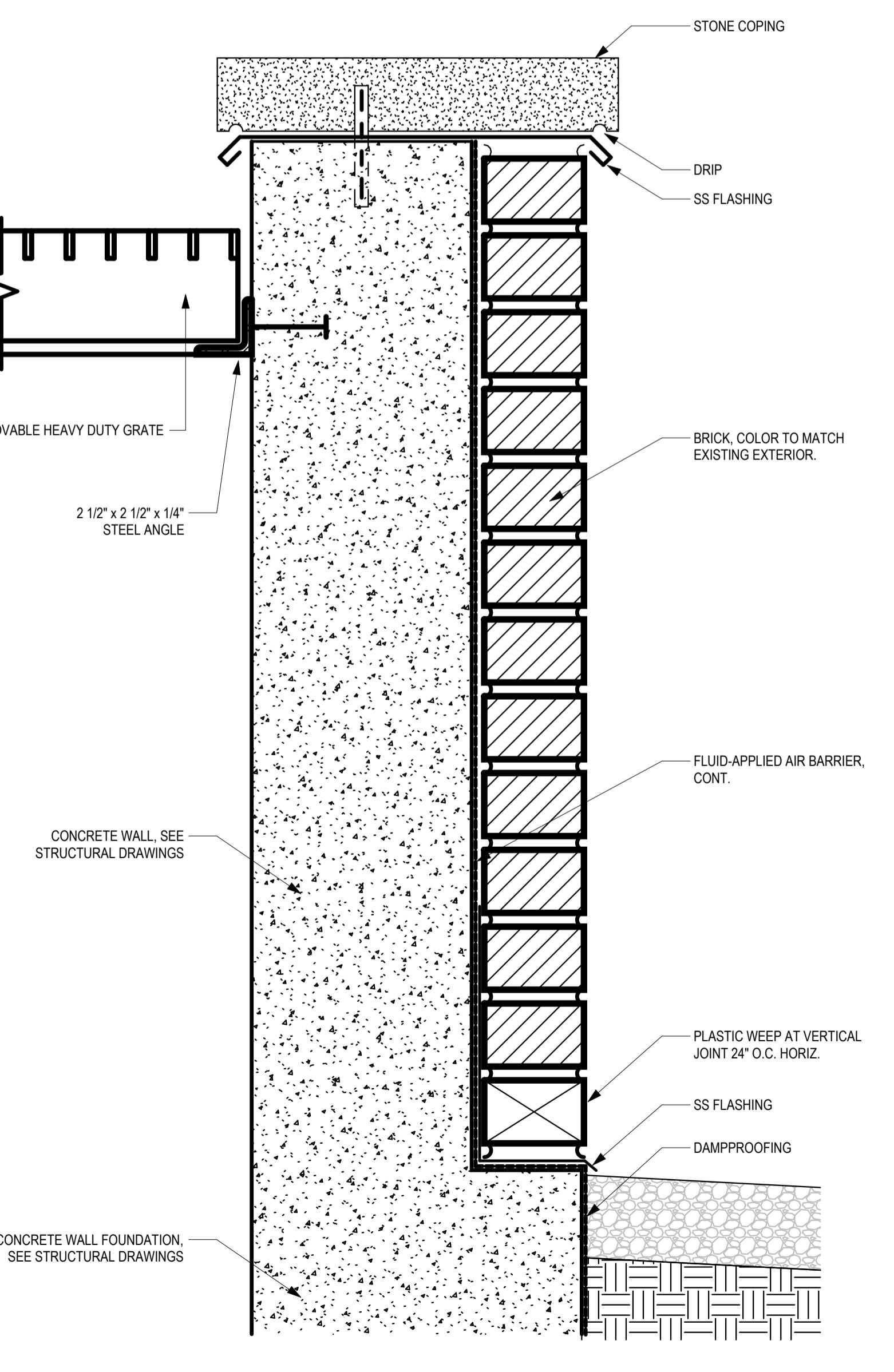


④ EXT HM HEAD AT EXISTING WALL



② EXT HM DOOR JAMB AT EXISTING WALL

3' = 1'-0"



① WALL AREA DETAIL

3' = 1'-0"

REVISION SCHEDULE

DATE DRAWING SET TITLE

CHAMPAIGN COUNTY -
SELECT BUILDING
DEMOLITION

1701 E Main St,
Urbana, IL 61802

Drawing Title

DOOR SCHEDULES
AND DETAILS

Expiration Date of Seal: 11-30-2026 BE Project No: 024002

Drawn By: Author

Drawing No: A900

235

Feasibility Study

Champaign County Courtroom Feasibility



Champaign County Courthouse

101 E. MAIN ST.,

URBANA, ILLINOIS 61801

Bailey Edward Project No. 025151

January 29, 2026

Feasibility Study

Champaign County Courtroom F

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APPENDICES:

- A. Concept Plan
- B. Opinion of Probable Construction Cost

1.0 Introduction and Project Information

The following report is a Feasibility Study Plan for the second floor Courtroom F space in the Champaign County Courthouse in Urbana, Illinois. It includes architectural and systems evaluations and recommendations and concept plans.

The Champaign County Courthouse is a historic Romanesque Revival 3-story building built in 1901. A large addition was constructed between 1996-2002, which today contains most of the actual courthouse functions used by the 6th Circuit. Courtroom F is located in the northeast portion of the building at the second level.

This report is the culmination of the team's visual evaluation and concept development conducted to date since the project team's space assessment of Courtroom F in October 2025.



FIGURE 1.0.1: Champaign County Courthouse Building. Google Images.

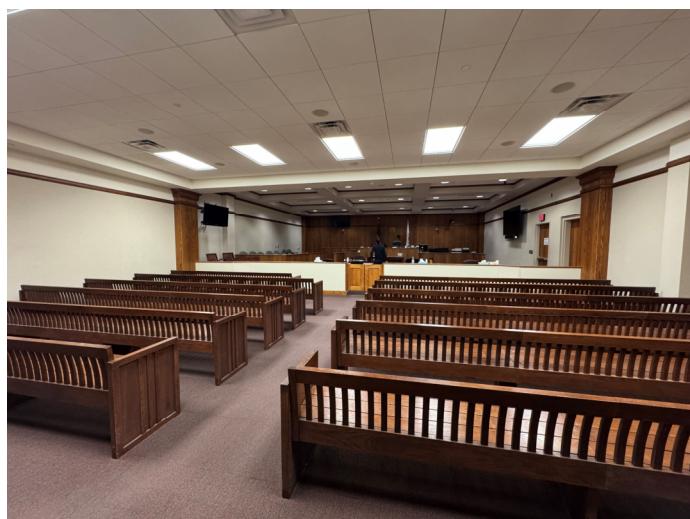


FIGURE 1.0.2: Existing Courtroom F on the Second Floor of the Courthouse Building.

2.0 Executive Summary

2.1 Scope of Work

This Feasibility Study examines the current state and use of Courtroom F on the second floor and outlines opportunities, constraints, priorities, and goals for continued use. This report explores two options to provide separate courtrooms for the judges currently sharing an existing courtroom. As the first option, we have reviewed the feasibility of dividing Courtroom F into two separate courtrooms to accommodate an additional judge appointment to Champaign County. As a second option, we reviewed the feasibility of a small courtroom at the first level in the space primarily occupied by the help center and some area currently occupied by the Circuit Clerk.

Bailey Edward reviewed existing documentation and visited the site to visually evaluate the existing conditions of the space. Two concept plans have been developed and an assessment of the current MEP systems is included in this report.

This report contains the following:

1. Architecture Evaluation and Systems Evaluation.
2. Concept Plan.
3. Conceptual Cost Estimate.

2.2 Condition

The Courtroom F space itself is in overall good condition—the interior flooring, walls, ceiling, and doors are all in good condition, as well as the lighting and furniture. The project team did not assess any other space for this project given the limited scope.

2.3 Program

Stakeholders identified that two separate courtrooms are needed in lieu of sharing the existing Courtroom F on the second floor of the building. The two courtrooms require separate access on the public side in addition to separate access from the secure side, both for the judges and the defendants. Only one courtroom would need to host a jury and seating for public.

2.4 Historic Preservation & Sustainability Objectives

The Champaign County Courthouse building is on the National Register of Historic Places as a contributing property to the Downtown Urbana Historic District, which was added to the National Register in 2019. It is recommended that all work should follow The Secretary of the Interior's Standards for the Treatment of Historic Properties. The Secretary of the Interior Standards offer four approaches to the treatment of historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. Ultimately, due to the need to modify the Courtroom F space, Rehabilitation has been identified as the treatment approach. The proposed work is at the interior of the 1990's era building, which is an addition to the historic courthouse. No modifications are proposed for the exterior of the facility. All proposed work is recommended to be reviewed by the State Historic Preservation Office (SHPO).

2.5 Cost

This Feasibility Study provides an opinion of the probable cost for converting Courtroom F into two separate functional courtrooms. The total estimated construction cost for converting Courtroom F, excluding design fees and owner costs, falls within the range of **\$420,000 to \$525,000 dollars**. This cost opinion takes a conservative cost approach and considers design contingency and escalation. See **Section 6.0** for further explanation and breakdown.

3.0 Code Analysis

The following building codes and standards:

- International Building Code (IBC), 2021
- International Existing Building Code (IEBC), 2021
- International Mechanical Code, 2021
- International Fuel Gas Code, 2021
- International Energy Conservation Code, 2021
- National Electric Code, 2017
- National Fire Alarm Code, 2016
- Americans with Disabilities Act (ADA) (Latest edition)
- Life Safety Code NFPA 101, 2015
- Illinois State Plumbing Code

The Courthouse building itself can be classified as A-3 assembly occupancy per the International Building Code. The group includes courtrooms and other assembly uses not classified elsewhere. The building consists of three levels: first floor, second floor, and third floor.

For future renovation there is no plan to change from the existing occupancy classification. The existing exterior walls are mostly composed of brick masonry, a noncombustible material. Therefore, the building may be classified as Type IIIA construction.

The Courthouse building is considered a Type IIIA construction, non-sprinklered building. It is considered non-sprinklered because only the 1996 addition is assumed to be sprinklered throughout the building. According to IBC Chapter 5, buildings with A-3 assembly occupancy classification are permitted to be a maximum building height of 65 feet, a maximum of three stories above grade, and an allowable area of up to 14,000 square feet.

For a renovation description, if the building becomes fully sprinklered throughout, which increases the allowable building heights and areas per the IBC Chapter 5 guidelines, then the building will be permitted to have a maximum height of 85 feet, and an allowable area of 56,000 square feet.

Use and Occupancy Classification (Chapter 3):

Classification of Occupancy

1. Existing Building:
 - a. A-3 Assembly
2. Renovation:
 - a. The occupancy classification is unchanged from the existing.

General Building Heights and Areas (Chapter 5):

Existing Building Description – Type IIIA Construction, Non-sprinklered

IBC Chapter 5: Allowable Building Heights and Areas			
Occupancy Classification	Allowable Building Height in Feet Above Grade	Allowable Number of Stories Above Grade	Allowable Area Factor in Square Feet
A-3 Assembly	65 FT	3	14,000 SF

Renovation Description – Type IIIA, Fully sprinklered throughout entire building

IBC Chapter 5: Allowable Building Heights and Areas			
Occupancy Classification	Allowable Building Height in Feet Above Grade	Allowable Number of Stories Above Grade	Allowable Area Factor in Square Feet
A-3 Assembly	85 FT	4	56,000 SF

In Section 507.7 Group A-3 Buildings of Type III and IV construction with not more than one story above grade plane and used as a place of worship shall not be permitted provided that the following criteria are met:

1. The building shall not have a stage other than a platform.
2. The building shall be equipped throughout with an automatic sprinkler system.
3. The assembly floor shall be located 21 inches or less from street or grade level and all exits are provided with ramps to street or grade level.
4. The building shall be surrounded and adjoined by public ways or yards not less than 60 in width.

Types of Construction (Chapter 6):

This report has classified the existing building as Type IIIA.

1. Type III construction allows exterior walls are of noncombustible materials.
2. Type III construction allows interior building elements that are any material permitted by code.

Fire Protection Systems (Chapter 9):

An automatic sprinkler system shall be provided for Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exist:

1. The fire area exceeds 12,000 square feet
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of discharge serving such occupancies.

3.1 Existing Building Layout

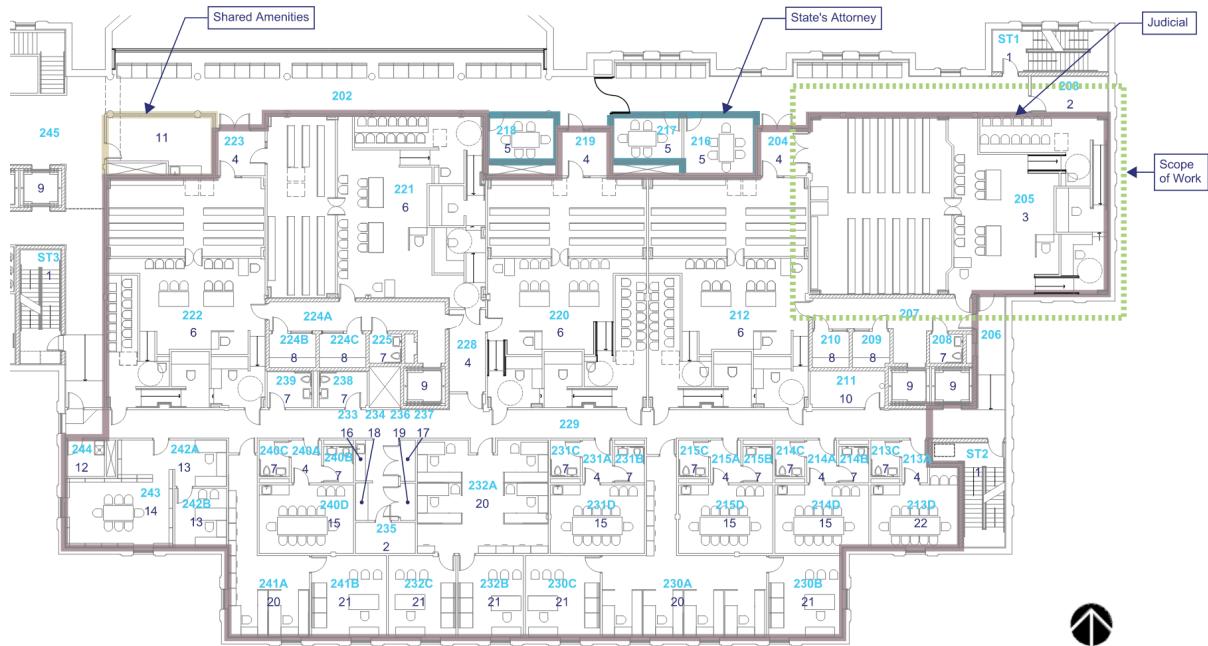


FIGURE 3.1.2 – Existing Second Floor East - Addition. Outlined in green is Courtroom F, see Section 5.0 for the concept plan diagram.

4.0 Recommendations

4.1 Historic Treatment Philosophy

The Champaign County Courthouse is currently listed on the National Register of Historic Places as a contributing property to the Downtown Urbana Historic District. The Courthouse is evaluated on the following criteria:

Criteria A: Properties significant for their association or linkage to events important in the past.

Criteria B: Properties significant for their association or linkage to persons important in the past.

Criteria C: Properties significant as representatives of the manmade expression of culture or technology. Information value

Criteria D: Properties significant for their ability to yield important information about prehistory or history.

The Champaign County Courthouse was applicable under Criteria C. The properties architectural features are the primary determining factor for the building's significance. Based on the Champaign County Courthouse inclusion on the National Register, the *Secretary of the Interior's Standards for the Treatment of Historic Properties* should be followed, and all work is subject to review by the Illinois State Historic Preservation Officer (SHPO) as appropriate. The standards offer four approaches to the treatment of historic properties: preservation, rehabilitation, restoration, and reconstruction; each of the standards has accompanying guidelines to follow. Selection of the appropriate approach is based on the four areas of consideration: Level of Significance, Physical Condition, Proposed Use, and Code requirements and other regulations. Rehabilitation is the most appropriate treatment given the current conditions and requirements of this project.

Physical condition: While it seems most of the original materials and features of the Champaign County Courthouse are intact, it is unknown what exterior and interior repairs are needed since that was not the focus of this Feasibility Study Plan.

Proposed Use: The proposed use of Courtroom F and alternative concept layout (see Section 5.0) at the Courthouse is consistent with the facility's current use. While the uses are consistent with the current building use, the requirements for these spaces and building codes have changed since the last rehabilitation/addition.

Code and other Regulations: Courtroom F was preliminarily evaluated against current health, life, safety/code and accessibility compliance requirements and did not identify any major issues. The presence of hazardous materials will need to be tested, identified, and removed if there are plans to disturb the material.

The current design offered with this feasibility study will not disturb the exterior of the facility. Additionally, the proposed revisions will occur within the 1990's addition and will not impact the history section of the courthouse. Based on the criteria referenced above, if the exterior historic character of the facility is impacted by the proposed design, the project team proposes following the Rehabilitation standard with its accompanying guidelines to follow:

"Rehabilitation- is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.*
2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.*
3. *Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*
4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*
5. *Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.*
6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where*

-
- possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
 8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
 9. New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
 10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

4.2 Systems Evaluation and Recommendations

The existing Courtroom F will be subdivided into two independent courtrooms along an east–west axis. The eastern portion of the space currently contains the judge's bench, jury box, counsel tables, clerk's desk, and court recorder area. The functional layout of this eastern courtroom is anticipated to remain largely unchanged; however, the ceiling system within this area will be replaced, requiring modifications to lighting, air distribution devices, audio/visual components, and fire protection elements. The western portion of the existing courtroom currently serves as the spectator seating area and will be converted into a new, fully functional courtroom with a judge's bench, two counsel locations, and an additional position adjacent to the judge intended for a clerk or court recorder.

4.2.1 Mechanical

The new full-height separating wall between the two courtrooms will extend to the underside of the structure above and will interfere with portions of the existing HVAC infrastructure. One existing VAV terminal unit, along with a minimal amount of associated high-pressure outdoor supply air ductwork upstream and low-pressure supply air ductwork downstream, will be relocated to accommodate the new wall location. These modifications will allow the two newly created courtrooms to continue to be served as independent thermal zones. All ceiling-mounted air distribution devices will be replaced in both courtrooms as part of the ceiling replacement, with new supply air diffusers coordinated with the revised room layouts and lighting. Existing return air ductwork and grilles are currently located at the far west end of the original courtroom; return air ductwork will be extended from this location to serve the eastern courtroom, and new return air grilles will be installed. Limited HVAC control wiring modifications may be required in conjunction with the VAV relocation, though existing thermostats may remain in place if they continue to provide appropriate zoning. Upon completion of the work, the HVAC systems serving both courtrooms will be tested and balanced to verify proper airflow and temperature control.

4.2.2 Electrical

The two existing branch circuits currently serving convenience receptacles in the spectator area will be retained and repurposed to serve convenience power in the newly created western courtroom. These circuits will be reconfigured as required to align with the new courtroom layout while maintaining code-compliant loading and receptacle spacing. Existing branch circuits serving the judge, jury, counsel, clerk, and recorder areas in the eastern courtroom will remain in service, with localized modifications as required to accommodate the new dividing wall. All lighting in both courtrooms will be replaced as part of the project. New lighting fixtures and new low-voltage lighting control systems will be installed to support independent operation of each courtroom and to comply with current energy code requirements. Existing unswitched lighting circuits will be extended as necessary to serve the new lighting layouts in both courtrooms. The existing 120-volt power serving the motorized projection screen will be evaluated and modified as required based on the final allocation of presentation equipment between the two courtrooms.

The existing fire alarm system includes two visual notification appliances within the original courtroom. These strobes will remain in place, with one serving each of the newly created courtrooms following the division. Minor circuit modifications may be required to ensure proper association and code-compliant coverage within each space; however, no new fire alarm devices are anticipated.

The eastern courtroom will retain its existing courtroom audio/visual and court vision systems, with limited modifications required to coordinate with the new dividing wall and ceiling replacement. A new, independent courtroom A/V and court vision infrastructure will be provided for the western courtroom. New A/V conduit pathways will be installed similar in size, routing, and functionality to those in the original courtroom. These pathways will extend from the A/V equipment location to the judge's bench, two counsel table locations, and one additional location adjacent to the judge intended for a future clerk or recorder position. Conduit infrastructure will be sized to support typical courtroom technology systems, including push-to-talk microphones, monitors, and associated equipment. Ceiling-mounted speakers and cameras in both courtrooms will be relocated or newly installed as required to coordinate with the revised ceiling layouts.

4.2.3 Plumbing

No plumbing work is anticipated as part of the courtroom division. The project does not include modifications to domestic water, sanitary, vent, or specialty plumbing systems, and no conflicts with plumbing infrastructure are currently expected.

4.2.4 Fire Protection

From a fire protection standpoint, the existing automatic sprinkler system serving the courtroom will be modified to accommodate the new dividing wall and ceiling replacement. Sprinkler heads in both the eastern and western courtrooms will be relocated as required to maintain proper spacing, coverage, and alignment with the new ceiling grid. The fire protection system will remain fully compliant with applicable codes following completion of the modifications.

4.3 Further Investigation

The following items were not included in this scope of work but should be investigated in a future design phase; this is not limited to the items on this list:

- Hazardous Materials Testing
- Full Accessibility Compliance

5.0 Concept

The design concept for Courtroom F are guided by a thoughtful evaluation of current spatial needs within the constraint of the existing spaces. This section is organized into two categories: Planning Considerations and Concept Plan.

5.1 Planning Considerations and Goals

Future design schemes for the Courthouse Building must balance existing conditions, historic sensitivity, and the programmatic requirements.

DESIGN DRIVERS

Considering the programmatic space needs and the Illinois Supreme Court Standards, the development of a concept followed the below design drivers:

- Accessibility: Complying with accessibility requirements to ensure people with disabilities have access.
- Security / Privacy: Separate secured entrances, physical separation/privacy between courtrooms and public access.

PROGRAMMING GOALS

The following goals are identified for the programmatic needs:

- Two separate courtrooms – dividing the one shared existing courtroom into two separate spaces.
- Secured entrance separate from the public entrance.

5.2 Concept Plan

The primary conceptual layout for the second floor Courtroom F proposes constructing a full-height wall in the center of the space in order to create two separate courtrooms. The courtroom on the east side of the wall will still allow for a jury while the courtroom on the west side of the wall will not have provisions for a jury. To establish secured entrance into each of these courtrooms, creating an enclosed vestibule around the existing secured doors located at the south wall will serve as a shared entry point for the judges to enter either of the courtrooms. On the north side of the east courtroom space, a separate entryway is created for separate public access into the east courtroom; this will mean demolishing a portion of the existing wall to create an opening.

Figure 5.2.1 demonstrates that this concept plan is feasible to divide the existing Courtroom F into two separate courtroom spaces with separate public and secure entrances. The elements drawn in red on the concept plan (Figure 5.2.1) represent where the new walls, 3-foot-wide doors, and furniture are to be located while the grey/black elements represent the existing walls, doors, and furniture to remain. In the east courtroom, the jury, judge, attorney, and witness stand can remain in their current position. The existing physical barrier between the spectators and court will need to be reconfigured and shifted east as shown in the concept plan; this also indicates that only two rows of spectator seating will fit in the east courtroom space.

In the west courtroom, a new judge, attorney, clerk, and witness stand can fit within the space along with a row of spectator seating at the back of the room. A short wall can be placed between the spectators and the court to provide a sense of separation and allow circulation on either side of the wall with simple openings.

It should be mentioned that it is desired to move one of the second-floor office functions to a chamber room located on the third floor which will allow one of the second-floor offices to be converted into a judge's chamber. This would allow the judge to move out of the law library so it can return to its function as a library. These changes will be handled in-house by the facility staff.

Refer to Appendix A for the scaled concept plan drawing.

Second Floor

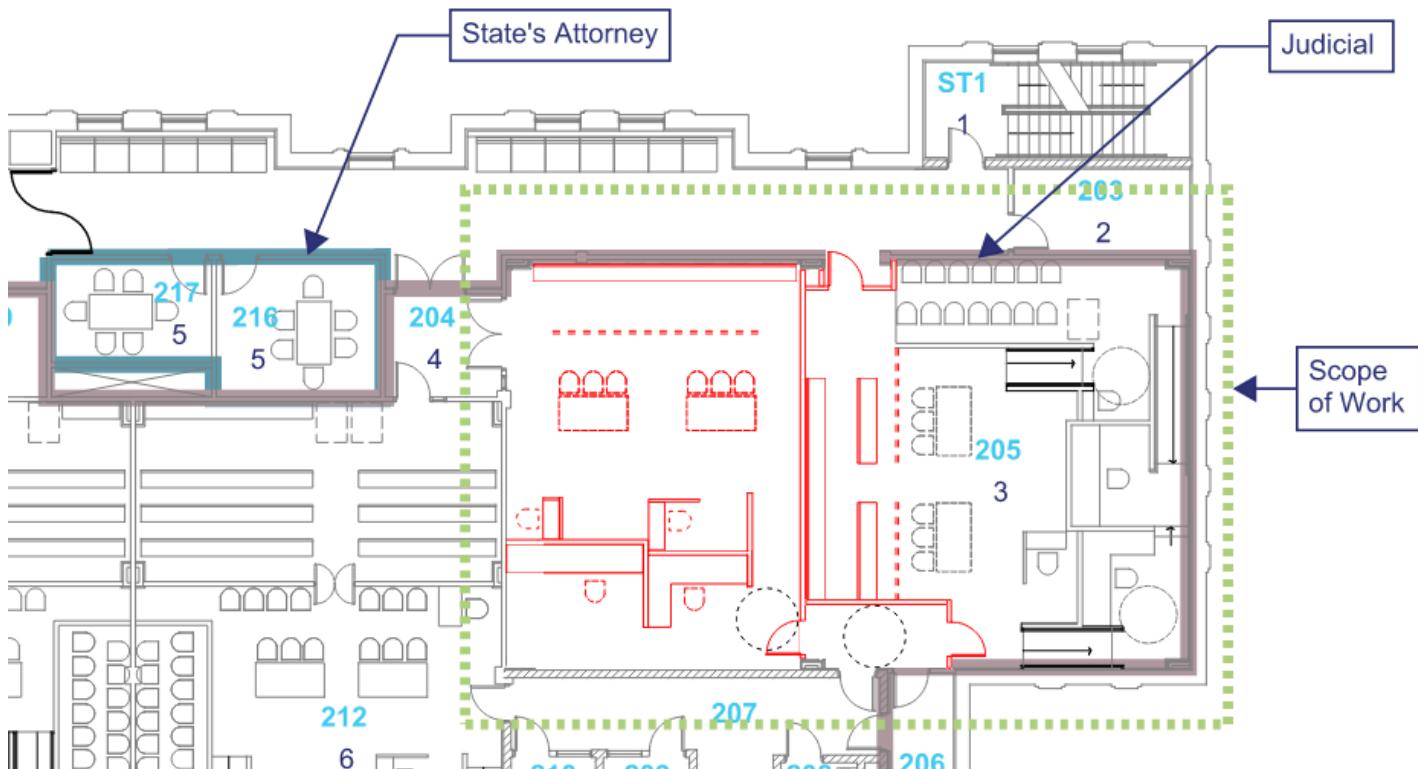


FIGURE 5.2.1 – Proposed Concept Plan showing the existing courtroom split into two separate courtrooms on the second floor. The red linework represents the new walls, doors, and furniture that would be provided.

6.0 Opinion of Probable Construction Cost

This Feasibility Study provides a high-level Opinion of Probable Construction Cost (OPCC) for the recommended scope of work identified in the concept plan for Courtroom F.

6.1 Concept Renovation Plan

The concept renovation plan encompasses 2,224 square feet of interior modifications within the existing Courtroom F to accommodate a second courtroom space on the second floor.

The renovation introduces a new full-height partition wall, finishes in both Courtroom F and proposed courtroom space, a new judge's bench, furniture, new doors and hardware, and MEP allowances for reconfiguration to suit the new layout.

The renovation cost is estimated at approximately **\$525,119.11, or \$236.11 per square foot**, based on square footage pricing, benchmarking and current market conditions. This cost includes allowances for general conditions, contractor fees, and design contingency.

For a high-level breakdown of the OPCC, refer to Appendix B. It should be noted that the estimate does not include scope for any audio-visual (A/V) systems.

6.2 Summary of Increases

There have been percentage-based increases added to the Opinion of Probable Construction Cost. These cost increases have been incorporated to account for project conditions that are expected to impact labor productivity and overall execution. These include a compressed project schedule requiring accelerated work activities, as well as restricted site access and enhanced security procedures associated with construction within an occupied courthouse. Collectively, these conditions are anticipated to result in increased labor costs, reduced efficiency, and additional coordination efforts, which have been reflected in the proposed adjustments.

In summary:

- Overtime for acceleration of work may be estimated at \$80,000 for the Concept Renovation Plan scope of work, not included in the total OPCC above.
- The "Security Procedure Impacts" increase is included as an additional 10% of the base scope price. This section has been added as a premium for the work taking place in an active courthouse and all of the security procedure that will be required or anticipated by the contractor.
- The "Non-standard Working Hours" increase is included as an additional 15% of the base scope price. This section has been added to take into account that the workers will likely be required to work alternate hours to account for the active court sessions taking place in the building during typical hours of construction.

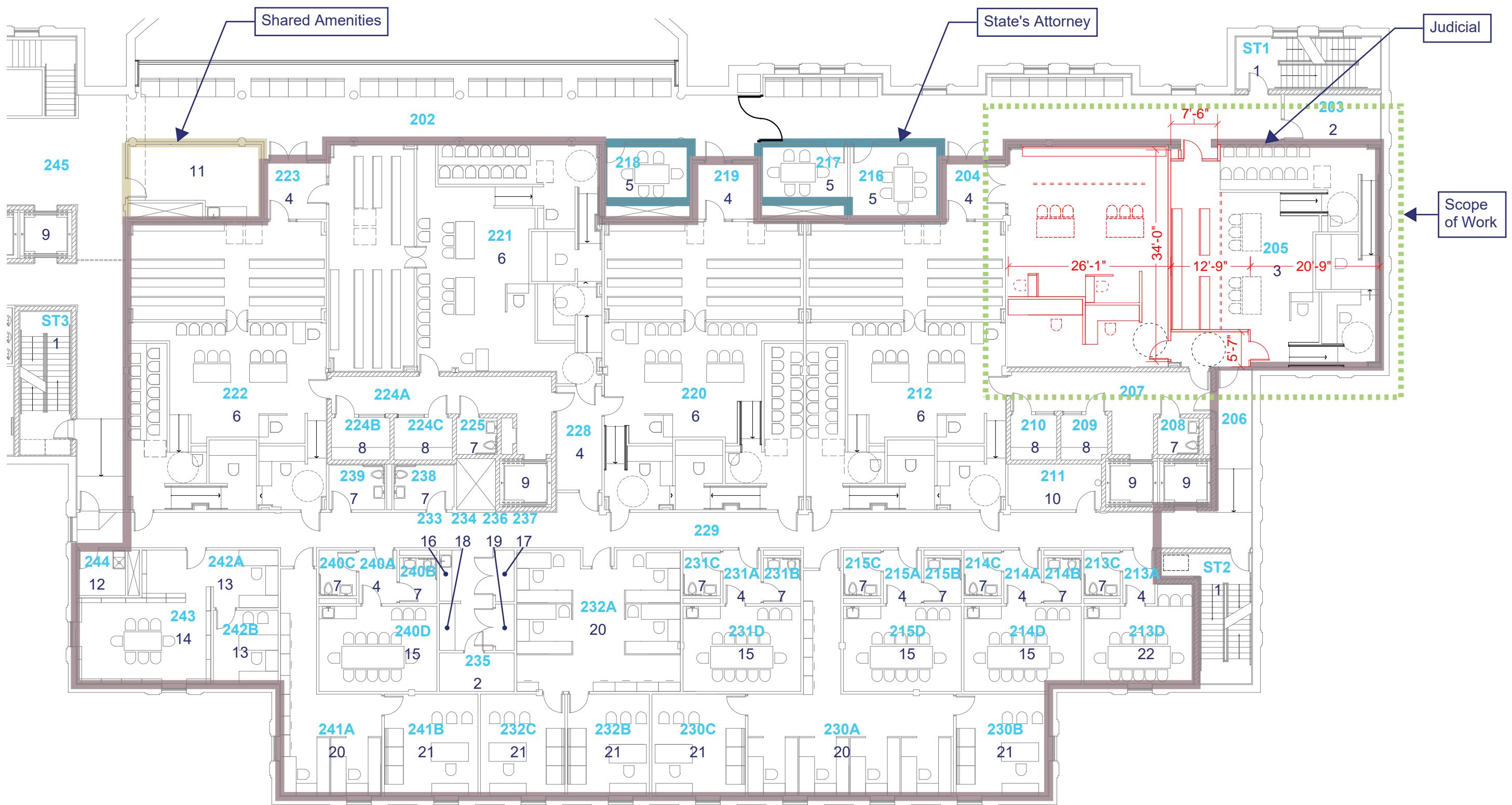
The OPCC does not include all project costs, such as design fees, agency fees, security, or pricing for any future additions work. The cost allows for single-prime, design/bid/build project delivery in conformance with Illinois procurement law. Escalation (4% per year) has been included assuming a compressed project schedule and that construction would begin in Fall 2026. A detailed OPCC provided throughout the design development of the project would give a more accurate estimate.

7.0 Project Schedule

Based on the recommended scope of work for the renovation of Courtroom F, the design process is anticipated to take 5-6 months to complete construction documents and issuing the documents for bid. The bidding process, award, and contract negotiation and execution are expected to take roughly 4 months. Construction duration could be 3-4 months and may depend on coordinating the construction work schedule with the building's hours of operation and court proceedings. It is expected that work will take place while the building is occupied.

Appendix A: Concept Plan

Includes the current concept plan (with dimensions) developed for this report study.



- | | | |
|---------------------------|----------------------------|-------------------------|
| 1. Stair | 8. Holding Room | 15. Jury |
| 2. Storage | 9. Elevator | 16. Coffee |
| 3. Large Court
Room | 10. Telecomm | 17. Electrical |
| 4. Vestibule | 11. Employee
Break Room | 18. Copy |
| 5. Attorney
Conference | 12. Janitor's
Closet | 19. Security |
| 6. Court Room | 13. Office | 20. Staff |
| 7. Toilet | 14. Law Library | 21. Judge's
Chambers |
| | | 22. Conference |

2nd Floor Plan East - Addition

Scale: 1/16" = 1-0"



bailey edward

Appendix B: Opinion of Probable Construction Cost

Includes, at a conceptual level, the OPCC breakdown. It should be noted that this estimate does not include scope for any audio-visual (A/V) or IT system improvements.

OPINION OF PROBABLE CONSTRUCTION COST

January 29, 2026
Feasibility Study

Champaign County
Courtroom F Feasibility Study
 Bailey Edward Project No: 025151

This opinion of probable construction cost represents Bailey Edward's cost opinion for this project and is made on the basis of our experience and qualifications. We have exercised professional care in the preparation of this cost opinion. Since we have no control over market conditions or bidding strategies, no guarantee is given or implied with this cost opinion.

DESCRIPTION	TOTAL
DIVISION 1 - GENERAL REQUIREMENTS	\$51,608.00
DIVISION 2 - EXISTING CONDITIONS	\$25,984.25
DIVISION 3 - CONCRETE	\$0.00
DIVISION 4 - MASONRY	\$0.00
DIVISION 5 - METALS	\$0.00
DIVISION 6 - WOOD, PLASTICS, COMPOSITES	\$75,000.00
DIVISION 7 - THERMAL AND MOISTURE PROTECTION	\$2,780.00
DIVISION 8 - OPENINGS	\$11,538.54
DIVISION 9 - FINISHES	\$117,400.32
DIVISION 12 - FURNISHINGS	\$0.00
DIVISION 23 - HEATING VENTILATING AND AIR-CONDITIONING	\$33,360.00
DIVISION 26 - ELECTRICAL	\$44,480.00
	Subtotal
	\$362,151.11
Performance Bond (3%)	\$10,864.53
Payment Bond (3%)	\$10,864.53
Overhead and Profit (10%)	\$36,215.11
Security Factors (10%)	\$36,215.11
Overtime (15%)	\$54,322.67
	Total
	\$420,095.29
Design Contingency (25%)	\$105,023.82
Total Including Contingency	\$525,119.11

Chiller Replacement
Champaign County Courthouse

The purpose of this study is to identify the size and cost of replacement chillers at the Champaign County Courthouse.

There are two existing chillers on the west end of the 2001 Courthouse Addition. These are packaged, air-cooled machines nominal 200 tons capacity. At 25 years of service, these machines have exceeded their 20-year service life and have experienced increasing numbers of failures. They need to be replaced.

The County's intent to construct an addition of some 43,000 square feet plus basement suggests new chillers should be nominal 310 ton machines. In other words, new chillers should not be the same capacity as the existing machines.

The actual tonnage available from such machines should be derated based on:

- Glycol anti-freeze in the chilled water system.
- Elevated condensing air temperature.
- Reduced chiller water discharge temperature.

The existing chillers are partially obscured from view by a mansard-style screen. The chillers are close enough to each other to fit between the screening. The existing configuration, however, allows for re-ingestion of condenser air which diminishes their effective capacity.

The existing roof structure in the vicinity of the chillers is a concrete slab on steel. It was designed to minimize vibration and noise issues. The existing chillers are installed on curbs installed on the concrete slab.

The proposed new chillers are significantly larger than the existing chillers in terms of dimensions and weight. This is due to:

- Mandated increases in efficiency.
- Mandated changes in refrigerant.
- The increase in tonnage.

Because of the size increase, the existing curbs are too small to accommodate the proposed new chillers.

New structural supports are proposed to elevate the new chillers above the roof surface. The chillers would be installed on vibration isolators. The weight of the chillers would be transferred directly to the structural columns. The concrete roof deck would continue to dampen airborne sound.

Chiller Replacement
Champaign County Courthouse

The proposed structural arrangement would require some of the mansard screening to be removed. This is necessary to provide adequate space around the machines for airflow and maintenance.

A vertical screen is proposed on the south side of the chillers to provide visual and acoustic screening. This matter of visual and acoustic screening must be thoroughly discussed in the design stage to achieve consensus.

Additional measures to mitigate chiller noise would include sound-deadening wraps on the compressors and short discharge tubes on the condenser fans. Note the chillers would not be located over the third floor courtroom.

Replacement of the chillers must be done in a phased manner to avoid leaving the building without mechanical cooling. The use of curbs to support the new chillers is not feasible for this reason.

The proposed structural supports will allow phasing of the work. One chiller would be removed and replaced with a new machine. Then the second chiller would be removed and replaced.

Phasing requires the work to be accomplished when cooling loads are manageable and when roof work can be properly executed. This suggests windows of March – April – May or September – October – November.

Multiple crane rentals would be needed to remove the existing chillers, erect new structural steel and install new chillers. The crane will be quite large and will involve shutdowns of Elm Street. Crane lifts are envisioned as weekend work.

The pumping scheme for the chillers would be revised to accommodate higher flows and to implement variable chiller water flow. This will increase chilled water system efficiency.

The chilled water system pumps currently employ variable flow technology and will continue to do so. Revisions to system flow would be part of the future building expansion.

Adequate power is available to drive the proposed chillers. This work will be phased and will involve new feeders installed from the basement to the roof.

The new chillers would be integrated into the Building Automation System.

Lead times on chillers are currently running at 16 weeks. This suggests an overall schedule on the order of 9 to 10 months from start of design to completion of construction depending on Board approvals.

December 23, 2025
Revised January 20, 2026

GHR No. 7702

Chiller Replacement
Champaign County Courthouse

Project Cost Estimate	
Estimated Construction Cost	\$1,521,520
Design Contingency 10%	\$152,152
Subtotal	\$1,673,672
Bid Contingency 5%	\$83,684
Subtotal "A"	\$1,757,356
Construction Contingency 10%	\$175,736
Subtotal	\$1,933,091
A/E Fee (8.16%) CDB Group 2R Applied to "A"	\$143,400
Reimbursables	
Site Observation, Hourly	\$5,500
Structural Design, Est	\$9,000
Architectural Design, Est	\$10,000
Advertising	\$1,200
Printing, Not Required	\$-0-
Total Reimbursables	\$25,700
Project Cost Estimate	\$2,102,191

December 23, 2025
Revised January 20, 2026

GHR No. 7702

Chiller Replacement
Champaign County Courthouse

Construction Cost Estimate Summary		
<u>Prime Contract</u>		
• General		\$271,000
<u>Subcontracts</u>		
• HVAC	\$983,000	
• Electrical	\$171,000	
• Ventilating	\$9,000	
• Plumbing	\$1,000	
• Fire Protection	\$0	
• Insulation	\$20,000	
• Test and Balance	\$33,000	
• Temperature Controls	\$9,000	
Total Subs	\$1,226,000	
2% Mark-Up	\$24,520	
Total Subcontracts		\$1,250,520
Total Construction Cost Estimate		<u>\$1,521,520</u>

OPINION OF PROBABLE COST - General

GHR Engineers & Associates, Inc.

RE: 7702
 Chiller Replacement
 Champaign County Courthouse
Prime Contract

X	Original 12/22/25

date printed: 01/30/26
 time printed: 7:29 AM
 prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 crane rentals in heating estimate, it may make better sense to have the General handle them				-\$0-
2.0 protect roof	1	ls	\$1,300.00	\$1,300
3.0 first chiller removed by heating				-\$0-
4.0 remove portions of the mansard, this is politically sensitive and needs discussion, WAG	1	ls	\$40,000.00	\$40,000
5.0 remove existing chiller curb and patch roof	1	ls	\$6,000.00	\$6,000
6.0 cut roof to allow install of new column tubes	4	ea	\$2,000.00	\$8,000
7.0 install new curb structural steel, WAG	1	ls	\$55,000.00	\$55,000
8.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
9.0 first chiller set by Heating				-\$0-
10.0 second chiller removed by Heating				-\$0-
11.0 removed remaining chiller curb and patch roof	1	ls	\$6,000.00	\$6,000
12.0 cut roof to allow install of new column tubes	2	ea	\$2,000.00	\$4,000
13.0 install new structural steel, WAG	1	ls	\$40,000.00	\$40,000
14.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
15.0 second chiller set by Heating				-\$0-
16.0 painting of any new / relocated steel, WAG	1	ls	\$10,000.00	\$10,000
17.0 pipe portals for power and control conduits	2	ea	\$1,000.00	\$2,000
18.0 cut and repair roof for portals	2	ea	\$1,200.00	\$2,400
19.0 allow for installation of screen on south of the building (where mansard currently exists, may need an acoustic consultant) total WAG	1	ls	\$20,000.00	\$20,000
20.0 remove roof protection	1	ls	\$1,200.00	\$1,200
21.0 allow for new conduit chases from basement to roof (try to go through small offices), WAG	3	ea	\$2,000.00	\$6,000
22.0 core drills	12	ea	\$200.00	\$2,400
23.0 drywall and patching	3	ea	\$4,000.00	\$12,000
24.0 painting of chases	3	ea	\$1,500.00	\$4,500
25.0 ceiling removal / replacement, allow	1	ls	\$1,500.00	\$1,500
26.0 remove roof hood curb and patch roof	1	ls	\$1,800.00	\$1,800
27.0 cut roof (concrete) and install new roof hood curb	1	ls	\$2,900.00	\$2,900
28.0 patch roof	1	ls	\$1,200.00	\$1,200
29.0 difficulty factor	1	ls	\$5,000.00	\$5,000

30.0 Miscellaneous	10.00%	\$23,920
31.0 Bond	1.50%	\$3,947
32.0 Insurance	1.50%	\$3,947

General Subcontract (actual) \$271,014
 General Subcontract (rounded) \$271,000

OPINION OF PROBABLE COST - Heating

GHR Engineers & Associates, Inc.

RE: 7702
 Chiller Replacement
 Champaign County Courthouse
 Subcontract

X	Original 12/22/25

date printed: 01/30/26
 time printed: 7:29 AM
 prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 mobilize	1	ls	\$9,000.00	\$9,000
2.0 drain one chiller, save glycol	1	ls	\$1,400.00	\$1,400
3.0 disconnect and remove chiller piping to suit new machine	1	ls	\$4,000.00	\$4,000
4.0 crane rental two day (to bring up steel and to remove one existing chiller) allow \$29,150 for Saturday and Sunday - per Uhlark e-mail	1	ls	\$29,200.00	\$29,200
5.0 protect roof (by General)				-\$0-
6.0 remove one chiller	1	ls	\$3,500.00	\$3,500
7.0 this allows general work to proceed on half the roof				-\$0-
8.0 after new steel work is done the first new chiller can be installed				-\$0-
9.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
10.0 set one new chiller on neoprene isolators on steel	1	ls	\$4,000.00	\$4,000
11.0 chiller material quote \$302,000 with 5% mark-up	1	ls	\$317,000.00	\$317,000
12.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
13.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
14.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
15.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
16.0 remove one chiller pump (15 HP) retain valves	1	ls	\$1,200.00	\$1,200
17.0 new chiller pump and trim, assume 20 HP	1	ls	\$7,000.00	\$7,000
18.0 install differential pressure transmitter provided by TC	1	ls	\$500.00	\$500
19.0 top off glycol, WAG (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
20.0 put new chiller into operation	1	ls	\$1,200.00	\$1,200
21.0 once new chiller is in operation the other existing chiller can be removed				-\$0-
22.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
23.0 remove the other existing chiller	1	ls	\$3,500.00	\$3,500
24.0 this allows general work to proceed on the other half of the structure				-\$0-
25.0 after structural work is done the second chiller can be installed				-\$0-
26.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
27.0 set second new chiller on neoprene isolators	1	ls	\$4,000.00	\$4,000
28.0 chiller material quote, \$302,000 with 5% mark-up	1	ls	\$317,000.00	\$317,000
29.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
30.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
31.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
32.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
33.0 remove remaining chiller pump (15 HP), retain valves	1	ls	\$1,200.00	\$1,200
34.0 new chiller pump and trim, assume 20 HP	1	ls	\$7,000.00	\$7,000
35.0 install differential pressure transmitter provided by TC	1	ls	\$500.00	\$500
36.0 top off glycol (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
37.0 put second chiller into operation	1	ls	\$1,200.00	\$1,200
38.0 allow for sound deadening blankets on compressors (this is apparently aftermarket)	4	ea	\$2,000.00	\$8,000
39.0 allow for sound tubes on condenser fans (this is apparently aftermarket), watch the esp limitation	40	ea	\$800.00	\$32,000
40.0 rotate engine exhaust discharge pipe to blow away from the chillers	1	ls	\$1,200.00	\$1,200
41.0 difficulty factor related to working in Courthouse	1	ls	\$4,000.00	\$4,000

42.0 Miscellaneous	10.00%	\$86,800
43.0 Bond	1.50%	\$14,322
44.0 Insurance	1.50%	\$14,322
Heating Contract (actual)		\$983,444
Heating Contract (rounded)		\$983,000

OPINION OF PROBABLE COST - Electrical

GHR Engineers & Associates, Inc.

RE: 7702
 Chiller Replacement
 Champaign County Courthouse
Electrical Subcontract

X	Original 12/22/25

date printed: 12/23/25
 time printed: 11:32 AM
 prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 retain existing 3,000 amp Square D Main Distribution Switchboard disconnect one existing chiller (remove parallel feeder 3#4/0 in 2"				-\$0-
2.0 C) remove existing 500 amp chiller switch and 400 amp spare, turn	1	ls	\$3,000.00	\$3,000
3.0 over to Owner	1	ls	\$1,000.00	\$1,000
4.0 new 700 amp switch, modify switchboard blank-offs, allow	1	ls	\$10,000.00	\$10,000
5.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground	280	ft	\$122.00	\$34,160
6.0 new chases by General Contractor				-\$0-
7.0 portals by General Contractor (move to Electrical)				-\$0-
8.0 final connection to chiller, single point connection	1	ls	\$2,800.00	\$2,800
9.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
10.0 run separate circuit to chiller evap heater	1	ls	\$4,000.00	\$4,000
11.0 provide new convenience outlets at chillers, may not need	2	ea	\$900.00	\$1,800
12.0 disconnect existing chiller pump (15 HP)	1	ls	\$900.00	\$900
13.0 allow for new switch and starter in existing MCC, may not need	1	ls	\$5,000.00	\$5,000
14.0 new circuit for new chiller pump (assume 20 HP)	1	ls	\$2,800.00	\$2,800
15.0 install VFD provided by TC Sub	1	ls	\$1,000.00	\$1,000
16.0 final connection to chiller pump (MCC is within sight) disconnect remaining chiller (remove parallel feeders 3#4/0 in 2"	1	ls	\$800.00	\$800
17.0 C)	1	ls	\$3,000.00	\$3,000
18.0 remove 500 amp chiller switch, turn over to Owner	1	ls	\$900.00	\$900
19.0 new 700 amp switch, modify switchboard blank-offs, allow	1	ls	\$10,000.00	\$10,000
20.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground	1	ls	\$34,160.00	\$34,160
21.0 new chase by General Contractor				-\$0-
22.0 portals by General Contractor (move to Electrical)				-\$0-
23.0 final connection to chiller, single point connection	1	ls	\$2,800.00	\$2,800
24.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
25.0 run separate circuit to chiller evap heater	1	ls	\$4,000.00	\$4,000
26.0 disconnect existing chiller pump (15 HP)	1	ls	\$900.00	\$900
27.0 allow for new switch and starter in existing MCC, may not need	1	ls	\$5,000.00	\$5,000
28.0 new circuit for new chiller pump (assume 20 HP)	1	ls	\$2,800.00	\$2,800
29.0 install VFD provided by TC Sub	1	ls	\$1,000.00	\$1,000
30.0 final connection to chiller pump (MCC is within sight)	1	ls	\$800.00	\$800
31.0 allow for miscellaneous work related to new chases	3	ea	\$1,100.00	\$3,300
32.0 surge protection at chillers, WAG	2	ea	\$3,000.00	\$6,000
33.0 grounding and bonding, bond chillers to structural steel	1	ls	\$3,000.00	\$3,000
34.0 difficulty factor	1	ls	\$4,000.00	\$4,000

35.0 Miscellaneous	10.00%	\$15,092
36.0 Bond	1.50%	\$2,490
37.0 Insurance	1.50%	\$2,490

Electrical Subcontract (actual)	\$170,992
Electrical Subcontract (rounded)	\$171,000

OPINION OF PROBABLE COST - Ventilating

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Ventilating Subcontract

X	Original 12/22/25

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LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 allow for relocating existing elev smoke vent (RH-5)	1	ls	\$3,800.00	\$3,800
2.0 extend boiler flue to two feet higher than chiller	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$780
4.0 Bond	1.50%	\$129
5.0 Insurance	1.50%	\$129

Ventilating Subcontract (actual)	\$8,837
Ventilating Subcontract (rounded)	\$9,000

OPINION OF PROBABLE COST - Plumbing

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Plumbing Subcontract

X	Original 12/22/25

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LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume hose bibb available in upper floor old building				-\$0-
2.0 allow for relocating existing 4" vent (may not need)	1	ls	\$1,000.00	\$1,000

3.0 Miscellaneous	10.00%	\$100
4.0 Bond	1.50%	\$17
5.0 Insurance	1.50%	\$17

Plumbing Subcontract (actual)	\$1,133
Plumbing Subcontract (rounded)	\$1,000

OPINION OF PROBABLE COST - Fire Protection

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Fire Protection Subcontract

X	Original 12/22/25

date printed: 12/23/25
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume sprinkler layouts unaffected by new conduit chases, verify!				-\$0-

2.0 Miscellaneous	10.00%
3.0 Bond	1.50%
4.0 Insurance not included	1.50%

Fire Protection Subcontract (actual)
Fire Protection Subcontract (rounded)

OPINION OF PROBABLE COST - Insulation

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Insulation Subcontract

X	Original 12/22/25

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LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 insulate chiller piping (on roof)	1	ls	\$6,000.00	\$6,000
2.0 insulate chiller piping (on roof)	1	ls	\$6,000.00	\$6,000
3.0 insulate chiller pump and piping (in basement)	1	ls	\$2,000.00	\$2,000
4.0 insulate chiller pump and piping (in basement)	1	ls	\$2,000.00	\$2,000
5.0 difficulty factor	1	ls	\$1,500.00	\$1,500

6.0 Miscellaneous	10.00%	\$1,750
7.0 Bond	1.50%	\$289
8.0 Insurance	1.50%	\$289

Insulation Subcontract (actual)	\$19,828
Insulation Subcontract (rounded)	\$20,000

OPINION OF PROBABLE COST - Temp Controls

GHR Engineers & Associates, Inc.

RE: 7702
 Chiller Replacement
 Champaign County Courthouse
Proprietary Alpha

X	Original 12/22/25

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LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 removals				
2.0 integrate one new chiller				
3.0 integrate chiller pump and VFD				
4.0 commission one new chiller and chiller pump				
5.0 integrate remaining new chiller				
6.0 integrate remaining new chiller pump and VFD				
7.0 commission remaining new chiller and chiller pump				
8.0 graphics				
9.0 new VFD's (turn over to Electrical Subcontractor)				
10.0 new communication wiring (extend unclear due to lack of answers from ACS)				
11.0 vendor quote Nathan Seymour 12.19.2025 (\$27,700 with 5% markup), looks low	1	ls	\$28,875.00	\$28,875
12.0 Miscellaneous			10.00%	\$2,888
13.0 Bond			1.50%	\$476
14.0 Insurance			1.50%	\$476
Temperature Control Subcontract (actual)				\$32,715
Temperature Control Subcontract (rounded)				\$33,000