

Project Manual Issued for Bidding

ARCHITECT'S PROJECT NUMBER 224153.00

2025 Interior Improvements: Tenant Build-Out

1300 Copperfield Avenue

Joliet, IL 60432

FOR THE

WILL COUNTY BOARD
302 N. CHICAGO STREET
JOLIET, IL 60432

March 17, 2025



**Will County
Illinois**

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WILL COUNTY, ILLINOIS

PURCHASING DEPARTMENT

JENNIFER BERTINO-TARRANT
WILL COUNTY EXECUTIVE

KEVIN LYNN
DIRECTOR

P. 815-740-4712
F. 815-740-4604
E. klynn@willcounty.gov

County Office Building
302 N. Chicago Street
Joliet, IL 60432

March 20, 2025

To Whom It May Concern:

You are invited to submit your sealed bid for 2025 Interior Improvements: Tenant Build Out at 1300 Copperfield Ave., Joliet, IL 60432.

Complete bid specifications are included, **which will act as the contract and must be filled out and returned as such.**

A **mandatory** pre-bid meeting is scheduled for 9:00 A.M., on Tuesday, April 1, 2025, at 1300 Copperfield Ave., Joliet, IL 60432. Please contact purchasing@willcounty.gov via email to pre-register your firm's attendance.

A 10% Bid Bond or Cashier's Check made payable to the Will County Treasurer MUST accompany your bid, or it will not be considered. Money Orders or Company checks will not be accepted.

Sealed bids will be received in the purchasing department, 2nd floor, Will County Office Building, 302 N. Chicago St., Joliet, IL 60432, **DUE NOT LATER THAN 10:00 A.M., "AS SO INDICATED BY THE TIME STAMP CLOCK OF WILL COUNTY", THURSDAY, APRIL 17, 2025.**

Bids will be publicly opened and read by the Will County Executive or her Representative at **10:05 A.M., THURSDAY, APRIL 17, 2025**, at the Will County Office Building, 302 N. Chicago Street, 2nd Floor, Joliet, IL. 60432. You are welcome to attend the meeting.

Should you have any questions regarding this bid, please contact the Will County Purchasing Department, in writing at purchasing@willcounty.gov.

We welcome your bid.

Sincerely,

Kevin Lynn

Kevin Lynn
Purchasing Director

**ADVERTISEMENT OF BID
2025 INTERIOR IMPROVEMENTS:
TENANT BUILD OUT
1300 COPPERFIELD AVENUE, JOLIET, IL 60432**

SEALED BIDS FOR 2025 INTERIOR IMPROVEMENTS: TENANT BUILD OUT AT 1300 COPPERFIELD AVENUE, JOLIET, IL 60432 WILL BE RECEIVED AT THE PURCHASING DEPARTMENT, 2ND FLOOR OF THE WILL COUNTY OFFICE BUILDING, 302 N. CHICAGO ST., JOLIET, IL 60432, UNTIL THE HOUR OF **10:00 AM, THURSDAY, APRIL 17, 2025.**

A MANDATORY ON-SITE, PRE-BID MEETING IS SCHEDULED FOR 9:00 AM, TUESDAY, APRIL 1, 2025, AT 1300 COPPERFIELD AVE., ST, JOLIET, IL 60432. PLEASE CONTACT THE WILL COUNTY PURCHASING DEPARTMENT TO PRE-REGISTER FOR THE MANDATORY PRE-BID MEETING VIA EMAIL AT purchasing@willcounty.gov .

SEALED BIDS WILL BE PUBLICLY OPENED AND READ BY THE WILL COUNTY EXECUTIVE OR HER REPRESENTATIVE AT **10:05 AM, THURSDAY, APRIL 17, 2025**, AT THE WILL COUNTY OFFICE BUILDING, 302 N. CHICAGO STREET, COUNTY BOARD ROOM, JOLIET, IL, 60432.

SPECIFICATIONS AND CONDITIONS OF THE BID ARE AVAILABLE AT www.willcounty.gov, www.demandstar.com, AS WELL AS THE PURCHASING DEPARTMENT, 2ND FLOOR, WILL COUNTY OFFICE BUILDING, 302 N. CHICAGO ST., JOLIET, IL 60432, (815) 740-4712 OR EMAIL purchasing@willcounty.gov.

THE TENDERING OF A BID SHALL BE CONSTRUED AS ACCEPTANCE OF THE PLANS AND SPECIFICATIONS. THE COUNTY OF WILL RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS OR PROPOSALS RECEIVED.

BY ORDER OF THE WILL COUNTY EXECUTIVE, JENNIFER BERTINO-TARRANT.

**INSTRUCTIONS TO BIDDERS
2025 INTERIOR IMPROVEMENTS:
TENANT BUILD OUT
1300 COPPERFIELD AVENUE, JOLIET, IL 60432**

You are invited to submit your sealed bid for:

2025 INTERIOR IMPROVEMENTS: Tenant Build Out AT 1300 COPPERFIELD AVE. JOLIET, IL 60432

A. SEALED BIDS:

Sealed bids will be received in the Purchasing Department, 2nd floor of the Will County Office Building located at 302 N. Chicago Street, Joliet, IL, 60432, **not later than 10:00 AM, Thursday, April 17, 2025.** **BIDS RECEIVED AFTER THIS TIME WILL NOT BE ACCEPTED.**

Sealed bids will be publicly opened and read aloud by the Will County Executive or her representative at **10:05 AM, Thursday, April 17, 2025** at the Will County Office Building, 302 N. Chicago Street, 2nd Floor, Joliet, IL, 60432.

Bids must be made in accordance with the instructions contained herein.

Bid forms shall be completely filled out either typewritten or in ink. The **complete set of contract documents must be submitted** in triplicate with **ONE ORIGINAL, TWO COPIES AND ONE ELECTRONIC COPY ON A DIGITAL STORAGE DEVICE, CLEARLY MARKED. BIDS WHICH FAIL TO SUBMIT THE ENTIRE COMPLETED BID PACKAGE AND CONTRACT CLEARLY MARKED WILL BE REJECTED, WILL BE NON-CONFORMING, AND WILL NOT BE ACCEPTED.**

Bids shall be submitted on the forms furnished by the County of Will in a sealed package, plainly marked, with the bidder's name, address, and the notation:

**SEALED BID: 2025 INTERIOR IMPROVEMENTS: TENANT BUILD OUT AT 1300
COPPERFIELD AVENUE, JOLIET, IL 60432**

BID RELEASED: FRIDAY, MARCH 21, 2025

PRE-BID MEETING: TUESDAY, APRIL 1, 2025 – 9:00 AM

QUESTIONS DUE: WEDNESDAY, APRIL 9, 2025 - 12:00 PM

ADDENDA RELEASE: FRIDAY, APRIL 11, 2025 - 4:00 PM

BID DUE: THURSDAY, APRIL 17, 2025 –10:00 AM

Bids shall be addressed to the Will County Purchasing Department, Will County Office Building, 302 N. Chicago Street, Joliet, IL, 60432.

B. SIGNATURE OF BIDS:

The **signature on bid documents must** be that of an authorized representative of bidder. An officer of or agent of the offering bidder who is empowered to bind the bidder in a contract shall sign the proposal and any clarifications to that proposal.

Each bidder, by making their bid, represents that he/she has read and understands the bidding documents.

Any bid not containing said signed documents shall be non-conforming and will be rejected.

C. BID SECURITY:

A 10% Bid Bond or Cashier's Check made payable to the Will County Treasurer shall accompany each bid, attached to the front cover, as a guarantee that if the bid is accepted, a contract will be entered into. **Money Orders or Company Checks will not be accepted.** The bid bond should be based on 10% of bid. The unsuccessful bidders' checks will be returned after the County has awarded the contract. The bid bond or cashier's check of the successful bidder will be returned after being replaced with their performance bond.

D. PERFORMANCE BOND:

A Performance Bond for the amount of the Contract will be required from the successful bidder and shall be valid throughout the life of the Contract. The Performance Bond will be returned at the completion of the Contract. If it is difficult to acquire a Performance Bond by the time of the Contract is to commence, the Purchasing Director will accept a letter notarized by the Insurance Carrier showing that such Bond is being processed.

E. PRIME CONTRACTOR CERTIFICATION:

Included in this bid package is a prime Contractor certification form. This form must be filled out and returned with your sealed bid package or the bid package **will not be accepted, deemed non-conforming, and shall be rejected.**

F. BIDDING PROCEDURES:

1. All bids must be prepared on the forms provided by the County and submitted in triplicate, with **ONE ORIGINAL AND TWO COPIES OF THE ENTIRE COMPLETED BID PACKAGE AND CONTRACT, CLEARLY MARKED,** in accordance with the Instructions to bidders. **Any bid packages not containing ONE ORIGINAL AND TWO COPIES OF THE ENTIRE COMPLETED BID PACKAGE AND CONTRACT, CLEARLY MARKED, shall be non-conforming and shall be rejected.** The entire bid package is the terms of the agreement.
2. A bid is invalid if it has not been deposited at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for bids or prior to any extension thereof issued to the bidders.
3. Unless otherwise provided in any supplement to the Instructions to bidders, no bidder shall modify, withdraw or cancel his bid or any part thereof for sixty days (60) days after the time designated for the receipt of bids in the Advertisement for bids. This duration is in place in case the selected contractor fails to perform in the first month following contract award.
4. Changes or corrections may be made in the bid documents after they have been issued and before bids are received. In such cases a written addendum describing the change or correction will be issued by the County of Will to all bidders recorded by the County of Will as having attended the mandatory pre-bid meeting. Such addendum shall take precedence over that portion of the documents concerned and shall become part of the bid documents. Except in unusual cases, addenda will be issued to reach the bidders at least five (5) days prior to date established for receipt of bids. **If the signed receipt of Addenda form is not included in the bid package and contract (EVEN IF NO ADDENDA ITEMS), the bid package and contract shall be non-conforming and shall be rejected.**
5. Each bidder shall carefully examine all bid documents and all addenda thereto and shall thoroughly familiarize themselves with the detailed requirements thereof prior to submitting a proposal. Should a bidder find discrepancies or ambiguities in, or omissions from documents, or should they be in doubt as to their meaning, they shall, at once, and in any event, not later than five (5) days prior to bid due date, notify the County of Will, who will, if necessary, send a written addendum to all bidders. All inquiries shall be directed to the Will County Purchasing Department

in writing at purchasing@willcounty.gov. After sealed bids are received, the bidder will make no allowance for oversight.

G. TAX EXEMPTION:

The County of Will is exempt from Federal, State and Municipal Taxes.

H. WORDS AND FIGURES:

Where amounts are given in both words and figures, the words shall govern. If the amount is not written in words, the unit cost will take precedence over the extended price in case of a discrepancy in the multiplication.

I. CONTRACT DURATION:

The Contract is to commence on or before May 1, 2025. Work must be **completed on or before November 28, 2025.**

J. REJECTION OF BIDS:

The bidder acknowledges the right of the County of Will to reject any and all bids received.

K. DEFAULT:

In case of default by the successful bidder, the County of Will may procure the articles or services from other sources and may deduct from any unpaid balance due the successful bidder any increase in cost to the county as a result of said default, or may collect against the bond or surety for excess costs so paid, and the prices paid by the County of Will shall be considered the prevailing market price at the time such purchase is made.

L. NON-DISCRIMINATION:

The Contractor shall at all times observe and comply with any law, statute, regulation or the like relating in any way to civil rights including but not limited to 775 ILCS 10/1.

M. EQUAL EMPLOYMENT OPPORTUNITY:

Contractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq., as amended and any rules and regulations promulgated in accordance therewith, including, but not limited to the Equal Employment Opportunity Clause, Illinois Administrative Code, Title 44, Part 750

N. PAYMENT PERIOD:

Given the scope of the project, one (1) invoice will be submitted to the County of Will, Facilities Department at time of project completion and upon acceptance of the repairs by the Will County Executive. Payment to the Contractor by the County shall be pursuant to the Local Government Prompt Payment Act.

O. RISK OF LOSS:

The Contractor shall assume all risks for loss or damages to materials whether stored on the site or elsewhere, or to tools or equipment owned or rented by the Contractor, and he shall maintain such insurance as he may deem necessary to protect himself against such loss or damage.

P. TYPES OF INSURANCE:

1. **Worker's compensation insurance.** The Contractor shall procure worker's compensation insurance as required by applicable state law for all of his employees who would be engaged in work on the project. In case any class of employees engaged in any work on the project under this Contract is not protected under the workmen's compensation statute, the Contractor shall provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected. In addition, the Contractor will provide employer's liability (coverage B) in the amount of \$1,000,000.00.

2. **Contractor's comprehensive general liability and property damage insurance.** Contractor's comprehensive general and property damage insurance shall be in an amount not less than \$1,000,000.00 for injuries including accidental death to any one person and not less than \$1,000,000.00 combined single limit bodily injury and property damage.
3. **County's protective liability insurance.** The Contractor shall protect the County or its assignee, if any, from contingent responsibility arising from the work, project operation performed under this Contract by adding these parties as named insured as a rider to the general Contractor specified comprehensive general liability policy shall be County of Will, 302 North Chicago Street, Joliet, Ill, 60432. All insurance policies shall contain a waiver of subrogation in favor of the County of Will.

Q. PROOF OF CARRIAGE OF INSURANCE:

1. The Contractor shall furnish the County at the time of bidding, with certificates showing the type, amount, class or operations covered, effective dates and dates or expiration of policies, which policies shall show compliance with the requirements of paragraph P. Such certificates shall also contain substantially the following statement: "The Insurance covered by this Certificate will not be canceled or materially altered except after 30 days written notice has been received by all named insured." **Any bid not containing said proof of insurance shall be nonconforming and shall be rejected.**
2. All policies shall substitute the word "Occurrence" for "accident" for both bodily and property damage. "Occurrence" shall be defined to mean an event or series of events or continuous or repeated exposure to conditions, which unexpectedly cause injury or damage during the policy period.
3. All insurance coverage shall be provided by Insurance Companies maintaining a financial strength and claims paying ability rating no lower than "A" minus "VIII" as rated by the 1999 or most current AM Bests Insurance Guide.

R. TAXES:

The Contractor shall pay all applicable sales, use, service use, service occupation, social security, and other taxes, levies, assessments, and duties, and shall make income tax deductions, all as required by local, State and Federal law.

S. CHOICE OF LAW AND VENUE:

The bid and this agreement shall be governed by the laws of the State of Illinois, without regard to conflict of law provisions. Venue for any cause of action related to this bid or agreement shall be the Twelfth Judicial Circuit, Will County, Illinois.

T. RIGHT OF THE COUNTY TO TERMINATE CONTRACT:

1. If any of the Provisions of the Contract are violated by the Contractor, or if the Contractor shall disregard applicable law, ordinances, rules or regulations or work requirements as spelled out in the bid specifications, or the Contractor shall be adjudged as bankrupt or make a general assignment for the benefit of creditors, or if a receiver should be appointed for the Contractor, or if at any time during the progress of the work the Contractor should allow any indebtedness to accrue for labor, material, or equipment, and should the Contractor fail to pay for labor, material, or equipment, and should the Contractor fail to pay and discharge the same within 5 days after demand made by the person or persons furnishing such labor, material or equipment, the County may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract. Unless within 10 days after the serving of such notice upon the Contractor, such violation or other matter shall have been corrected or satisfactory arrangement for correction have been made, the Contractor shall, upon the expiration of said 10 days, at County's option, cease and terminate work. The Contract shall then be null and void.

2. In the event of any such termination, the County shall immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the right to take over and perform the Contract; provided, however, that if the Surety does not commence performance thereof within 10 days from the date of the mailing of such Surety of notice of termination, the County may take over work and prosecute the same to completion by other Contract or by force. Contractor shall be liable to the County for any excess cost to the County occasioned thereby, and in such event the County may take possession of and utilize in completing the work, such material, equipment and the like as may be on the project site of the work and necessary, therefore.
3. Notwithstanding anything contained herein to the contrary, failure to comply with or perform the services required shall be cause for termination.
4. The County or its assign may terminate this agreement by giving the Contractor written notification of termination of this agreement by registered United States Mail, sufficient postage prepaid, return receipt requested, addressed to the Contractor at its address stated in the Contract, at least 14 days prior to termination, with service of such notice conclusively presumed to be received on date of dispatch. In such event, the Contractor shall only be entitled to receive a prorated payment for work actually and satisfactorily performed pursuant to the Contract through date of termination.
5. In the event that any of the Will County Offices should move to a different location, notice will be given a minimum of sixty (60) days prior to said move.

U. ILLINOIS FREEDOM OF INFORMATION ACT:

Any and all submissions to the County of Will become the property of the County of Will and these and any late submissions will not be returned. Your proposal will be open to the public under the Illinois Freedom of Information Act (FOIA) (5 ILCS 140*et seq.*) and other applicable laws and rules, unless you request in your proposal that we treat certain information as exempt. We will not honor requests to exempt entire proposals. You must show the specific grounds in FOIA or other law or rule that support exempt treatment. If you request exempt treatment, you must submit an additional copy of the proposal with exempt information deleted. This copy must tell the general nature of the material removed and shall retain as much of the proposal as possible. In the event the County of Will receives a request for a document submitted, the County of Will shall provide notice to contractor as soon as practicable. Regardless, contractor will be responsible for any costs or damages associated with defending your request for exempt treatment. Furthermore, contractor warrants that County of Will's responses to requests for a document submitted that is not requested to be exempt will not violate the rights of any third party.

Please be advised that if your proposal is accepted by the County of Will all related records maintained by, provided to, or required to be provided to the County of Will during the contract duration are subject to FOIA. In the event the County of Will receives a request for a document relating to contractor, its provision of services, or the arranging for the provision of services, the County of Will shall provide notice to contractor as soon as practicable and, within the period available under FOIA, contractor may then identify those records, or portions thereof, that it in good faith believes to be exempt from production and the justification for such exemption. Regardless, contractor will be responsible for any costs or damages associated with defending the request for exempt treatment. Furthermore, contractor will warrant that County of Will's responses to requests for a document relating to contractor, its provision of services, or the arranging for the provision of services, or the arranging for the provision of services, will not violate the rights of any third party.

Please be advised also that FOIA provides that any record in the possession of a party with whom the County of Will has contracted to perform a governmental function on behalf of the County of Will, and that directly relates to the governmental function and is not otherwise exempt under FOIA is considered a public record of the County of Will for purposes of FOIA. 5 ILCS 140/7(2). As such,

upon request by the County of Will (or any of its officers, agents, employees or officials), the contractor shall provide to the County of Will at no cost and within the timeframes of FOIA a copy of any "public record" as required by FOIA and in compliance with the provisions of FOIA. After request by the County of Will, contractor may then identify those records, or portions thereof, that it in good faith believes to be exempt from production and the justification for such exemption. Regardless, contractor will be responsible for any costs or damages associated with defending the request for exempt treatment.

V. ADVERTISEMENTS:

The bidder shall not place or maintain any signs, bills, posters, or other advertisements in or about the project sites and/or buildings, except by written permission of County of Will.

W. AWARDING OF BID:

The bid is expected to be awarded on or before April 24, 2025

The bidder acknowledges the following: (a) this advertisement for bids may be canceled for good cause when in the best interests of the County, (b) the County retains the right to reject any and all bids in whole or in part for good cause when in the best interests of the County, and (c) the County retains the right to reject any and all bids in whole or in part not in compliance with the advertisement for bids, to waive any non-material informalities or irregularities for any bid received, to accept the lowest responsible, responsive bid after all bids have been examined and evaluated, and to determine not to proceed to contract on any particular bid.

X. PRE-BID MEETING:

A mandatory **on-site, pre-bid meeting** is scheduled for **9:00 AM, TUESDAY, APRIL 1, 2025 at 1300 Copperfield Avenue, Joliet, IL 60432**, in order to examine site and building to satisfy yourself fully as to all the existing conditions under which you will be obliged to work. No allowance will be made subsequently, in this condition, on behalf of any Bidder for any error or negligence on the bidder's part. Please contact purchasin@willcounty.gov to pre-register for the pre-bid meeting.

Y. SUBMITTAL SUMMARY REQUIREMENTS:

Each of the following items **must** be submitted by the bid time mentioned herein in order that the bid will be considered. **Any bid not containing items 1-6 below shall be non-conforming and shall be rejected:**

1. 10% Bid Bond or Cashier's Check
2. Certificates of Insurance
3. **Signed** Copy of Prime Contractor Certification
4. **Signed** Bid Form
5. **Signed** Receipt of Addenda Form
6. Reference Form
7. One original, two copies and one digital copy on an electronic storage device of entire Bid Package.

PRIME CONTRACTOR CERTIFICATION

The undersigned hereby certifies that _____
Name of Company

is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of the Criminal Code of 1961.

Name of Representative

Title

Signature

Date

Note: A person who makes a false certificate commits a Class 3 Felony.

Sections 33E-3 and 33E-4 provide as follows:

33E-3. Bid-rigging. A person commits the offense of bid-rigging when he knowingly agrees with any person who is, or but for such agreement would be, a competitor of such person concerning any bid submitted or not submitted by such person or another to a unit of State or local government when with the intent that the bid submitted or not submitted will result in the award of a contract to such person or another and he either (1) provides such person or receives from another information concerning the price or other material term or terms of the bid which would otherwise not be disclosed to a competitor in an independent noncollusive submission of bids or (2) submits a bid that is of such a price or other material term or terms that he does not intend the bid to be accepted.

Bid rigging is a Class 3 felony. Any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation as provided in paragraph (2) of subsection (a) of Section 5-4 of this Code.

33E-4 Bid rotating. A person commits the offense of bid rotating when, pursuant to any collusive scheme or agreement with another, he engages in a pattern over time (which, for the purposes of this Section, shall include at least 3 contract bids within a period of 10 years, the most recent of which occurs after the effective date of this amendatory Act of 1988) of submitting sealed bids to units of State or local government with the intent that the award of such bids rotates, or is distributed among, persons or business entities which submit bids on a substantial number of the same contracts. Bid rotating is a Class 2 felony. Any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation as provided in paragraph (2) of subsection (a) **of Section 5-4 of this Code.**

Possible violations of Section 33 can be reported to the Office of the Will County State's Attorney at (815) 727-8452



WILL COUNTY, ILLINOIS

PURCHASING DEPARTMENT

Bid Form

1300 Copperfield Interior Project

#2025-77

Name _____ F.E.I.N> # _____
 Address _____
 City _____ State _____ Zip _____
 Contact Person _____ Phone _____
 Email Address _____

THIS IS NOT AN ORDER

Will County Agency Name:

For additional information contact the Will County Purchasing Department at purchasing@willcounty.gov

The bidder proposes to provide the products and/or services in accordance with the specifications attached herein.

Bid Checklist. Please ensure all required documents listed below are included in your response:

- ___ 10% Bid Bond or Cashier's Check
- ___ Certificates of Insurance
- ___ **Signed** Copy of Prime Contractor Certification
- ___ **Signed** Bid Form
- ___ **Signed** Receipt of Addenda Form
- ___ Reference Form
- ___ One original, two copies and one digital copy on an electronic storage device of entire Bid Package.

DESCRIPTION	BID AMOUNT
LUMP SUM AMOUNT:	\$
TOTAL BID AMOUNT WRITTEN IN WORDS. IN CASE OF DISCREPANCY, THE AMOUNT IN WORDS SHALL GOVERN.	

Alternate Bid 1: Provide Lighting Replacement on Level 300 and 400 Corridors.	
ADD \$ _____.	



WILL COUNTY, ILLINOIS

PURCHASING DEPARTMENT

Bid Form

1300 Copperfield Interior Project

#2025-77

UNIT PRICES

Additional work of the following categories shall be included in Scope of Work and paid for using Allowance Dollars included in Lump Sum amount. The following Unit Prices, which shall include all expenses, including overhead and profit, shall determine the extent of work to be performed.

PDESCRIPTION	BID AMOUNT
Provide VAV unit without building controls:	\$/EA
Provide VAV unit with controls	\$/EA
Remove Carpeting, prep floor and install new carpet tile flooring	\$/SF
Remove resilient wall base and install new 4" resilient wall base	\$/LF

Signed By: _____

Title: _____



WILL COUNTY, ILLINOIS

PURCHASING DEPARTMENT

Reference Form

1300 Copperfield Interior Project

#2025-77

Please list three (3) references, other than the County of Will, that you have done similar work, service or supplied similar products to:

Entity: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Contact Person: _____

Email Address: _____

Entity: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Contact Person: _____

Email Address: _____

Entity: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Contact Person: _____

Email Address: _____



WILL COUNTY, ILLINOIS

PURCHASING DEPARTMENT

Addendum Form

1300 Copperfield Interior Project

#2025-77

Name _____ F.E.I.N> # _____

Address _____

City _____ State _____ Zip _____

Contact Person _____ Phone _____

Email Address _____

THIS IS NOT AN ORDER

Will County Agency Name:

For additional information contact the Will County Purchasing Department at purchasing@willcounty.gov

Addendum Receipt: Receipt of the following Addendum to the Bidding Documents is hereby acknowledged:

No. _____, dated _____, signed _____

Addendum Receipt: Receipt of the following Addendum to the Bidding Documents is hereby acknowledged:

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LATE BIDS CANNOT BE ACCEPTED!

<u>SEALED BID DOCUMENT</u>	
Vendor Return Address:	
BID #:	2025-77 1300 Copperfield Interior Project
DUE DATE:	4/17/2025
DUE:	10:00 A.M.
DATED MATERIAL-DELIVER IMMEDIATELY	
WILL COUNTY PURCHASING DEPARTMENT 302 N. CHICAGO ST., 2ND FLOOR JOLIET, IL 60432	

PLEASE CUT OUT AND AFFIX THIS BID LABEL
(ABOVE) TO THE OUTERMOST ENVELOPE OF YOUR
SEALED BID TO HELP ENSURE PROPER DELIVERY!

LATE BIDS CANNOT BE ACCEPTED!



WILL COUNTY, ILLINOIS

PURCHASING DEPARTMENT

No Bid Form

Please note: This form is only required if you are not bidding.

Solicitation Name/Number: _____

Reason for not bidding:

- | | |
|--|--|
| <input type="checkbox"/> Not enough time to respond | <input type="checkbox"/> Unable to compete |
| <input type="checkbox"/> Not Applicable to company | <input type="checkbox"/> No time to complete work |
| <input type="checkbox"/> Unable to obtain required insurance | <input type="checkbox"/> Unable to meet specs/requirements |
| <input type="checkbox"/> Unable to obtain required bonding | |
| <input type="checkbox"/> Other (please detail below) | |

Suggestions:

Company Name: _____

Contact Name: _____

Address: _____

Phone: _____

Email: _____

Date: _____

Please retain our information for future solicitations: Yes No

Verify that all of your Illinois Sales Tax Exemption Certificate information is correct

- ✓ If not, contact us immediately.
- ✓ **Do not discard** - your Illinois Sales Tax Exemption Certificate is an important tax document that authorizes you to purchase tangible personal property for use or consumption tax-free.



02/02

OFFICIAL DOCUMENT State of Illinois - Department of Revenue OFFICIAL DOCUMENT

Illinois Sales Tax Exemption Certificate

WILL COUNTY

302 N CHICAGO ST
JOLIET IL 60432-4078

Sales Tax Exemption Certificate

Issue date: 02/11/2025	Sales Tax Exemption	E99925737
Expiration date: 03/01/2030	Organization type:	Governmental

This entity is authorized under the Retailers' Occupation Tax Act to purchase tangible personal property for use or consumption tax-free.

 ILLINOIS REVENUE
Handwritten signature
Director

OFFICIAL DOCUMENT - DO NOT DESTROY

**SECTION 00 43 25
PROPOSED SUBSTITUTIONS**

PROPOSED SUBSTITUTIONS

1.01 SUBSTITUTION INFORMATION

- A. Project: 2025 Interior Improvements: Tenant Build Out at 1300 Copperfield Ave. for Will County.
- B. _____ Contractor,
(Firm Name of Bidder)
- C. All bids shall be based upon the provisions of the proposed Contract Documents and not upon substitutions proposed herein.
- D. Owner reserves the right to accept or reject all such substitutions at its sole discretion and in the best interest of Will County.
- E. Bidders desiring to make substitutions for "proprietary brands" specified shall identify the brand, make, and model number of the specified product together with the brand, make, and model number of the product being proposed as a substitution and the dollar amount to be added or deducted from the base bid if the proposed substitution is accepted.
- F. Complete descriptions and technical data shall accompany all proposed substitutions and be attached herein.
- G. Manufacturer's names and materials approved by the Architect during the bidding period but not shown in addenda shall be listed below if said materials are to be considered.

1.02 PROPOSED SUBSTITUTION 1:

- A. _____
Product Specified
- B. _____
Proposed Substitution
- C. \$ _____
Amount to be ADDED or DEDUCTED

1.03 PROPOSED SUBSTITUTION 2:

- A. _____
Product Specified
- B. _____
Proposed Substitution
- C. \$ _____
Amount to be ADDED or DEDUCTED

1.04 PROPOSED SUBSTITUTION 3:

- A. _____
Product Specified
- B. _____
Proposed Substitution

C. \$ _____
Amount to be ADDED or DEDUCTED

1.05 PROPOSED SUBSTITUTION 4:

Product Specified

Proposed Substitution

\$ _____
Amount to be ADDED or DEDUCTED

1.06 CERTIFICATION

A. _____
Name of Bidder (Printed Name of Authorized Agent of Contractor)

B. _____
Signature of Bidder (Signed Name of Authorized Agent of Contractor)

C. _____
Date

END OF SECTION

**SECTION 00 72 00
GENERAL CONDITIONS**

FORM OF GENERAL CONDITIONS

1.01 INFORMATION

- A. Project: 2025 Interior Improvements: Tenant Build Out.
- B. The General Conditions applicable to the Agreement between Owner and Contractor is attached following this page.
- C. The General Conditions are AIA Document A201, General Conditions of the Contract for Construction, 2017 Edition, revised.

END OF SECTION



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

GENERAL CONDITIONS FOR CONSTRUCTION FOR WILL COUNTY
224153.00 2025 Interior Improvements: Tenant Build Out

* A201 Revised on September 16, 2022

THE OWNER:

(Name, legal status and address)

Will County
302 N. Chicago Street
Joliet, Illinois 60423

THE ARCHITECT:

(Name, legal status and address)

See applicable Project Work Order.

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- 1 GENERAL PROVISIONS
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- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS

ADDITIONS AND DELETIONS:

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

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

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

Init.

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User Notes:

(825652566)

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES



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User Notes:

(825652566)

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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 Master Agreement or other similar legally binding agreement between the Owner and Contractor governing the Project (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Project Work Order 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. The Project Work Order shall take precedence over terms and conditions in the Master Agreement.

§ 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 all of the Contractor's duties under the Contract Documents and any Project Work Order, including 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 under a Project Work Order.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the applicable Project Work Order 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

Under the Project Work Order, the Initial Decision Maker, if any, 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 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.

§ 1.2.4 If any two or more provisions of the Contract Documents conflict, and such conflict relates to the quantity or quality of the Work, the Contractor agrees to provide the greater quantity and/or better quality of such Work.

§ 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 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 reserved rights claimed by the owner(s) and any licensee(s) who have an interest in and to the Instruments of Service.

§ 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(s) and any licensee(s) who have an interest in and to the Instruments of Service.

§ 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.

§ 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 may agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. If the parties agree to protocols governing the transmission and use of Instruments of Service and other documents in digital form, the parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, or another form based on written agreement of the parties to establish these protocols for the development, use, transmission, and exchange of digital data.

(Paragraphs deleted)

§ 1.8 Reserved.

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, to the extent allowed by law and by the Owner's policies and procedures, 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 Reserved.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Reserved.

§ 2.2.2 Reserved.

§ 2.2.3 Reserved.

§ 2.2.4 Where the Owner has furnished any information or documents to the Contractor in connection with the Project, 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, insurers, 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. The Contractor shall provide information or other assistance as the Architect or Owner may request in connection with these obligations.

§ 2.3.2 As appropriate for the Project, the Owner shall retain an architect and/or engineer lawfully licensed to practice architecture and/or engineering, or an entity lawfully practicing architecture and/or engineering, for any such architectural or design services in addition to or in furtherance of the submittals, except to the extent that such submittals include specialized Work to be performed by Contractor under Section 1.1.3, 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 Reserved.

§ 2.3.4 Upon written request by the Contractor, 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.

Init.

§ 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. The Owner's rights and remedies under this section are in addition to, and not a limitation of, any other rights and remedies of the Owner under the Contract Documents or otherwise.

§ 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 or approved construction schedules, and fails within a five-day period after receipt of written 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, neglect, or failure. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and reasonable attorneys' fees, 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 within thirty (30) days after a request by the Owner.

§ 2.6 **Owner's Right to Audit.** The Contractor shall keep full and accurate records of all labor and material costs incurred and items billed in connection with the performance of the Work, which records shall be open to inspection, copying, and audit by the Owner or its authorized representatives during performance of the Work and until three years after Final Payment.

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. The Contractor is an independent contractor and shall not be deemed an agent of the Owner for any reason.

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

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in strict 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 The Contractor represents that it has visited the Project site, become generally familiar with local conditions under which the Work is to be performed, correlated personal observations with requirements of the Contract Documents, including the Project Work Order, and has satisfied itself as to the nature and location of the Work, the general and local conditions, including those bearing upon access (including partial or total restrictions on access), transportation, delivery, disposal, staging, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, ground water table or similar physical conditions of the ground, the character, quality and quantity of existing conditions to be encountered, the character of equipment and facilities

needed prior to and during the prosecution of the Work and all other matters which can in any way effect the Work or the cost thereof under this Agreement. Any failure by the Contractor to acquaint itself with all the available information concerning these conditions will not relieve the Contractor from any obligation under 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 or its Subcontractors or suppliers 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 and Owner 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 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.

§ 3.2.5 In all cases where Work interconnects with existing facilities, Contractor shall field measure and verify at the site all dimensions relating to such existing facilities. Any conflicts in the Work and the existing facilities which could have been mitigated by the Contractor's obligation to verify the dimensions of the existing facilities shall be promptly rectified by the Contractor at its own expense, and such obligation does not limit the Owner's other rights and remedies under the Contract Documents.

§ 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 to Owner and Architect 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. The Contractor shall not proceed performing the Work using its alternative means, methods, techniques, sequences, or procedures without written approval from the Architect.

§ 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.

§ 3.3.4 The Contractor shall coordinate inspections by governmental authorities having jurisdiction over the Work.

§ 3.3.5 No inspection performed or failed to be performed shall be a waiver of any of the Contractor's obligations hereunder.

§ 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 written 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.

§ 3.4.4 The Contractor shall not at any time permit on the Project site any alcohol or controlled substances whether inside or outside of buildings or structures. Possession or use of any of the foregoing at or adjacent to the site shall obligate the Contractor to remove such offending personnel from the site and replace them at no additional cost to the Owner.

§3.4.5 The Contractor and any Subcontractors shall conform to labor laws of the State and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable thereto. Contractor shall enforce among all personnel directly or indirectly employed by it, and among all Subcontractors and their employees, all rules which the Owner may establish for conduct of such personnel on the site.

§3.4.6 The Contractor shall pay prevailing wages in accordance with and shall fully comply with all requirements of the Prevailing Wage Act, 820 ILCS 130/0.01, *et seq.*, including those set forth in Section 13.1.3.1 herein. This Agreement calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/0.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the current "prevailing rate of wages" (hourly cash wages plus amount for fringe benefits) in the county where the work is performed. The Department publishes the prevailing wage rates on its website at <http://labor.illinois.gov/>. The Department revises the prevailing wage rates, and the contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website. All Contractors, Subcontractors, and sub-subcontractors rendering services under this Agreement must comply with all requirements of the Act, including but not limited to, all wage requirements and notice and record keeping duties.

§ 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 shall strictly conform to the requirements of the Contract Documents and shall be free from defects. 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 Owner is tax-exempt. Notwithstanding, the Contractor shall pay any applicable sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received, 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 Without assuming any design responsibilities, the Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, building codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work 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 those that should have been reasonably discovered by Architect prior to commencement of the Work 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, to be approved by Owner and provided the Architect and Contractor shall determine in good faith whether such conditions resulted from an omission related to the Architect's design, as set forth by the Contract Documents, or the Contractor's submittals or were otherwise unforeseeable. If the either Architect or Owner determines that the conditions at the site are not materially different from those indicated in the Contract Documents or Submittals, 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 immediately 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. Notwithstanding any provision of the Contract Documents to the contrary, any use of an allowance account is subject to the written pre-approval of the Owner.

§ 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 on site. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. The superintendent shall be subject to approval by the Owner and shall not be replaced without the prior written consent of the Owner. The Owner shall have the right to require that the Contractor replace the superintendent, at no additional cost to the Owner, at any time during the duration of the Work if his/her performance is not satisfactory to the Owner.

§ 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 Owner or 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 Owner and Architect to provide notice within the 14-day period shall constitute notice of no initial objection but shall not affect Owner's right to make a subsequent rejection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent.

§ 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.

§ 3.10.1.1 The Contractor's construction schedules shall be in a bar chart format, and shall depict, at a minimum, activity identification and durations, critical path, float, early start, early finish, late start, and late finish.

§ 3.10.1.2 The float in the construction schedules will not be deemed exclusively available to the Contractor or Owner, but rather shall be available to either party as needed.

§ 3.10.1.3 No less than once per month, the Contractor shall submit an updated construction schedule. The updated construction schedule shall depict actual start and completion dates for Work commenced and, if appropriate, Work completed. Additionally, the updated construction schedules shall depict updated estimates of anticipated commencement and completion dates for all upcoming Work.

§ 3.10.1.4 The Contractor's submission of the initial construction schedule and monthly schedule updates shall be conditions precedent to certification of the Contractor's application for payment.

§ 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. If the Contractor fails to adhere to the approved construction schedule(s), Contractor shall immediately, at its own expense, take necessary measures to remedy such failure, including addition of personnel and/or equipment, overtime, and/or additional shifts. The Owner shall be entitled to rely on Contractor's schedules for coordination of its own activities, as well as the activities of other contractors working at the Project site or on the Project.

§ 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 (collectively the "As-Built Documents"). These As-Built Documents shall be in electronic form or paper copy, available for inspection by the Architect or Owner upon reasonable notice, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed. Adequate maintenance of the As-Built Documents shall be a condition precedent to certification of the Contractor's applications for payment.

§ 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 Architect will specify all performance and design criteria that such services must satisfy. 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 Architect has 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 the site access plan, if any, and to the 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. Throughout the progress of the Work the Contractor shall continually remove from the Project Site and from any adjacent property, all waste, scraps, tools, equipment, storage facilities, machinery, trailers, and vehicles no longer required for prosecution of the Work, such that the Project site remains clean, orderly, and safe.

§ 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 Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, or the Contractor has reason to believe that the required design, process, or product is an infringement, 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 and litigation expenses (including expert witness fees), arising out of or resulting from performance of the Work, but only to the extent caused by Contractor's breach of contract or 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. 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. The obligations of the Contractor under this Section 3.18 shall not extend to the liability of the Architect, the Architect's consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, the Architect's consultants, and agents and employees of any of them.

§ 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.

§ 3.18.3 "Claims, damages, loses and expenses" as these words are used herein shall be construed to include, but not be limited to (1) injury or damage resulting from the failure of or use or misuse by Contractor, its Subcontractors, agents, servants or employees, of any hoist, rigging, blocking, scaffolding, or any and all other kinds of items of equipment, whether or not the same be owned, furnished or loaned by Owner; (2) all attorneys' fees and costs incurred in defense of the claim or in bringing an action to enforce the provision of this Indemnity or any other indemnity contained in the Contract Documents, including the fees charged by the indemnitee's expert witnesses; and (3) all costs, expenses, lost time, opportunity costs and other similar indirect or incident damages incurred by the party being indemnified or its employees, agents or consultants.

§ 3.18.4 In the event that the Contractor or its Subcontractors are requested to, but refuse to, honor the indemnity obligations hereunder or to provide a defense, then in addition to all other obligations hereunder, the Contractor and its Subcontractors shall reimburse the Owner and Architect the cost of any legal action concerning Contractor's or Subcontractor's duty to defend and indemnify under this Agreement, including attorneys' fees, time expended, costs and expenses.

§ 3.18.5 The Contractor hereby knowingly and intentionally waives the right to assert, under the case of *Kotecki v. Cyclops Welding Corp.*, 146 Ill.2d 155 (1991), that Contractor's liability may be limited to the amount of its statutory liability under the Workers' Compensation Act, and agrees that Contractor's liability to indemnify and defend the Owner and Architect is not limited by the so called "Kotecki Cap". The Contractor shall include this provision in each of its Subcontract agreements and shall require its Subcontractors to be so bound.

§ 3.18.6 The Contractor shall include in each and every Subcontract with any and all Subcontractors and/or material suppliers performing Work and require each and every Subcontractor and/or material supplier performing Work to agree to be bound by all of the provisions 3.18.1 through 3.18.10 under the Contract Documents.

§ 3.18.7 The Contractor's indemnity obligations hereunder shall specifically include all claims and judgments which may be made against the indemnitees under federal or state law or the law of the other governmental bodies having jurisdiction, and further, against claims and judgments arising from violation of public ordinances and requirements of governing authorities due to Contractor's or Contractor's employees' method of execution of the Work.

§ 3.18.8 The provisions of this Section 3.18 are not intended to conflict in any way with the Construction Contract Indemnification for Negligence Act, 740 ILCS 35/0.01 *et seq.* and shall be interpreted in accordance therewith.

§ 3.18.9 The Contractor shall indemnify and hold harmless the Owner in the event of labor or trade union conflicts or disputes between the Contractor and Subcontractors and their respective employees. The Contractor shall endeavor to adjust and resolve such conflicts and disputes which affect the timely completion of the Work. Such conflicts or disputes shall not be a basis or excuse for the breach of the Contract Documents by the Contractor or its Subcontractors, and shall not provide the Contractor with relief from complying with dates for Substantial Completion or Final Completion. Labor or trade union disputes that affect production or delivery of materials or equipment, or the installation, shall be at no cost to the Owner. The Contractor shall notify the Architect and the Owner in writing as soon as possible as to any labor or trade disputes which may affect the Work and its timely completion. In such event, the Contractor shall provide a written proposal to the Architect and the Owner which includes any comparable substitution(s) necessary to complete the Work.

§ 3.18.10 None of the foregoing provisions shall deprive the Owner or the Architect of any action, right or remedy otherwise available to them or either of them at law.

§ 3.19 If the Work is to be performed by trade unions, the Contractor shall make all necessary arrangements to reconcile, without delay, damage, or cost to the Architect or the Owner, any conflict between the Contract Documents and any agreements or regulations of any kind at any time in force among members or councils which regulate or distinguish what activities shall not be included in the Work of any particular trade. Such arrangements are subject to written pre-approval of Owner and Architect. In case the progress of the Work is affected by any undue delay in furnishing or installing any items or materials or equipment required under the Contract Documents because of the conflict involving any such agreement or regulation, the Architect may require that other material or equipment of equal kind and quality be provided at no additional cost to the Owner.

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 or the Contract Documents.

(Paragraph deleted)

§ 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 endeavor to 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 and the Owner each have 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 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 Owner or 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 of the information given with 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 authority of the Architect's Project representative is limited by the Owner's policies and procedures, and by the terms and conditions of the agreement between the Owner and Architect. 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 and if approved in writing by the Owner.

§ 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 If this Project is utilizing a construction manager at-risk, then when the lowest, responsive and responsible multiple prime trade bidder(s) are identified and awarded contracts by the Owner, each such award shall constitute the automatic assignment of that trade contract by the Owner to the construction manager, who is also known as the "Contractor". Each such successful bidder shall then be known as a "Subcontractor." If this Project is utilizing a single general contractor or multiple prime trade contractors, and the Project is not utilizing a construction manager-at risk, then there shall be no such assignment. In any case, 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 Reserved.

(Paragraphs deleted)

§ 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 Subcontractor acknowledges: (1) that the Owner is a direct intended third party beneficiary of each Subcontract between the Contractor and Subcontractor; (2) that notwithstanding any contract provision to the contrary, Subcontractor shall be bound to perform the Work in accordance with these AIA A201 General Conditions, as amended; and (3) that the Subcontractor is not a third-party beneficiary of any contract between Contractor and Owner.

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

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- .1 assignment is effective only after termination of the Contract Work under the applicable Project Work Order by the Owner, 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 Reserved.

§ 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, and upon such further assignment, the Owner shall have no further liability to such subcontractor.

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 or other construction or operations on the site with the Owner's own forces, and with Separate Contractors. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 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.

(Paragraph deleted)

§ 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.

§ 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. Subject to Article 15, 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 Reserved.

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§ 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 allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 The Owner may, without invalidating the Contract and without notice to the surety, direct changes in the Work. Changes in the Work may be accomplished after execution of the applicable Project Work Order, 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.

§ 7.1.4 No Change Order shall be approved or paid unless preceded by a written direction for the Change Order is provided by the Owner. This requirement cannot be waived by conduct, custom, or practice with respect to this Project or other projects. There shall be no implied or constructive change orders.

§ 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.

§ 7.2.2 No payment for changes in the Work shall be made until such change has been memorialized in an executed Change Order and the Change has been executed.

§ 7.2.3 If the Contractor is also the Project's Construction Manager pursuant to a separate construction management agreement with the Owner, the Contractor shall not be permitted any markup on Change Orders or compensation with respect to Change Orders, other than as may be provided in such construction management agreement. The Subcontractors, and any Contractor who is not serving as Construction Manager for the Project, shall be entitled to the following markups for additive Changes Orders, and shall be required to take the following mark-downs for deductive Change Orders. Additional markup for insurance or bonds will not be allowed. All Change Order requests must be submitted with the following backup information or they will not be reviewed or processed by the Architect or Owner: material and labor quantities, material unit costs, labor rates, and any other substantiating data to explain and substantiate the Change Order amount.

Markups and Markdowns for Change Orders:

Additive Change Order: 10%

Deductive Change Order: 10%

§ 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 for the purposes of defining the change and/or how any payment shall be calculated, but not for the purpose of approving payment.

§ 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, with markups for overhead and profit as permitted by the Contract Documents;
- .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 Section 7.2.3, except for emergencies as provided in Section 10.4, in which case Contractor shall not be entitled to overhead and profit. 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 these costs, shall be computed at the Comprehensive Trade Rates attached as an exhibit to the Project Work Order;
- .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, as set forth in Contractor's Equipment Rental Rates and Practices, attached as an exhibit to the Project Work Order;
- .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, computed at the Comprehensive Management Rates attached as an exhibit to the Project Order.

§ 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. Upon execution by the Owner, such agreement shall be effective 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 or net decrease, if any, with respect to that change.

§ 7.3.9 Reserved.

§ 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 Project Work Order, 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 for the Work under the Project Work Order..

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time under the Project Work Order. The Contractor shall achieve Final Completion within thirty (30) days following Substantial Completion.

§ 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 a cause that (1) was reasonably unforeseeable to the Contractor; and (2) is not within the Contractor's control, then the Contract Time shall be equitably extended and such extension shall be reduced to a Change Order.

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

§ 8.3.3 Extension of Contract Time under the Project Work Order pursuant to this Article 8 shall be the Contractor's sole and exclusive remedy for delay.

§ 8.3.4 Extension of Contract Time under the Project Work Order resulting from Changes in the Work shall be negotiated into respective Change Orders. Whenever the Contractor seeks an adjustment in the Contract Time as part of a Claim or Change Order, the Contractor shall justify the request with proper written reference to the approved construction schedules. All executed Change Orders shall be deemed to include adjustments in the Contract Time, if any, resulting from the underlying Change in the Work.

§ 8.3.5 In addition to other rights and remedies set forth elsewhere in the Contract Documents, the Contractor shall reimburse the Owner for all Architect's fees and expenses for additional services necessitated by (1) Contractor's failure to achieve Substantial Completion within the time established in the Contract Documents; (2) for more than one inspection to determine Substantial Completion; and (3) for more than one inspection to determine Final Completion.

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. If the Contractor is also the construction manager pursuant to a construction management agreement with the Owner, that agreement contains any and all additional compensation payable to the Contractor in its role as construction manager.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated for any one item of material or equipment are changed by more than 25% in a proposed Change Order or Construction Change Directive, the applicable unit prices shall be equitably adjusted in such Change Order or Construction Change Directive.

§ 9.2 Schedule of Values

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 Subcontracts. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. Each section of the schedule organized by Subcontract shall further allocate each Subcontractor's Work into discrete tasks with values corresponding to each task. The total of all values for all tasks for all Subcontractors shall equal the Contract Sum. Portions of the Work not subcontracted shall be allocated into discrete tasks and corresponding values. 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. Approval by the Owner of the schedule of values (and revisions thereto) shall be a condition precedent to certification of Contractor's 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 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, including copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents. The Contractor's inclusion in an Application for Payment of an amount owed to a Subcontractor shall constitute the Contractor's certification to the Owner that such Subcontractor is entitled to payment in that amount, and that there are no backcharges, Claims, or other disputes then pending or anticipated which may impact that Subcontractor's right to such payment. Contractor shall submit all Applications for Payment in a consistent format.

§ 9.3.1.1 Such applications may include requests for payment on account of changes in the Work that have been properly authorized by Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor has not approved payment to a Subcontractor or supplier, unless such Work has been performed by others and the Contractor has approved said payment.

§ 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.

§ 9.3.4 All Applications for Payment shall be accompanied by lien waivers from the Contractor and applicable Subcontractors. The lien waivers, when taken together, shall equal the sum due and paid under the immediately preceding Application for Payment, and shall be effective through the submittal date of the immediately preceding Application.

§ 9.3.5 All Applications for Payment shall be accompanied by the Contractor's and Subcontractors' certified payrolls as required by the Illinois Prevailing Wage Act, 820 ILCS 130/5 or upon request of Owner.

§ 9.3.6 Submission of properly executed lien waivers and the certified payrolls are conditions precedent to certification of each Application for Payment.

§ 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, or if any other condition precedent to payment has not occurred. 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 failure to carry out the Work in accordance with the Contract Documents.

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§ 9.5.2 If Contractor disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, Contractor 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 accordance with the Local Government Prompt Payment Act, 50 ILCS 505/1, et seq. and as may be otherwise 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. In the sole discretion of the Owner, if the Contractor fails to furnish evidence as required by this Section, the Owner has the right, but not the obligation, to pay Subcontractors and suppliers directly.

§ 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 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.

§ 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 at any time there is evidence of any liens or claims for which the Owner may become liable, the Owner shall have the right to retain, out of any payment due or thereafter to become due to Contractor or a Subcontractor, an amount sufficient to completely indemnify and defend the Owner from and against such lien or claim, including any reasonable attorneys' fees and litigation expenses that have been or may be incurred by the Owner. Should any such evidence be established after all payments are made, the Contractor or Subcontractor shall repay the Owner all sums which the Owner may be compelled to pay in discharging such lien or claim, including all reasonable attorneys' fees, litigation expenses, and other costs resulting from such lien or claim.

§9.6.9 The Owner shall withhold ten percent (10%) from all progress payments to the Contractor as retention. The Contractor shall request retention with its final Application for Payment as provided in Section 9.10. No interest shall accrue on monies held in retention. Contractor shall ensure that each contract between Contractor and each Subcontractor contains this same provision for the withholding and release of retention.

§ 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 without any interference resulting from Contractor's operations or from incomplete work. The Work is not substantially complete until all Project systems included in the Work are operational as designed and scheduled, all required governmental inspections and certifications have been made and obtained, designated instruction of the Owner's personnel in the operation of systems has been completed and documented, and all final finishes required by the Contract Documents have been installed. The Work is not substantially complete until the Contractor has submitted the following items to the Owner or Architect:

- .1 All As-Built Documents in conformance with the Contract Documents and the requirements of this Agreement;
- .2 All operations and maintenance manuals as required by the Contract Documents;
- .3 All manufacturers' warranties as required by the Contract Documents; if such warranties cannot be executed until the Certificate of Substantial Completion is executed, the Contractor shall submit a warranty specimen as a condition of Substantial Completion, and shall submit the fully executed warranty prior to Final Completion.

In the event Contractor does not complete remaining work within thirty (30) days of Substantial completion, Owner shall give the Contractor written notice of the remaining Work to be completed. If the Contractor fails to complete the remaining work to be completed within five (5) days of receipt of the written notice, the Owner reserves the right to complete the remaining Work in accordance with § 2.4 without further notice to the Contractor. All costs incurred by Owner therein shall be offset against Contractor's final payment.

§ 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, which shall be attached to the Certificate of Substantial Completion (the "Punch List"). Failure to include an item on the Punch 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 Punch 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 Punch 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 with the Punch List attached. The Certificate of Substantial Completion 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 Punch 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.

§ 9.8.6 Upon Substantial Completion, the Contractor and Subcontractors hereby assign all vendor and manufacturers' warranties to the Owner, if and to the extent any such warranty identified the Contractor or a Subcontractor, and not the Owner, as the entity to whom the warrantor is obligated.

§ 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 Punch 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 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 All Work depicted on the Contractor's Punch List and thereafter identified in the Architect's inspection shall be completed by Contractor within thirty (30) days of issuance of the Certificate of Substantial Completion. 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, including retention held pursuant to Section 9.6.9, 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 and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (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, including those fully-executed warranties required by Section 9.8.1.1 to be furnished prior to final completion, and (6) final 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, along with the final submittal of certified payroll as provided by Section 5 of the Prevailing Wage Act, 820 ILCS 130/5. 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, reasonable attorneys' fees, and litigation expenses.

§ 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, and shall not constitute a waiver of Claims.

Otherwise, if the Contractor does not complete remaining work within thirty (30) days after Substantial Completion, Owner may complete the remaining Work and backcharge the Contractor in accordance with Section 2.5. All related costs incurred by Owner shall be deducted from Contractor's final payment, and if the amount of Contractor's final Application for Payment is insufficient to cover such costs, Contractor shall pay such insufficiency to Owner upon demand.

§ 9.10.4

(Paragraphs deleted)

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§ 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 specifically 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 solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. Neither the Owner nor the Architect shall be responsible for any safety precautions or programs in connection with the Work.

§ 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, including any orders and regulations resulting from an act of government declaring a national or state emergency that requires all Work to be stopped or causes delay in such Work.

§ 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

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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 any person suffers injury or damage to person or property because of an act or omission of a party, or of others for whose acts such party is legally responsible, the responsible party shall give notice of the injury or damage, whether or not insured, 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 Without accepting any responsibility or liability for the remediation of hazardous materials that exist on or contiguous to the Project site as of the date of the Agreement, 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. By Change Order, the Contract Time shall be equitably extended.

§ 10.3.3 Reserved.

§ 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 procurement, delivery, unloading, loading, stockpiling, storing, preparing, installing, use and/or handling of such materials or substances (collectively, "handling").

§ 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 faultily or 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 Reserved.

§ 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. Except as otherwise provided herein, 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.

In the event such an emergency is the result of any orders and regulations resulting from an act of government declaring a national or state emergency that requires all Work to be stopped or causes delay in such Work:

1. Additional extension of time claimed by the Contractor on account of the emergency shall be determined by Article 8 and Article 15.
2. Additional compensation claimed by the Contractor on account of the emergency shall be determined by Article 7.3.4 and Article 15.
3. Contractor shall be required to provide reasonable evidence to Owner demonstrating that such claims are the result of an emergency and Contractor's need to preserve the safety of persons or property in accordance with a national or state emergency declaration. Owner reserves the right to deny any such claim in the event Contractor has not provided sufficient reasonable evidence as determined by Owner in its sole discretion.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor, and the Subcontractors, to the extent applicable as specified below, 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 this Section 11.1 and its subparts and elsewhere in the Contract Documents. To the extent of any conflict between this Section 11.1 and other Contract Documents, the Contractor and Subcontractors shall purchase and maintain the insurance with the higher limits, broader coverage, and better protections for the Owner. The Contractor and Subcontractors 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. Such coverage shall be procured on an occurrence basis. Such coverage shall be procured from insurers with a Best's Key Rating Guide rating of at least A / VIII. The Owner, Architect, and Architect's consultants shall by endorsement be named as additional insureds under the Contractor's and each Subcontractor's commercial general liability policy, automobile liability policy, and excess or umbrella policy, all on a primary and noncontributory basis.

§ 11.1.1.1 Commercial general liability insurance including coverage for contractual liability and completed operations, explosion, collapse and underground hazards, covering personal injury, bodily injury and property damage, in the amount of One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate.

§ 11.1.1.2 Automobile liability insurance, including hired, rented, and non-owned vehicles, covering personal injury, bodily injury and property damage, with a combined single limit of One Million Dollars (\$1,000,000).

§ 11.1.1.3 Umbrella / excess insurance coverage with a limit of at least Ten Million Dollars (\$10,000,000).

§ 11.1.1.4 Workers' compensation insurance in the amount of the statutory minimum with an employer's liability coverage of at least One Million Dollars (\$1,000,000).

§ 11.1.1.5 The Contractor, and Subcontractors as applicable, shall maintain the insurance required by this Section 11.1 without interruption from the date of the Agreement until the date of final payment, and, with respect to their completed operations coverage, until three (3) years after Substantial Completion of Work, or for such other period for maintenance of completed operations coverage as specified in the Contract Documents, whichever is greatest.

§ 11.1.1.6 Prior to commencement of the Work, and again prior to the expiration of any policy, the Contractor and all Subcontractors shall furnish to the Owner and Architect certificates of insurance, policy declarations, all policy endorsements, and if requested by the Owner the policies, all reflecting the insurance required by this Section 11.1. An additional certificate and endorsements evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted by Contractor and all Subcontractors with the final Application for Payment

as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the time permitted for expiration. If any aggregate limit is reduced on account of claims paid, Contractor and Subcontractor shall immediately notify the Owner and Architect in writing of the amount of such reduction.

§ 11.1.1.7 Failure of either the Architect or Owner to demand certificates of insurance and/or policies and/or endorsements shall not constitute a waiver of the Contractor's and Subcontractor's responsibilities under this Section 11.1. Nor shall review and/or approval by either the Owner or Architect in any way relieve Contractor or any Subcontractor of its responsibility for furnishing sufficient insurance.

§ 11.1.1.8 Liability of Contractor or Subcontractor is not limited by these insurance requirements or by actual insurance coverage. Nothing related to insurance requirements in the Contract Documents is to be construed as limiting the liability of the Contractor, the liability of any Subcontractor of any tier, or the liability of the Architect, or any of their respective insurance carriers. Owner does not represent that the coverages or limits of insurance specified are sufficient or adequate to protect the Owner, Contractor, Architect, or any Subcontractor's interest or liabilities, but are merely minimums.

§ 11.1.1.9 Each Subcontractor shall comply with all requirements of this Section 11.1, except that the Owner may in writing excuse a Subcontractor from procuring and maintaining an excess / umbrella policy in conformance with Section 11.1.1.3, where deemed appropriate by the Owner, in its sole discretion.

§ 11.1.2 The Contractor as principal shall furnish to the Owner as obligee bonds covering faithful performance of the Contract and payment of obligations arising from the Contract. The payment and performance bonds shall strictly comply with the Public Construction Bond Act, 30 ILCS 550/0.01, *et seq.* (the "Act"), and with all provisions of this Section 11.1.2 and its subparts to the extent not in conflict with the Act. 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. Each such surety shall have a Best's Key Rating Guide rating of at least A / VIII.

§ 11.1.2.1 The payment and performance bonds shall be executed on AIA Document A311 or A312, or on another form acceptable to the Owner, and shall include a penal sum equivalent to or greater than the Contract Sum as defined in Section 9.1.1. If the Project involves a Contractor who is also serving as a construction manager at risk that will take or has taken assignment of trades pursuant to Section 5.1.1, then for purposes of determining the penal sum of the bond, the Contract Sum means the aggregate sum of all bids awarded by the Owner and assigned to the Contractor as provided in Section 5.1.1.

§ 11.1.2.2 All terms and conditions of all Contract Documents, including those that comprise these A201 General Conditions, as amended, shall be deemed incorporated by reference into each bond furnished in connection with this Section 11.1.2. In case of any conflict between any provision of any performance or payment bond and the Contract Documents, the provisions of the Contract Documents shall prevail to the extent of such conflict. Any provision of any bond purporting to create a condition precedent for Owner not otherwise contained in the Contract Documents, or which otherwise purports to abrogate or nullify the Owner's rights or remedies otherwise available in contract, law, or equity, is void. If any provision of any bond purports to shorten the period of limitations and/or the period of repose as provided in Section 13-214 of the Code of Civil Procedure, 735 ILCS 5/13-214, or if any provision of any bond purports to shorten any other applicable statute of limitation or repose, such provision of such bond shall be null and void, but all other provisions of such bond shall remain enforceable.

§ 11.1.2.3 No surety shall assert solvency of its principal or its principal's denial of default as a defense to any claim under any bond furnished in accordance with this Section 11.1.2.

§ 11.1.2.4 If any surety shall make any assignment for the benefit of creditors or commit any act of bankruptcy, or is declared bankrupt, or if it shall file a voluntary petition in bankruptcy, or shall in the opinion of the Owner be insolvent, the Contractor shall immediately upon request by the Owner furnish and maintain other bonds satisfactory to the Owner. No further payment shall be due nor shall be made to Contractor until the new surety or sureties shall have met the Owner's qualifications.

§ 11.1.2.5 If at any time the Owner shall become reasonably dissatisfied with any surety, or for any other reason such bonds shall cease to be adequate security for the Owner, Contractor shall, within five (5) days after notice to do so, substitute acceptable bonds in such form and sum and signed by such other surety or sureties as may be reasonably

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satisfactory to the Owner. No further payment shall be deemed due nor shall be made to Contractor until the new surety or sureties shall have met the Owner's qualifications.

§ 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. The Owner may furnish bonds to any person, at any time, without consent of the Contractor.

§ 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 but not the obligation 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 Builder's Risk Insurance

§ 11.2.1 The Contractor or, if this Project is utilizing a construction manager at-risk and without otherwise limiting the construction manager's obligations as Contractor under this Agreement, the construction manager as Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk or equivalent policy form for all losses not covered by any professional liability insurance policies to be maintained by the Architect or Construction Manager, if applicable, in accordance with the Contract Documents in the amount of the Contract Sum, as modified by Change Orders, comprising the total value for the entire Project at the site on a replacement cost basis. Insurance obtained by Contractor shall insure against the risks and peril of fire and extended coverage, theft, vandalism, malicious mischief, collapse, flood, earthquake, airborne property, debris removal and other perils or causes of loss, including physical loss or damage to the Work and any materials or equipment in transit, at the Project Site or another location. Such insurance, or other coverage necessary to be obtained by Contractor, shall include mechanical breakdown insurance, including startup and testing in the interest of the Owner or Contractor and its subcontractors. Any required deductible shall be paid by the Contractor unless the Contract Documents otherwise provide or the Owner acknowledges its obligation to pay such deductibles in writing and prior to commencement of the Work. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.2.1 to be covered, whichever is later. This insurance shall include purchased and maintained under this Section 11.2.1 and in accordance with the A201 General Conditions shall include as named insureds the Owner, the Architect, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.2.2 Reserved.

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

§ 11.3 Reservation of Subrogation

§ 11.3.1 The parties' respective rights of subrogation are reserved.

§ 11.3.2 Reserved.

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

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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.

§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 Contractor as fiduciary and made payable to the Contractor as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgage clause and of Section 11.5.2. The Contractor shall pay the Architect and Owner their just shares of insurance proceeds received by the Contractor, and by appropriate agreements the Architect shall make payments to its consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Contractor shall notify the Owner of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Owner shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Owner does not object, the Contractor shall settle the loss and the Owner shall be bound by the settlement and allocation. Upon receipt, the Contractor 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 Owner timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Contractor 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 Owner's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Owner or Architect, be uncovered for the Owner's or 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 Owner or Architect has not specifically requested to examine prior to its being covered, the Owner or 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 an express written acceptance of such specific condition. The Owner shall give such notice promptly after discovery of the condition. 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 and back charge the Contractor 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 be extended on specific items of Work identified by the Owner as defective, and such extension shall commence upon the performance of corrective Work by the Contractor pursuant to this Section 12.2. Such extension shall expire one year from the date of completion of such corrective Work.

§ 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 any 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 Owner may seek to enforce that obligation or any other obligation arising under the Contract Documents.

§ 12.2.6 All other warranties and guarantees required by the Contract Documents shall be provided to the Architect prior to Substantial Completion or Final Completion, as applicable, and are separate obligations from the obligations contained in this Section 12.2.

§ 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 by express written notice to the Contractor instead of requiring its removal and correction, in which case the Contract Sum will be reduced by deductive Change Order, 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 State of Illinois without regard for conflict of law principles.

§ 13.1.1 Contractor and each Subcontractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/2-101 *et seq.*, and Contractor and each Subcontractor hereby certifies that he / she / it has and will maintain at all times during the term of this agreement a written sexual harassment policy in accordance with 775 ILCS 5/2-105(A)(4).

§ 13.1.2 Contractor and each Subcontractor hereby certifies pursuant to Section 33E-11 of the Illinois Criminal Code that he / she / it is not barred from bidding on, or contracting in connection with, the Project as a result of a conviction for either bid-rigging or bid rotating under Section 33E-3 or 33E-4 of the Criminal Code.

§ 13.1.3 The Contractor and each Subcontractor hereby certifies that he / she / it will provide a drug free workplace in compliance Section 3 of the Drug Free Workplace Act, 30 ILCS 580/3.

§ 13.1.3.1 The Contractor and each Subcontractor shall submit to the Owner certified payrolls in accordance with Section 5 of the Illinois Prevailing Wage Act, 820 ILCS 130/5. The Contractor shall comply with the requirements of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 *et seq.*) and the Owner's Ordinances, if applicable, requiring payment of prevailing wages. The Contractor shall pay or cause to be paid not less than the prevailing rate of hourly wage in the county the work is performed as determined by the Illinois Department of Labor for the month in which the work is performed including but not limited to all laborers, workers and mechanics. All contractors and subcontractors rendering services under this contract must comply with all requirements under the Act, including but not limited to, all wage, notice and record keeping duties.

The Contractor is required to verify current prevailing wage prior to the first day of each month and to pay the then-current prevailing wage rate as determined by the Illinois Department of Labor. Any increases in costs to the Contractor due to the changes in the prevailing wage during the term of this Contract shall be at the

expense of Contractor and not at the expense of Owner. Current prevailing wage rates are published at the following website: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/pages/2018-rates.aspx>. The Contractor agrees to indemnify and hold harmless the Owner for any violations of the Prevailing Wage Act. The Contractor shall also: (1) insert into each subcontract and the project specifications for each subcontract, a written stipulation that the subcontractor shall not pay less than the prevailing rate of hourly wage to all laborers, workers, and mechanics performing work under the contract; and (2) require each subcontractor to insert into each lower-tiered contract and the project specifications for each lower-tiered subcontract, a stipulation that the subcontractor shall not pay less than prevailing rate of hourly wage to all laborers, workers, and mechanics performing work under the contract.

The Contractor shall include on all bonds and shall cause all subcontractors' bonds required under the Contract Documents to guarantee compliance with the Prevailing Wage Act.

Additionally, the Contractor and each subcontractor shall make and keep, for a period of not less than five (5) years from the date of the last payment on a contract or subcontract, records of all laborers, mechanics, and other workers employed by them on the Project; the records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending times of work each day. The Contractor shall submit monthly, no later than the 10th day of each calendar month, certified payroll to the Illinois Department of Labor's Certified Transcript of Payroll Portal, which can be accessed at: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/certifiedtranscriptofpayroll.aspx>. The certified payroll shall be accompanied by a statement signed by the Contractor or subcontractor which states that: (i) he or she has examined the certified payroll and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by this Act; and (iii) the Contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class A misdemeanor. The Contractor may rely on the certification of a lower tier subcontractor, provided the Contractor does not knowingly rely upon a subcontractor's false certification. The records submitted in accordance with this payroll submittal provision shall be considered public records pursuant to Section 5 of the Prevailing Wage Act, 820 ILCS 130/5 (2004, as amended by P.A. 94-515). The Owner may, at its option, immediately terminate the Contract in the event that Contractor violates any provision of this paragraph or the Prevailing Wage Act.

Contractor shall also post the prevailing wage rates for each craft or type of worker or mechanic needed to complete the project at either: (1) a location on the project site easily accessible to the workers engaged on the project; or (2) in lieu of posting on the project site, if the Contractor has a business location where laborers, workers, and mechanics may regularly visit, the Contractor may either post the prevailing rate of wages in each county the Contractor works in a conspicuous location or provide the laborers, workers or mechanics engaged on the project a written notice indicating the prevailing rate of wages for the project.

Upon seven business days' notice, the Contractor and each subcontractor shall make available for inspection and copying at a location within this State during reasonable hours, the records identified in 820 ILCS 130/5(a)(1) to the Owner, and its officers and agents.

§ 13.1.4 Upon the Owner's request, any employee of the Contractor and any employee of any Subcontractor or other supplier or vendor shall submit state-issued identification documents (e.g., driver's license, state identification card, etc.) or other documents to the Owner and provide the necessary consents so that the Owner may obtain a criminal background check of the employee. No person who fails or refuses to produce such documents may work on the Project at the Project site. Alternatively, the Owner reserves the right to direct the Contractor, at any time during the Project, to immediately obtain criminal background checks of Contractor's or Subcontractor's employees. Such criminal background checks will be performed at Contractor's or Subcontractor's expense and at no additional cost to Owner. If in the Owner's sole discretion objectionable information regarding any employee is discovered in the background check, whether performed by Owner or Contractor, such person shall not be allowed to work on the Project at the Project site. The Owner may request new background checks of any employee at any time.

§ 13.1.5 This Contract is subject to and shall be construed in accordance with all provisions of law applicable to the Work and the Project. All applicable rules of law shall prevail over any conflicting provision contained in any of the Contract Documents.

§ 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. Contractor shall not assign the Contract in whole or in part without written consent of the Owner.

§ 13.2.2 The Contract Documents and these A201 General Conditions provide the rights and obligations by and between Owner, Architect, and Contractor. There are no other beneficiaries to the Contract.

§ 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, without markup by the Architect or Contractor, 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 and without markup by the Architect or Contractor.

§ 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 only in accordance with the Local Government Prompt Payment Act, 50 ILCS 505/1, *et seq.*

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Project Work Order if the Work is stopped for a period of 90 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 Reserved.

§ 14.1.2 The Contractor may terminate the Project Work Order 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 Project Work Order and recover from the Owner payment for Work executed. However, in no event shall Contractor be entitled to overhead and profit on Work not executed, or 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 Project Work Order 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 Project Work Order if the Contractor

- .1 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 Contract Documents and/or the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of a material breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, 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, written 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 Project Work Order 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.

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§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work under a Project Work Order, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, including reasonable attorneys' fees, 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 upon demand.

§ 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 equitably adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. 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.

§ 14.3.2 Any adjustment made to the Contract Sum pursuant to Section 14.3.2 shall be subject to the provisions of Section 7.3.4.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Project Work Order 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;
- .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; and
- .4 Immediately assign to the Owner any sub-contractual assignments requested by the Owner pursuant to Section 5.4.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed. However, in no event shall Contractor be entitled to overhead and profit on Work not executed, or costs incurred by reason of such termination.

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. This Section 15.1.1 does not create any conditions precedent on any cause of action the Owner may have against the Contractor.

§ 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 applicable law.

§ 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 the Contractor 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 Contractor 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 If the Owner and Contractor agree with the Initial Decision Maker's decision, the Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision. In the event of such agreement, 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, and timely notice is a condition precedent to any recovery or relief by Contractor on such 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, and such notice is a condition precedent to any recovery or relief by Contractor on such Claim. 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.

(Paragraphs deleted)

§ 15.1.7 Reserved.

§ 15.2 Initial Decision

§ 15.2.0 As used in this Section 15.2 and its subparts, "Claims" refers only to Claims by the Contractor, and does not include Claims by the Owner.

§ 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 arbitration or litigation, as the case may be, of any Claim initiated by Contractor and arising prior to the date final payment is due. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the Contractor may commence litigation without a decision having been rendered, and such litigation shall be subject to the Owner's right to elect arbitration as provided in Section 15.4.1. 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 not be binding.

§ 15.2.6 Reserved.

(Paragraph deleted)

§ 15.2.7 Reserved.

§ 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 Reserved.

(Paragraphs deleted)

§ 15.4 Arbitration

§ 15.4.1 In the sole and exclusive discretion of the Owner, all claims, disputes and other matters in question between any of the Architect, Owner, Contractor, Surety, Subcontractor or any material supplier arising out of, or relating to, agreements to which two or more of said parties are bound, or the Contract Documents or the breach thereof, shall, in the case of such election by the Owner, be decided by arbitration. If the Owner elects such arbitration, it shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect at the time that the demand is made, as modified herein. In any such arbitration, the arbitrator shall make separate findings as to liability and the amount of damages with respect to each party to the arbitration to the extent any liability or responsibility for damages exists. The Architect, surety, subcontractors and material suppliers who have an interest in the dispute shall be joined as parties to the arbitration. The arbitrator shall have authority to decide all issues between the parties. The foregoing option of the Owner to arbitrate and any other agreement to arbitrate with an additional person or persons, duly consented to by the parties, shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrator shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.1.1 If the Owner elects arbitration, in its sole discretion, notice of the demand for arbitration shall be filed in writing with the other part(ies) to the arbitration and with the American Arbitration Association. Such demand for arbitration shall be made within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would otherwise be barred by an applicable statute of limitations or repose. Whether such limitations have been met shall be decided by the arbitrator if contested by a party.

§ 15.4.1.2 All parties shall carry on the Work and perform their duties during any arbitration proceedings, and the Owner shall continue to make payments to the extent required by the Contract Documents. However, at the request of any party, contested payments may be placed in an escrow account pending resolution of the dispute.

§ 15.4.1.3 If the Owner elects arbitration, in its sole discretion, in addition to the other rules of the American Arbitration Association applicable to any arbitration hereunder, the following shall apply:

Init.

.1 Promptly after the impaneling of the arbitrator, the arbitrator shall establish a procedure for each party to set forth in writing and to serve upon each other party a detailed statement of its contentions of fact and law, along with appropriate responses thereto;

.2 All parties to the arbitration shall be entitled to reasonable discovery procedures as provided by the Illinois Code of Civil Procedure and Illinois Supreme Court Rules, as supplemented by rules to be established by the arbitrator;

.3 The arbitration shall be commenced and conducted as expeditiously as possible consistent with affording reasonable discovery as provided herein. Similarly, the scope of discovery, and the extent of proceedings hereunder relating to discovery, shall be consistent with the parties' intent that the arbitration be conducted as expeditiously as possible.

§ 15.4.2 In the event of any litigation or arbitration between the parties hereunder, the Contractor shall pay the Owner's reasonable attorneys' fees and court costs to the extent the court or tribunal determines the Owner is the prevailing party.

(Paragraphs deleted)

Additions and Deletions Report for **AIA® Document A201® – 2017**

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PAGE 1

GENERAL CONDITIONS FOR CONSTRUCTION FOR WILL COUNTY 224153.00 2025 Interior Improvements: Tenant Build Out

* A201 Revised on September 16, 2022

...

Will County
302 N. Chicago Street
Joliet, Illinois 60423

...

See applicable Project Work Order.

PAGE 10

ARTICLE 1 GENERAL PROVISIONS
ARTICLE 1 — GENERAL PROVISIONS

...

The Contract Documents are enumerated in the Master Agreement or other similar legally binding agreement between the Owner and Contractor governing the Project (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Project Work Order 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. The Project Work Order shall take precedence over terms and conditions in the Master Agreement.

...

The term "Work" means all of the Contractor's duties under the Contract Documents and any Project Work Order, including 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.~~Project~~ under a Project Work Order.

...

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

...

~~The Initial Decision Maker Under the Project Work Order, the Initial Decision Maker, if any, 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.~~

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§ 1.2.4 If any two or more provisions of the Contract Documents conflict, and such conflict relates to the quantity or quality of the Work, the Contractor agrees to provide the greater quantity and/or better quality of such Work.

...

In the interest of ~~brevity~~ 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.

...

§ 1.5.1 ~~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~~ reserved rights claimed by the owner(s) and any licensee(s) who have an interest in and to the Instruments of Service.

§ 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~~ owner(s) and any licensee(s) who have an interest in and to the Instruments of Service.

...

§ 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~~ transmission.

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The parties shall ~~may~~ agree upon ~~written~~ protocols governing the transmission and use of, ~~and reliance on,~~ of Instruments of Service or any other information or documentation in digital form. ~~If the parties agree to protocols governing the transmission and use of Instruments of Service and other documents in digital form, the parties will use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, or another form based on written agreement of the parties to establish these 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 written protocols governing the use of, and reliance on, the information contained in the model 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

§ 1.8 Reserved.

ARTICLE 2 OWNER

§ 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~~ shall, to the extent allowed by law and by the Owner's policies and procedures, 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. Reserved.

...

§ 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. Reserved.

~~§ 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.Reserved.

~~§ 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.Reserved.

~~§ 2.2.4~~ Where the Owner has designated information furnished under this Section 2.2 as "confidential," furnished any information or documents to the Contractor in connection with the Project, 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, insurers, 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.

...

~~§ 2.3.1~~ 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. The Contractor shall provide information or other assistance as the Architect or Owner may request in connection with these obligations.

~~§ 2.3.2~~ The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture. As appropriate for the Project, the Owner shall retain an architect and/or engineer lawfully licensed to practice architecture and/or engineering, or an entity lawfully practicing architecture and/or engineering, for any such architectural or design services in addition to or in furtherance of the submittals, except to the extent that such submittals include specialized Work to be performed by Contractor under Section 1.1.3, 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.Reserved.

~~§ 2.3.4~~ Upon written request by the Contractor, 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.

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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. The Owner's rights and remedies under this section are in addition to, and not a limitation of, any other rights and remedies of the Owner under the Contract Documents or otherwise.

...

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or approved construction schedules, and fails within a ~~ten-day~~ five-day period after receipt of written 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 such default, neglect, or failure. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and reasonable attorneys' fees, 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.~~ the Owner within thirty (30) days after a request by the Owner.

ARTICLE 3 — CONTRACTOR

§ 2.6 Owner's Right to Audit. The Contractor shall keep full and accurate records of all labor and material costs incurred and items billed in connection with the performance of the Work, which records shall be open to inspection, copying, and audit by the Owner or its authorized representatives during performance of the Work and until three years after Final Payment.

ARTICLE 3 CONTRACTOR

§ 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. The Contractor is an independent contractor and shall not be deemed an agent of the Owner for any reason.

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

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in strict 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.

...

§ 3.2.1 ~~Execution of the Contract by the Contractor is a representation that the Contractor has visited the~~ The Contractor represents that it has visited the Project site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of correlated personal observations with requirements of the Contract Documents, including the Project Work Order, and has satisfied itself as to the nature and location of the Work, the general and local conditions, including those bearing upon access (including partial or total restrictions on access), transportation, delivery, disposal, staging, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, ground water table or similar physical conditions of the ground, the character, quality and quantity of existing conditions to be encountered, the character of equipment and facilities needed prior to and during the prosecution of the Work and all other matters which can in any way effect the Work or the cost thereof under this Agreement. Any failure by the Contractor to acquaint itself with all the available information concerning these conditions will not relieve the Contractor from any obligation under 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 or its Subcontractors or suppliers 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 and Owner 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,~~ Owner 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.

§ 3.2.5 In all cases where Work interconnects with existing facilities, Contractor shall field measure and verify at the site all dimensions relating to such existing facilities. Any conflicts in the Work and the existing facilities which could have been mitigated by the Contractor's obligation to verify the dimensions of the existing facilities shall be promptly rectified by the Contractor at its own expense, and such obligation does not limit the Owner's other rights and remedies under the Contract Documents.

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§ 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 to Owner and Architect 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 Contractor shall not proceed performing the Work using its alternative means, methods, techniques, sequences, or procedures. ~~procedures without written approval from the Architect.~~

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§ 3.3.4 The Contractor shall coordinate inspections by governmental authorities having jurisdiction over the Work.

§ 3.3.5 No inspection performed or failed to be performed shall be a waiver of any of the Contractor's obligations hereunder.

...

§ 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 written consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

...

§ 3.4.4 The Contractor shall not at any time permit on the Project site any alcohol or controlled substances whether inside or outside of buildings or structures. Possession or use of any of the foregoing at or adjacent to the site shall obligate the Contractor to remove such offending personnel from the site and replace them at no additional cost to the Owner.

§3.4.5 The Contractor and any Subcontractors shall conform to labor laws of the State and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable thereto. Contractor shall enforce among all personnel directly or indirectly employed by it, and among all Subcontractors and their employees, all rules which the Owner may establish for conduct of such personnel on the site.

§3.4.6 The Contractor shall pay prevailing wages in accordance with and shall fully comply with all requirements of the Prevailing Wage Act, 820 ILCS 130/0.01, *et seq.*, including those set forth in Section 13.1.3.1 herein. This Agreement calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the current "prevailing rate of wages" (hourly cash wages plus amount for fringe benefits) in the county where the work is performed. The Department publishes the prevailing wage rates on its website at <http://labor.illinois.gov/>. The Department revises the prevailing wage rates, and the contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website. All Contractors, Subcontractors, and sub-subcontractors rendering services under this Agreement must comply with all requirements of the Act, including but not limited to, all wage requirements and notice and record keeping duties.

§ 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 shall strictly 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. shall be free from defects.~~ 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.

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

...

§ 3.7.2 ~~The~~ Without assuming any design responsibilities, the Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, building 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.

...

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 those that should have been reasonably discovered by Architect prior to commencement of the Work 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 or both, to be approved by Owner and provided the Architect and Contractor shall determine in good faith whether such conditions resulted from an omission related to the Architect's design, as set forth by the Contract Documents, or the Contractor's submittals or were otherwise unforeseeable.~~ If the either Architect or Owner determines that the conditions at the site are not materially different from those indicated in the Contract Documents or Submittals, 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 immediately 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.

...

§ 3.8.1 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. Notwithstanding any provision of the Contract Documents to the contrary, any use of an allowance account is subject to the written pre-approval of the Owner.

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§ 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.~~ Work on site. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. The superintendent shall be subject to approval by the Owner and shall not be replaced without the prior written consent of the Owner. The Owner shall have the right to require that the Contractor replace the superintendent, at no additional cost to the Owner, at any time during the duration of the Work if his/her performance is not satisfactory to the Owner.

§ 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 Owner or 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 Owner and Architect to provide notice within the 14-day period shall constitute notice of no ~~reasonable objection.~~ initial objection but shall not affect Owner's right to make a subsequent rejection.

§ 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. consent.

...

§ 3.10.1.1 The Contractor's construction schedules shall be in a bar chart format, and shall depict, at a minimum, activity identification and durations, critical path, float, early start, early finish, late start, and late finish.

§ 3.10.1.2 The float in the construction schedules will not be deemed exclusively available to the Contractor or Owner, but rather shall be available to either party as needed.

§ 3.10.1.3 No less than once per month, the Contractor shall submit an updated construction schedule. The updated construction schedule shall depict actual start and completion dates for Work commenced and, if appropriate, Work

completed. Additionally, the updated construction schedules shall depict updated estimates of anticipated commencement and completion dates for all upcoming Work.

§ 3.10.1.4 The Contractor's submission of the initial construction schedule and monthly schedule updates shall be conditions precedent to certification of the Contractor's application for payment.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect. If the Contractor fails to adhere to the approved construction schedule(s), Contractor shall immediately, at its own expense, take necessary measures to remedy such failure, including addition of personnel and/or equipment, overtime, and/or additional shifts. The Owner shall be entitled to rely on Contractor's schedules for coordination of its own activities, as well as the activities of other contractors working at the Project site or on the Project.

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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 submittals (collectively the "As-Built Documents"). These As-Built Documents shall be in electronic form or paper copy, available to the Architect and Owner, for inspection by the Architect or Owner upon reasonable notice, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed. Adequate maintenance of the As-Built Documents shall be a condition precedent to certification of the Contractor's applications for payment.

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§ 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 Architect has 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.

...

The Contractor shall confine operations at the site to the site access plan, if any, and to the 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.

...

§ 3.15.1 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. Throughout the progress of the Work the Contractor shall continually remove from the Project Site and from any adjacent property, all waste, scraps, tools, equipment, storage facilities, machinery, trailers, and vehicles no longer required for prosecution of the Work, such that the Project site remains clean, orderly, and safe.

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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, or the Contractor has reason to believe that the required design, process, or product is an infringement, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

...

§ 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, fees and litigation expenses (including expert witness 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 Contractor's breach of contract or 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. The obligations of the Contractor under this Section 3.18 shall not extend to the liability of the Architect, the Architect's consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, the Architect's consultants, and agents and employees of any of them.

...

ARTICLE 4 — ARCHITECT

§ 3.18.3 "Claims, damages, losses and expenses" as these words are used herein shall be construed to include, but not be limited to (1) injury or damage resulting from the failure of or use or misuse by Contractor, its Subcontractors, agents, servants or employees, of any hoist, rigging, blocking, scaffolding, or any and all other kinds of items of equipment, whether or not the same be owned, furnished or loaned by Owner; (2) all attorneys' fees and costs incurred in defense of the claim or in bringing an action to enforce the provision of this Indemnity or any other indemnity contained in the Contract Documents, including the fees charged by the indemnitee's expert witnesses; and (3) all costs, expenses, lost time, opportunity costs and other similar indirect or incident damages incurred by the party being indemnified or its employees, agents or consultants.

§ 3.18.4 In the event that the Contractor or its Subcontractors are requested to, but refuse to, honor the indemnity obligations hereunder or to provide a defense, then in addition to all other obligations hereunder, the Contractor and its Subcontractors shall reimburse the Owner and Architect the cost of any legal action concerning Contractor's or Subcontractor's duty to defend and indemnify under this Agreement, including attorneys' fees, time expended, costs and expenses.

§ 3.18.5 The Contractor hereby knowingly and intentionally waives the right to assert, under the case of *Kotecki v. Cyclops Welding Corp.*, 146 Ill.2nd 155 (1991), that Contractor's liability may be limited to the amount of its statutory liability under the Workers' Compensation Act, and agrees that Contractor's liability to indemnify and defend the Owner and Architect is not limited by the so called "Kotecki Cap". The Contractor shall include this provision in each of its Subcontract agreements and shall require its Subcontractors to be so bound.

§ 3.18.6 The Contractor shall include in each and every Subcontract with any and all Subcontractors and/or material suppliers performing Work and require each and every Subcontractor and/or material supplier performing Work to agree to be bound by all of the provisions 3.18.1 through 3.18.10 under the Contract Documents.

§ 3.18.7 The Contractor's indemnity obligations hereunder shall specifically include all claims and judgments which may be made against the indemnitees under federal or state law or the law of the other governmental bodies having

jurisdiction, and further, against claims and judgments arising from violation of public ordinances and requirements of governing authorities due to Contractor's or Contractor's employees' method of execution of the Work.

§ 3.18.8 The provisions of this Section 3.18 are not intended to conflict in any way with the Construction Contract Indemnification for Negligence Act, 740 ILCS 35/0.01 et seq. and shall be interpreted in accordance therewith.

§ 3.18.9 The Contractor shall indemnify and hold harmless the Owner in the event of labor or trade union conflicts or disputes between the Contractor and Subcontractors and their respective employees. The Contractor shall endeavor to adjust and resolve such conflicts and disputes which affect the timely completion of the Work. Such conflicts or disputes shall not be a basis or excuse for the breach of the Contract Documents by the Contractor or its Subcontractors, and shall not provide the Contractor with relief from complying with dates for Substantial Completion or Final Completion. Labor or trade union disputes that affect production or delivery of materials or equipment, or the installation, shall be at no cost to the Owner. The Contractor shall notify the Architect and the Owner in writing as soon as possible as to any labor or trade disputes which may affect the Work and its timely completion. In such event, the Contractor shall provide a written proposal to the Architect and the Owner which includes any comparable substitution(s) necessary to complete the Work.

§ 3.18.10 None of the foregoing provisions shall deprive the Owner or the Architect of any action, right or remedy otherwise available to them or either of them at law.

§ 3.19 If the Work is to be performed by trade unions, the Contractor shall make all necessary arrangements to reconcile, without delay, damage, or cost to the Architect or the Owner, any conflict between the Contract Documents and any agreements or regulations of any kind at any time in force among members or councils which regulate or distinguish what activities shall not be included in the Work of any particular trade. Such arrangements are subject to written pre-approval of Owner and Architect. In case the progress of the Work is affected by any undue delay in furnishing or installing any items or materials or equipment required under the Contract Documents because of the conflict involving any such agreement or regulation, the Architect may require that other material or equipment of equal kind and quality be provided at no additional cost to the Owner.

ARTICLE 4 ARCHITECT

§ 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. Agreement or the Contract Documents.

§ 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.

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The Owner and Contractor shall endeavor to 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.

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§ 4.2.6 The Architect ~~has and~~ the Owner each have 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 Owner or 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 of the information given with 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.

...

§ 4.2.10 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 authority of the Architect's Project representative is limited by the Owner's policies and procedures, and by the terms and conditions of the agreement between the Owner and Architect. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

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§ 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. Documents and if approved in writing by the Owner.

...

ARTICLE 5 — SUBCONTRACTORS

ARTICLE 5 SUBCONTRACTORS

§ 5.1.1 A-If this Project is utilizing a construction manager at-risk, then when the lowest, responsive and responsible multiple prime trade bidder(s) are identified and awarded contracts by the Owner, each such award shall constitute the automatic assignment of that trade contract by the Owner to the construction manager, who is also known as the "Contractor". Each such successful bidder shall then be known as a "Subcontractor." If this Project is utilizing a single general contractor or multiple prime trade contractors, and the Project is not utilizing a construction manager-at risk, then there shall be no such assignment. In any case, 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.

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

§ 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.

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 Subcontractor acknowledges: (1) that the Owner is a direct intended third party beneficiary of each Subcontract between the Contractor and Subcontractor; (2) that notwithstanding any contract provision to the contrary, Subcontractor shall be bound to perform the Work in accordance with these AIA A201 General Conditions, as amended; and (3) that the Subcontractor is not a third-party beneficiary of any contract between Contractor and Owner.

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

...

§ 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. Reserved.

§ 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, entity, and upon such further assignment, the Owner shall have no further liability to such subcontractor.

ARTICLE 6 — CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 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 or other construction or operations on the site 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. Contractors. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

...

§ 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.

...

§ 6.2.2 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 Subject to Article 15, 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.~~

...

§ 6.2.5 ~~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. Reserved.~~

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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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1.1 ~~The Owner may, without invalidating the Contract and without notice to the surety, direct changes in the Work. Changes in the Work may be accomplished after execution of the Contract, applicable Project Work Order, 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.~~

...

§ 7.1.4 ~~No Change Order shall be approved or paid unless preceded by a written direction for the Change Order is provided by the Owner. This requirement cannot be waived by conduct, custom, or practice with respect to this Project or other projects. There shall be no implied or constructive change orders.~~

...

§ 7.2.2 ~~No payment for changes in the Work shall be made until such change has been memorialized in an executed Change Order and the Change has been executed.~~

§ 7.2.3 ~~If the Contractor is also the Project's Construction Manager pursuant to a separate construction management agreement with the Owner, the Contractor shall not be permitted any markup on Change Orders or compensation with respect to Change Orders, other than as may be provided in such construction management agreement. The Subcontractors, and any Contractor who is not serving as Construction Manager for the Project, shall be entitled to the following markups for additive Changes Orders, and shall be required to take the following mark-downs for deductive Change Orders. Additional markup for insurance or bonds will not be allowed. All Change Order requests must be submitted with the following backup information or they will not be reviewed or processed by the Architect or Owner: material and labor quantities, material unit costs, labor rates, and any other substantiating data to explain and substantiate the Change Order amount.~~

Markups and Markdowns for Change Orders:

Additive Change Order: 10%

Deductive Change Order: 10%

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order for the purposes of defining the change and/or how any payment shall be calculated, but not for the purpose of approving payment.

...

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit ~~evaluation~~; evaluation, with markups for overhead and profit as permitted by the Contract Documents;

...

§ 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. ~~Section 7.2.3, except for emergencies as provided in Section 10.4, in which case Contractor shall not be entitled to overhead and profit.~~ 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~~; the Architect these costs, shall be computed at the Comprehensive Trade Rates attached as an exhibit to the Project Work Order;

...

- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or ~~others~~; others, as set forth in Contractor's Equipment Rental Rates and Practices, attached as an exhibit to the Project Work Order;

...

- .5 Costs of supervision and field office personnel directly attributable to ~~the change~~; the change, computed at the Comprehensive Management Rates attached as an exhibit to the Project Order.

...

§ 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~~ Upon execution by the Owner, 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~~; increase or net decrease, 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. Reserved.

~~ARTICLE 8 — TIME~~
ARTICLE 8 TIME

...

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, Project Work Order, 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~~ Owner for the Work under the Project Work Order..

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract ~~Time~~ Time under the Project Work Order. The Contractor shall achieve Final Completion within thirty (30) days following Substantial Completion.

...

§ 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, a cause that (1) was reasonably unforeseeable to the Contractor; and (2) is not within the Contractor's control,~~ then the Contract Time shall be ~~extended for such reasonable time as the Architect may determine~~ equitably extended and such extension shall be reduced to a Change Order.

...

§ 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. Extension of Contract Time under the Project Work Order pursuant to this Article 8 shall be the Contractor's sole and exclusive remedy for delay.

~~ARTICLE 9 — PAYMENTS AND COMPLETION~~

§ 8.3.4 Extension of Contract Time under the Project Work Order resulting from Changes in the Work shall be negotiated into respective Change Orders. Whenever the Contractor seeks an adjustment in the Contract Time as part of a Claim or Change Order, the Contractor shall justify the request with proper written reference to the approved construction schedules. All executed Change Orders shall be deemed to include adjustments in the Contract Time, if any, resulting from the underlying Change in the Work.

§ 8.3.5 In addition to other rights and remedies set forth elsewhere in the Contract Documents, the Contractor shall reimburse the Owner for all Architect's fees and expenses for additional services necessitated by (1) Contractor's failure to achieve Substantial Completion within the time established in the Contract Documents; (2) for more than one inspection to determine Substantial Completion; and (3) for more than one inspection to determine Final Completion.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 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. If the Contractor is also the construction manager pursuant to a construction management agreement with the Owner, that agreement contains any and all additional compensation payable to the Contractor in its role as construction manager.

§ 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, for any one item of material or equipment are changed by more than 25% in a proposed Change Order or Construction Change Directive, the applicable unit prices shall be equitably adjusted.~~
adjusted in such Change Order or Construction Change Directive.

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~~Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the~~ 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-Subcontracts. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. Each section of the schedule organized by Subcontract shall further allocate each Subcontractor's Work into discrete tasks with values corresponding to each task. The total of all values for all tasks for all Subcontractors shall equal the Contract Sum. Portions of the Work not subcontracted shall be allocated into discrete tasks and corresponding values. 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. Approval by the Owner of the schedule of values (and revisions thereto) shall be a condition precedent to certification of Contractor's 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 values 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 including copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents. The Contractor's inclusion in an Application for Payment of an amount owed to a Subcontractor shall constitute the Contractor's certification to the Owner that such Subcontractor is entitled to payment in that amount, and that there are no backcharges, Claims, or other disputes then pending or anticipated which may impact that Subcontractor's right to such payment. Contractor shall submit all Applications for Payment in a consistent format.

§ 9.3.1.1 ~~As provided in Section 7.3.9, such~~ 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 has not approved payment to a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay and the Contractor has approved said payment.

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§ 9.3.4 All Applications for Payment shall be accompanied by lien waivers from the Contractor and applicable Subcontractors. The lien waivers, when taken together, shall equal the sum due and paid under the immediately preceding Application for Payment, and shall be effective through the submittal date of the immediately preceding Application.

§ 9.3.5 All Applications for Payment shall be accompanied by the Contractor's and Subcontractors' certified payrolls as required by the Illinois Prevailing Wage Act, 820 ILCS 130/5 or upon request of Owner.

§ 9.3.6 Submission of properly executed lien waivers and the certified payrolls are conditions precedent to certification of each Application for Payment.

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§ 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. ~~Made, or if any other condition precedent to payment has not occurred.~~ 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

...

.7 ~~repeated~~ failure to carry out the Work in accordance with the Contract Documents.

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

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~~§ 9.6.1~~ After the Architect has issued a Certificate for Payment, the Owner shall make payment in ~~the manner and within the time~~ accordance with the Local Government Prompt Payment Act, 50 ILCS 505/1, et seq. and as may be otherwise provided in the Contract Documents, and shall so notify the Architect.

...

~~§ 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. In the sole discretion of the Owner, if the Contractor fails to furnish evidence as required by this Section, the Owner has the right, but not the obligation, to pay Subcontractors and suppliers directly.

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~~§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments~~ 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.~~ at any time there is evidence of any liens or claims for which the Owner may become liable, the Owner shall have the right to retain, out of any payment due or thereafter to become due to Contractor or a Subcontractor, an amount sufficient to completely indemnify and defend the Owner from and against such lien or claim, including any reasonable attorneys' fees and litigation expenses that have been or may be incurred by the Owner. Should any such evidence be established after all payments are made, the Contractor or Subcontractor shall repay the Owner all sums which the Owner may be compelled to pay in discharging such lien or claim, including all reasonably attorneys' fees, litigation expenses, and other costs resulting from such lien or claim.

~~§9.6.9~~ The Owner shall withhold ten percent (10%) from all progress payments to the Contractor as retention. The Contractor shall request retention with its final Application for Payment as provided in Section 9.10. No interest shall accrue on monies held in retention. Contractor shall ensure that each contract between Contractor and each Subcontractor contains this same provision for the withholding and release of retention.

§ 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 without any interference resulting from Contractor's operations or from incomplete work. The Work is not substantially complete until all Project systems included in the Work are operational as designed and scheduled, all required governmental inspections and certifications have been made and obtained, designated instruction of the Owner's personnel in the operation of systems has been completed and documented, and all final finishes required by the Contract Documents have been installed. The Work is not substantially complete until the Contractor has submitted the following items to the Owner or Architect:

- .1 All As-Built Documents in conformance with the Contract Documents and the requirements of this Agreement;
- .2 All operations and maintenance manuals as required by the Contract Documents;
- .3 All manufacturers' warranties as required by the Contract Documents; if such warranties cannot be executed until the Certificate of Substantial Completion is executed, the Contractor shall submit a warranty specimen as a condition of Substantial Completion, and shall submit the fully executed warranty prior to Final Completion.

In the event Contractor does not complete remaining work within thirty (30) days of Substantial completion, Owner shall give the Contractor written notice of the remaining Work to be completed. If the Contractor fails to complete the remaining work to be completed within five (5) days of receipt of the written notice, the Owner reserves the right to complete the remaining Work in accordance with § 2.4 without further notice to the Contractor. All costs incurred by Owner therein shall be offset against Contractor's final payment.

§ 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. Payment, which shall be attached to the Certificate of Substantial Completion (the "Punch List"). Failure to include an item on such list-the Punch 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,~~ Punch 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,~~ Punch 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 with the Punch List attached.~~ The Certificate of Substantial Completion 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~~ Punch 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.~~

§ 9.8.6 Upon Substantial Completion, the Contractor and Subcontractors hereby assign all vendor and manufacturers' warranties to the Owner, if and to the extent any such warranty identified the Contractor or a Subcontractor, and not the Owner, as the entity to whom the warrantor is obligated.

§ 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~~Punch 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.

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§ 9.9.3 ~~Unless otherwise agreed upon, partial~~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.

...

§ 9.10.1 All Work depicted on the Contractor's Punch List and thereafter identified in the Architect's inspection shall be completed by Contractor within thirty (30) days of issuance of the Certificate of Substantial Completion. 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~~Certificate, including retention held pursuant to Section 9.6.9, 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, effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner,~~ (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 including those fully-executed warranties required by Section 9.8.1.1 to be furnished prior to final completion, and (6) final 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.~~ Owner, along with the final submittal of certified payroll as provided by Section 5 of the Prevailing Wage Act, 820 ILCS 130/5. 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.~~ costs, reasonable attorneys' fees, and litigation expenses.

§ 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 and~~ shall not constitute a waiver of Claims.

Otherwise, if the Contractor does not complete remaining work within thirty (30) days after Substantial Completion, Owner may complete the remaining Work and backcharge the Contractor in accordance with Section 2.5. All related costs incurred by Owner shall be deducted from Contractor's final payment, and if the amount of Contractor's final Application for Payment is insufficient to cover such costs, Contractor shall pay such insufficiency to Owner upon demand.

~~§ 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. Reserved.~~

§ 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 specifically identified by that payee as unsettled at the time of final Application for Payment.

~~ARTICLE 10 — PROTECTION OF PERSONS AND PROPERTY~~

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. Neither the Owner nor the Architect shall be responsible for any safety precautions or programs in connection with the Work.

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§ 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~~, including any orders and regulations resulting from an act of government declaring a national or state emergency that requires all Work to be stopped or causes delay in such Work.

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~~If either party~~ any person suffers injury or damage to person or property because of an act or omission of ~~the other a~~ party, or of others for whose acts such party is legally responsible, the responsible party shall give 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.

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~~§ 10.3.1 The~~ Without accepting any responsibility or liability for the remediation of hazardous materials that exist on or contiguous to the Project site as of the date of the Agreement, 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.~~ resume. 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 equitably extended.

§ 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. Reserved.

§ 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.~~ procurement, delivery, unloading, loading, stockpiling, storing, preparing, installing, use and/or handling of such materials or substances (collectively, "handling").

§ 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 ~~faultily or 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.~~ Reserved.

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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~~ Except as otherwise provided herein, 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.

In the event such an emergency is the result of any orders and regulations resulting from an act of government declaring a national or state emergency that requires all Work to be stopped or causes delay in such Work:

1. Additional extension of time claimed by the Contractor on account of the emergency shall be determined by Article 8 and Article 15.
2. Additional compensation claimed by the Contractor on account of the emergency shall be determined by Article 7.3.4 and Article 15.
3. Contractor shall be required to provide reasonable evidence to Owner demonstrating that such claims are the result of an emergency and Contractor's need to preserve the safety of persons or property in accordance with a national or state emergency declaration. Owner reserves the right to deny any such claim in the event Contractor has not provided sufficient reasonable evidence as determined by Owner in its sole discretion.

ARTICLE 11 — INSURANCE AND BONDS

ARTICLE 11 INSURANCE AND BONDS

§ 11.1.1 ~~The Contractor~~ Contractor, and the Subcontractors, to the extent applicable as specified below, 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 this Section 11.1 and its subparts and elsewhere in the Contract Documents. To the extent of any conflict between this Section 11.1 and other Contract Documents, the Contractor and Subcontractors shall purchase and maintain the insurance with the

higher limits, broader coverage, and better protections for the Owner. The Contractor and Subcontractors 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. Such coverage shall be procured on an occurrence basis. Such coverage shall be procured from insurers with a Best's Key Rating Guide rating of at least A / VIII. The Owner, Architect, and Architect's consultants shall by endorsement be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents, and each Subcontractor's commercial general liability policy, automobile liability policy, and excess or umbrella policy, all on a primary and noncontributory basis.

§ 11.1.1.1 Commercial general liability insurance including coverage for contractual liability and completed operations, explosion, collapse and underground hazards, covering personal injury, bodily injury and property damage, in the amount of One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate.

§ 11.1.1.2 Automobile liability insurance, including hired, rented, and non-owned vehicles, covering personal injury, bodily injury and property damage, with a combined single limit of One Million Dollars (\$1,000,000).

§ 11.1.1.3 Umbrella / excess insurance coverage with a limit of at least Ten Million Dollars (\$10,000,000).

§ 11.1.1.4 Workers' compensation insurance in the amount of the statutory minimum with an employer's liability coverage of at least One Million Dollars (\$1,000,000).

§ 11.1.1.5 The Contractor, and Subcontractors as applicable, shall maintain the insurance required by this Section 11.1 without interruption from the date of the Agreement until the date of final payment, and, with respect to their completed operations coverage, until three (3) years after Substantial Completion of Work, or for such other period for maintenance of completed operations coverage as specified in the Contract Documents, whichever is greatest.

§ 11.1.1.6 Prior to commencement of the Work, and again prior to the expiration of any policy, the Contractor and all Subcontractors shall furnish to the Owner and Architect certificates of insurance, policy declarations, all policy endorsements, and if requested by the Owner the policies, all reflecting the insurance required by this Section 11.1. An additional certificate and endorsements evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted by Contractor and all Subcontractors with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the time permitted for expiration. If any aggregate limit is reduced on account of claims paid, Contractor and Subcontractor shall immediately notify the Owner and Architect in writing of the amount of such reduction.

§ 11.1.1.7 Failure of either the Architect or Owner to demand certificates of insurance and/or policies and/or endorsements shall not constitute a waiver of the Contractor's and Subcontractor's responsibilities under this Section 11.1. Nor shall review and/or approval by either the Owner or Architect in any way relieve Contractor or any Subcontractor of its responsibility for furnishing sufficient insurance.

§ 11.1.1.8 Liability of Contractor or Subcontractor is not limited by these insurance requirements or by actual insurance coverage. Nothing related to insurance requirements in the Contract Documents is to be construed as limiting the liability of the Contractor, the liability of any Subcontractor of any tier, or the liability of the Architect, or any of their respective insurance carriers. Owner does not represent that the coverages or limits of insurance specified are sufficient or adequate to protect the Owner, Contractor, Architect, or any Subcontractor's interest or liabilities, but are merely minimums.

§ 11.1.1.9 Each Subcontractor shall comply with all requirements of this Section 11.1, except that the Owner may in writing excuse a Subcontractor from procuring and maintaining an excess / umbrella policy in conformance with Section 11.1.1.3, where deemed appropriate by the Owner, in its sole discretion.

§ 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, as principal shall furnish to the Owner as obligee bonds covering faithful performance of the Contract and payment of obligations arising from the Contract. The payment and performance bonds shall strictly comply with the Public Construction Bond Act, 30 ILCS 550/0.01, et seq. (the "Act"), and with all provisions of this Section 11.1.2 and its subparts to the extent not in conflict with the Act. 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. Each such surety shall have a Best's Key Rating Guide rating of at least A / VIII.

§ 11.1.2.1 The payment and performance bonds shall be executed on AIA Document A311 or A312, or on another form acceptable to the Owner, and shall include a penal sum equivalent to or greater than the Contract Sum as defined in Section 9.1.1. If the Project involves a Contractor who is also serving as a construction manager at risk that will take or has taken assignment of trades pursuant to Section 5.1.1, then for purposes of determining the penal sum of the bond, the Contract Sum means the aggregate sum of all bids awarded by the Owner and assigned to the Contractor as provided in Section 5.1.1.

§ 11.1.2.2 All terms and conditions of all Contract Documents, including those that comprise these A201 General Conditions, as amended, shall be deemed incorporated by reference into each bond furnished in connection with this Section 11.1.2. In case of any conflict between any provision of any performance or payment bond and the Contract Documents, the provisions of the Contract Documents shall prevail to the extent of such conflict. Any provision of any bond purporting to create a condition precedent for Owner not otherwise contained in the Contract Documents, or which otherwise purports to abrogate or nullify the Owner's rights or remedies otherwise available in contract, law, or equity, is void. If any provision of any bond purports to shorten the period of limitations and/or the period of repose as provided in Section 13-214 of the Code of Civil Procedure, 735 ILCS 5/13-214, or if any provision of any bond purports to shorten any other applicable statute of limitation or repose, such provision of such bond shall be null and void, but all other provisions of such bond shall remain enforceable.

§ 11.1.2.3 No surety shall assert solvency of its principal or its principal's denial of default as a defense to any claim under any bond furnished in accordance with this Section 11.1.2.

§ 11.1.2.4 If any surety shall make any assignment for the benefit of creditors or commit any act of bankruptcy, or is declared bankrupt, or if it shall file a voluntary petition in bankruptcy, or shall in the opinion of the Owner be insolvent, the Contractor shall immediately upon request by the Owner furnish and maintain other bonds satisfactory to the Owner. No further payment shall be due nor shall be made to Contractor until the new surety or sureties shall have met the Owner's qualifications.

§ 11.1.2.5 If at any time the Owner shall become reasonably dissatisfied with any surety, or for any other reason such bonds shall cease to be adequate security for the Owner, Contractor shall, within five (5) days after notice to do so, substitute acceptable bonds in such form and sum and signed by such other surety or sureties as may be reasonably satisfactory to the Owner. No further payment shall be deemed due nor shall be made to Contractor until the new surety or sureties shall have met the Owner's qualifications.

§ 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. The Owner may furnish bonds to any person, at any time, without consent of the Contractor.

§ 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 but not the obligation 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 Builder's Risk 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. Contractor or, if this Project is utilizing a construction manager at-risk and without otherwise limiting the construction manager's obligations as Contractor under this Agreement, the construction manager as Contractor shall purchase and maintain,

in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk or equivalent policy form for all losses not covered by any professional liability insurance policies to be maintained by the Architect or Construction Manager, if applicable, in accordance with the Contract Documents in the amount of the Contract Sum, as modified by Change Orders, comprising the total value for the entire Project at the site on a replacement cost basis. Insurance obtained by Contractor shall insure against the risks and peril of fire and extended coverage, theft, vandalism, malicious mischief, collapse, flood, earthquake, airborne property, debris removal and other perils or causes of loss, including physical loss or damage to the Work and any materials or equipment in transit, at the Project Site or another location. Such insurance, or other coverage necessary to be obtained by Contractor, shall include mechanical breakdown insurance, including startup and testing in the interest of the Owner or Contractor and its subcontractors. Any required deductible shall be paid by the Contractor unless the Contract Documents otherwise provide or the Owner acknowledges its obligation to pay such deductibles in writing and prior to commencement of the Work. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.2.1 to be covered, whichever is later. This insurance shall include purchased and maintained under this Section 11.2.1 and in accordance with the A201 General Conditions shall include as named insureds the Owner, the Architect, the Contractor, Subcontractors and Sub-subcontractors in the Project.

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§ 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.~~Reserved.

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

§ 11.3 Waivers-Reservation 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. parties' respective rights of subrogation are reserved.

§ 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. Reserved.

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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.~~

...

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner Contractor as fiduciary and made payable to the Owner Contractor 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 Contractor shall pay the Architect and ~~Contractor~~ Owner their just shares of insurance proceeds received by the Owner Contractor, and by appropriate agreements the Architect ~~and Contractor~~ shall make payments to ~~their~~ its consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner Contractor shall notify the Contractor Owner of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor Owner shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor Owner does not object, the Owner Contractor shall settle the loss and the Contractor Owner shall be bound by the settlement and allocation. Upon receipt, the Owner Contractor 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 Owner timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner Contractor 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

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Owner's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Owner or Architect, be uncovered for the Owner's or 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 Owner or Architect has not specifically requested to examine prior to its being covered, the Owner or 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.

...

§ 12.2.2.1 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~~an express written acceptance of such specific 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 and back charge the Contractor in accordance with Section 2.5.

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§ 12.2.2.3 The **one-year** period for correction of Work shall ~~not be extended by corrective Work performed be~~ extended on specific items of Work identified by the Owner as defective, and such extension shall commence upon the performance of corrective Work by the Contractor pursuant to this Section 12.2. Such extension shall expire one year from the date of completion of such corrective Work.

...

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to ~~other any~~ 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.~~ Owner may seek to enforce that obligation or any other obligation arising under the Contract Documents.

§ 12.2.6 All other warranties and guarantees required by the Contract Documents shall be provided to the Architect prior to Substantial Completion or Final Completion, as applicable, and are separate obligations from the obligations contained in this Section 12.2.

...

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

ARTICLE 13 — MISCELLANEOUS PROVISIONS

ARTICLE 13 MISCELLANEOUS PROVISIONS

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.~~ State of Illinois without regard for conflict of law principles.

§ 13.1.1 Contractor and each Subcontractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/2-101 *et seq.*, and Contractor and each Subcontractor hereby certifies that he / she / it has and will maintain at all times during the term of this agreement a written sexual harassment policy in accordance with 775 ILCS 5/2-105(A)(4).

§ 13.1.2 Contractor and each Subcontractor hereby certifies pursuant to Section 33E-11 of the Illinois Criminal Code that he / she / it is not barred from bidding on, or contracting in connection with, the Project as a result of a conviction for either bid-rigging or bid rotating under Section 33E-3 or 33E-4 of the Criminal Code.

§ 13.1.3 The Contractor and each Subcontractor hereby certifies that he / she / it will provide a drug free workplace in compliance Section 3 of the Drug Free Workplace Act, 30 ILCS 580/3.

§ 13.1.3.1 The Contractor and each Subcontractor shall submit to the Owner certified payrolls in accordance with Section 5 of the Illinois Prevailing Wage Act, 820 ILCS 130/5. The Contractor shall comply with the requirements of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 et seq.) and the Owner's Ordinances, if applicable, requiring payment of prevailing wages. The Contractor shall pay or cause to be paid not less than the prevailing rate of hourly wage in the county the work is performed as determined by the Illinois Department of Labor for the month in which the work is performed including but not limited to all laborers, workers and mechanics. All contractors and subcontractors rendering services under this contract must comply with all requirements under the Act, including but not limited to, all wage, notice and record keeping duties.

The Contractor is required to verify current prevailing wage prior to the first day of each month and to pay the then-current prevailing wage rate as determined by the Illinois Department of Labor. Any increases in costs to the Contractor due to the changes in the prevailing wage during the term of this Contract shall be at the expense of Contractor and not at the expense of Owner. Current prevailing wage rates are published at the following website: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/pages/2018-rates.aspx>. The Contractor agrees to indemnify and hold harmless the Owner for any violations of the Prevailing Wage Act. The Contractor shall also: (1) insert into each subcontract and the project specifications for each subcontract, a written stipulation that the subcontractor shall not pay less than the prevailing rate of hourly wage to all laborers, workers, and mechanics performing work under the contract; and (2) require each subcontractor to insert into each lower-tiered contract and the project specifications for each lower-tiered subcontract, a stipulation that the subcontractor shall not pay less than prevailing rate of hourly wage to all laborers, workers, and mechanics performing work under the contract.

The Contractor shall include on all bonds and shall cause all subcontractors' bonds required under the Contract Documents to guarantee compliance with the Prevailing Wage Act.

Additionally, the Contractor and each subcontractor shall make and keep, for a period of not less than five (5) years from the date of the last payment on a contract or subcontract, records of all laborers, mechanics, and other workers employed by them on the Project; the records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending times of work each day. The Contractor shall submit monthly, no later than the 10th day of each calendar month, certified payroll to the Illinois Department of Labor's Certified Transcript of Payroll Portal, which can be accessed at: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/certifiedtranscriptofpayroll.aspx>. The certified payroll shall be accompanied by a statement signed by the Contractor or subcontractor which states that: (i) he or she has examined the certified payroll and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by this Act; and (iii) the Contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class A misdemeanor. The Contractor may rely on the certification of a lower tier subcontractor, provided the Contractor does not knowingly rely upon a subcontractor's false certification. The records submitted in accordance with this payroll submittal provision shall be considered public records pursuant to Section 5 of the Prevailing Wage Act, 820 ILCS 130/5 (2004, as amended by P.A. 94-515). The Owner may, at its option, immediately terminate the Contract in the event that Contractor violates any provision of this paragraph or the Prevailing Wage Act.

Contractor shall also post the prevailing wage rates for each craft or type of worker or mechanic needed to complete the project at either: (1) a location on the project site easily accessible to the workers engaged on the project; or (2) in lieu of posting on the project site, if the Contractor has a business location where laborers, workers, and mechanics may regularly visit, the Contractor may either post the prevailing rate of wages in each county the Contractor works in a conspicuous location or provide the laborers, workers or mechanics engaged on the project a written notice indicating the prevailing rate of wages for the project.

Upon seven business days' notice, the Contractor and each subcontractor shall make available for inspection and copying at a location within this State during reasonable hours, the records identified in 820 ILCS 130/5(a)(1) to the Owner, and its officers and agents.

§ 13.1.4 Upon the Owner's request, any employee of the Contractor and any employee of any Subcontractor or other supplier or vendor shall submit state-issued identification documents (e.g., driver's license, state identification card, etc.) or other documents to the Owner and provide the necessary consents so that the Owner may obtain a criminal background check of the employee. No person who fails or refuses to produce such documents may work on the Project at the Project site. Alternatively, the Owner reserves the right to direct the Contractor, at any time during the Project, to immediately obtain criminal background checks of Contractor's or Subcontractor's employees. Such criminal background checks will be performed at Contractor's or Subcontractor's expense and at no additional cost to Owner. If in the Owner's sole discretion objectionable information regarding any employee is discovered in the background check, whether performed by Owner or Contractor, such person shall not be allowed to work on the Project at the Project site. The Owner may request new background checks of any employee at any time.

§ 13.1.5 This Contract is subject to and shall be construed in accordance with all provisions of law applicable to the Work and the Project. All applicable rules of law shall prevail over any conflicting provision contained in any of the Contract Documents.

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§ 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. Contractor shall not assign the Contract in whole or in part without written consent of the Owner.

§ 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. Contract Documents and these A201 General Conditions provide the rights and obligations by and between Owner, Architect, and Contractor. There are no other beneficiaries to the Contract.

...

§ 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, without markup by the Architect or Contractor, 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 and without markup by the Architect or Contractor.

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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, only in accordance with the Local Government Prompt Payment Act, 50 ILCS 505/1, et seq.

ARTICLE 14 — TERMINATION OR SUSPENSION OF THE CONTRACT
ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1.1 The Contractor may terminate the ~~Contract-Project Work Order~~ if the Work is stopped for a period of ~~30-90~~ 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:

...

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

§ 14.1.2 The Contractor may terminate the ~~Contract-Project Work Order~~ 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-Project Work Order~~ and recover from the Owner payment for Work ~~executed, as well as reasonable~~ executed. However, in no event shall Contractor be entitled to overhead and profit on Work not executed, ~~and~~ or 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-Project Work Order~~ and recover from the Owner as provided in Section 14.1.3.

...

§ 14.2.1 The Owner may terminate the ~~Contract-Project Work Order~~ 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 Contract Documents and/or 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~~ a material 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'~~ written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

...

§ 14.2.3 When the Owner terminates the ~~Contract-Project Work Order~~ 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, Work~~ under a Project Work Order, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, including reasonable attorneys' fees, 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.~~ Owner upon demand.

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§ 14.3.2 The Contract Sum and Contract Time shall be equitably 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~~

...

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

§ 14.3.2 Any adjustment made to the Contract Sum pursuant to Section 14.3.2 shall be subject to the provisions of Section 7.3.4.

...

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

...

- .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; and~~
- .4 Immediately assign to the Owner any sub-contractual assignments requested by the Owner pursuant to Section 5.4.

§ 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.~~executed. However, in no event shall Contractor be entitled to overhead and profit on Work not executed, or costs incurred by reason of such termination.

~~ARTICLE 15 — CLAIMS AND DISPUTES~~ ARTICLE 15 CLAIMS AND DISPUTES

...

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. This Section 15.1.1 does not create any conditions precedent on any cause of action the Owner may have against the Contractor.

...

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.~~applicable law.

...

§ 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~~ the Contractor 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~~ Contractor first recognizes the condition giving rise to the Claim, whichever is later.

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~~§ 15.1.4.2 The If the Owner and Contractor agree with the Initial Decision Maker's decision, 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 decision. In the event of such agreement, the Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.~~

...

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, and timely notice is a condition precedent to any recovery or relief by Contractor on such Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

...

~~§ 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. given, and such notice is a condition precedent to any recovery or relief by Contractor on such Claim. 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.~~

...

~~§ 15.1.7 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.~~

~~§ 15.1.7 Reserved.~~

~~§ 15.2.0 As used in this Section 15.2 and its subparts, "Claims" refers only to Claims by the Contractor, and does not include Claims by the Owner.~~

~~§ 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. arbitration or litigation, as the case may be, of any Claim initiated by Contractor and arising prior to the date final payment is due. 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. Contractor may commence litigation without a decision having been rendered, and such litigation shall be subject to the Owner's right to elect arbitration as provided in Section 15.4.1. 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.~~

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§ 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. not be binding.

§ 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. Reserved.

§ 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. Reserved.

...

§ 15.3 Mediation Reserved.

§ 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.

§ 15.4.1 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. In the sole and exclusive discretion of the Owner, all claims, disputes and other matters in question between any of the Architect, Owner, Contractor, Surety, Subcontractor or any material

supplier arising out of, or relating to, agreements to which two or more of said parties are bound, or the Contract Documents or the breach thereof, shall, in the case of such election by the Owner, be decided by arbitration. If the Owner elects such arbitration, it shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect at the time that the demand is made, as modified herein. In any such arbitration, the arbitrator shall make separate findings as to liability and the amount of damages with respect to each party to the arbitration to the extent any liability or responsibility for damages exists. The Architect, surety, subcontractors and material suppliers who have an interest in the dispute shall be joined as parties to the arbitration. The arbitrator shall have authority to decide all issues between the parties. The foregoing option of the Owner to arbitrate and any other agreement to arbitrate with an additional person or persons, duly consented to by the parties, shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrator shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but If the Owner elects arbitration, in its sole discretion, notice of the demand for arbitration shall be filed in writing with the other part(ies) to the arbitration and with the American Arbitration Association. Such demand for arbitration shall be made within a reasonable time after the claim, dispute or other matter in question has arisen, and 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. such claim, dispute or other matter in question would otherwise be barred by an applicable statute of limitations or repose. Whether such limitations have been met shall be decided by the arbitrator if contested by a party.

§ 15.4.1.2 All parties shall carry on the Work and perform their duties during any arbitration proceedings, and the Owner shall continue to make payments to the extent required by the Contract Documents. However, at the request of any party, contested payments may be placed in an escrow account pending resolution of the dispute.

§ 15.4.1.3 If the Owner elects arbitration, in its sole discretion, in addition to the other rules of the American Arbitration Association applicable to any arbitration hereunder, the following shall apply:

.1 Promptly after the impaneling of the arbitrator, the arbitrator shall establish a procedure for each party to set forth in writing and to serve upon each other party a detailed statement of its contentions of fact and law, along with appropriate responses thereto;

.2 All parties to the arbitration shall be entitled to reasonable discovery procedures as provided by the Illinois Code of Civil Procedure and Illinois Supreme Court Rules, as supplemented by rules to be established by the arbitrator;

.3 The arbitration shall be commenced and conducted as expeditiously as possible consistent with affording reasonable discovery as provided herein. Similarly, the scope of discovery, and the extent of proceedings hereunder relating to discovery, shall be consistent with the parties' intent that the arbitration be conducted as expeditiously as possible.

§ 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. In the event of any litigation or arbitration between the parties hereunder, the Contractor shall pay the Owner's reasonable attorneys' fees and court costs to the extent the court or tribunal determines the Owner is the prevailing party.

§ 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 82 00
PREVAILING WAGE REQUIREMENTS**

PREVAILING WAGE REQUIREMENTS

2.01 REQUIREMENTS

- A. Project: 2025 Interior Improvements: Tenant Build Out at 1300 Copperfield Ave. for Will County.
- B. The Contractor and each Subcontractor shall comply with requirements of Illinois Prevailing Wage Act, 820 ILCS Section 130/0.01.
- C. Please refer to the Illinois Department of Labor's website at <https://www2.illinois.gov/idol/laws-rules/conmed/pages/prevailing-wage-rates.aspx> for the requirements and prerequisites of this Act as well as the text of the Act and all related regulations. Please refer questions concerning the Illinois Prevailing Wage Act or the Department of Labor's enforcement of this law, contact the Illinois Department of Labor's Prevailing Wage Division at (217) 782-1710.
- D. A partial list of the requirements of the Illinois Prevailing Wage Act is listed after this document and is not intended to be a complete listing or official guide to the Illinois Prevailing Wage Act, but is provided herein to assist the Contractor in understanding some of the basic requirements:
 - 1. All laborers, workers and mechanics employed by or on behalf of a public body in the construction of public works shall be paid the general prevailing rate of hourly wages for work of a similar character in the locality in which the work is performed. See 820 ILCS § 130/3.
 - a. A copy of Illinois Department of Labor Prevailing Wages for Will County effective December 2024 is included herein.
 - 2. If, during the course of work under this contract, the Department of Labor revises the prevailing rate hourly wages to be paid under this contract for any trade or occupation, Owner, will notify Contractor and each Subcontractor of the changes in the prevailing rate of hourly wages. Contractor shall have the sole responsibility and duty to ensure that the revised prevailing rate of hourly wages is paid by Contractor and all Subcontractors to each worker to whom a revised rate is applicable. Revisions to the prevailing wage as set forth above shall not result in an increase in the Contract Sum. See 820 ILCS § 130/4(a), (d).
 - 3. The Contractor and each Subcontractor must insert a provision or stipulation regarding the payment of the prevailing wage rate into their subcontracts and contractor's bond. See 820 ILCS § 130/4(b), (c).
 - 4. The Contractor and each Subcontractor who have been awarded public works contracts must post the relevant prevailing wage rate(s) at a location on the project site that is easily accessible by workers. See 820 ILCS §130/4(f).
 - 5. The Contractor and all subcontractors shall conform to the Illinois Statutory requirements regarding the submission of Certified Transcripts of Payroll.
 - a. Certified Transcripts of Payroll are to be prepared and are to document every hour worked by all persons identified by the Illinois Prevailing Wage Act who are employed by the Work of this project.
 - b. Certified Transcripts of Payroll are to be submitted directly to the Illinois Department of Labor via their on-line, Certified Transcript of Payroll Portal no later than the 15th of each calendar month following a month in which construction on the project has occurred.
 - c. The Contractor and all subcontractors shall provide original copies of the Certified Transcripts of Payroll to the Owner with each pay application.
 - d. The Contractor and/or subcontractor(s) are aware that filing Certified Transcripts of Payroll known to be false is a class B misdemeanor. See 820 ILCS §130/5(a)(2).
 - 6. The Contractor and each Subcontractor shall create, and keep for at least three years, records of all laborers, mechanics, and other workers employed by them on a public works

project. See 820 ILCS § 130/5(a)(1), (b).

END OF SECTION

Will County Prevailing Wage Rates posted on 12/16/2024

Trade Title	Rg	Type	C	Base	Foreman	Overtime							H/W	Pension	Vac	Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
						M-F	Sa	Su	Hol	Su	Sa	Hol							
ASBESTOS ABT-GEN	All	ALL		50.15	51.15	1.5	1.5	1.5	2.0	2.0	2.0	17.71	16.92	0.00	0.91	0.00	0.00	0.00	
ASBESTOS ABT-MEC	All	BLD		41.27	44.57	1.5	1.5	1.5	2.0	2.0	2.0	15.84	16.02	0.00	0.90	0.00	3.11	6.21	
BOILERMAKER	All	BLD		55.76	60.77	2.0	2.0	2.0	2.0	2.0	2.0	6.97	26.44	0.00	3.34	1.95	0.00	38.26	
BRICK MASON	All	BLD		52.06	57.27	1.5	1.5	1.5	2.0	2.0	2.0	12.70	24.54	0.00	1.24	0.00	3.99	7.98	
CARPENTER	All	ALL		55.11	60.62	2.0	2.0	2.0	2.0	2.0	2.0	12.89	30.48	0.70	0.93	0.00	0.00	0.00	
CEMENT MASON	All	ALL		47.70	49.70	2.0	1.5	2.0	2.0	2.0	2.0	12.70	32.80	0.00	0.80	0.00	0.00	0.00	
CERAMIC TILE FINISHER	All	BLD		47.09	47.09	1.5	1.5	1.5	2.0	2.0	2.0	13.00	16.82	0.00	1.09	0.00	5.17	10.34	
CERAMIC TILE LAYER	All	BLD		54.84	59.84	1.5	1.5	1.5	2.0	2.0	2.0	13.00	20.68	0.00	1.17	0.00	7.15	14.30	
COMMUNICATION TECHNICIAN	All	BLD		44.00	48.40	1.5	1.5	1.5	2.0	2.0	2.0	17.19	17.60	0.00	0.75	2.37	0.00	0.00	
ELECTRIC PWR EQMT OP	All	ALL		62.10	68.14	1.5	1.5	1.5	2.0	2.0	2.0	13.08	20.88	0.00	3.32	0.00	18.64	37.28	
ELECTRIC PWR GRNDMAN	All	ALL		48.44	68.14	1.5	1.5	1.5	2.0	2.0	2.0	10.20	16.29	0.00	2.60	0.00	14.55	29.09	
ELECTRIC PWR LINEMAN	All	ALL		62.10	68.14	1.5	1.5	1.5	2.0	2.0	2.0	13.08	20.88	0.00	3.32	0.00	18.64	37.28	
ELECTRICIAN	All	BLD		54.00	58.86	1.5	1.5	1.5	2.0	2.0	2.0	17.74	22.27	0.00	1.35	5.00	0.00	0.00	
ELEVATOR CONSTRUCTOR	All	BLD		67.84	76.32	2.0	2.0	2.0	2.0	2.0	2.0	16.18	20.96	5.42	0.75	0.00	0.00	0.00	
GLAZIER	All	BLD		51.55	53.05	1.5	2.0	2.0	2.0	2.0	2.0	15.64	26.18	0.00	2.27	0.00	0.00	0.00	
HEAT/FROST INSULATOR	All	BLD		55.02	58.32	1.5	1.5	1.5	2.0	2.0	2.0	15.84	19.01	0.00	0.90	0.00	4.60	9.20	
IRON WORKER	All	ALL		50.50	55.55	2.0	2.0	2.0	2.0	2.0	2.0	14.06	30.21	0.00	1.00	0.00	0.00	0.00	
LABORER	All	ALL		50.15	50.90	1.5	1.5	1.5	2.0	2.0	2.0	17.71	16.92	0.00	0.91	0.00	0.00	0.00	
LATHER	All	ALL		55.11	60.62	2.0	2.0	2.0	2.0	2.0	2.0	12.89	30.48	0.70	0.93	0.00	0.00	0.00	
MACHINIST	All	BLD		58.39	62.39	1.5	1.5	1.5	2.0	2.0	2.0	9.93	8.95	1.85	1.47	0.00	0.00	0.00	
MARBLE FINISHER	All	ALL		39.50	53.55	1.5	1.5	1.5	2.0	2.0	2.0	12.70	22.32	0.00	0.73	0.00	2.88	5.76	
MARBLE SETTER	All	BLD		51.00	56.10	1.5	1.5	1.5	2.0	2.0	2.0	12.70	24.01	0.00	0.92	0.00	3.73	7.45	
MATERIAL TESTER I	All	ALL		40.15		1.5	1.5	1.5	2.0	2.0	2.0	17.71	16.92	0.00	0.91	0.00	0.00	0.00	
MATERIALS TESTER II	All	ALL		45.15		1.5	1.5	1.5	2.0	2.0	2.0	17.71	16.92	0.00	0.91	0.00	0.00	0.00	
MILLWRIGHT	All	ALL		55.11	60.62	2.0	2.0	2.0	2.0	2.0	2.0	12.89	30.48	0.70	0.93	0.00	0.00	0.00	
OPERATING ENGINEER	All	BLD	1	60.80	64.80	2.0	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00	

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OPERATING ENGINEER	All	BLD	2	59.50	64.80	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	3	56.95	64.80	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	4	55.20	64.80	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	5	64.55	64.80	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	6	61.80	64.80	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	7	63.80	64.80	2.0	2.0	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	FLT	1	69.35	69.35	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	FLT	2	67.85	69.35	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	FLT	3	63.35	69.35	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	FLT	4	58.85	69.35	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	FLT	5	70.85	69.35	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	FLT	6	58.85	69.35	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	1	59.00	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	2	58.45	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	3	56.40	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	4	55.00	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	5	53.80	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	6	62.00	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	7	60.00	63.00	1.5	1.5	2.0	2.0	2.0	23.70	20.80	2.00	2.70	0.00	0.00	0.00
PAINTER	All	ALL		53.05	59.68	1.5	1.5	2.0	2.0	1.5	15.76	16.19	0.00	1.86	0.00	0.00	0.00
PAINTER - SIGNS	All	BLD		45.49	51.09	1.5	1.5	2.0	2.0	2.0	8.20	16.81	0.00	0.00	0.00	0.00	0.00
PILEDRIIVER	All	ALL		55.11	60.62	2.0	2.0	2.0	2.0	2.0	12.89	30.48	0.70	0.93	0.00	0.00	0.00
PIPEFITTER	All	BLD		57.00	60.00	1.5	1.5	2.0	2.0	2.0	13.65	22.85	0.00	3.12	0.00	0.00	0.00
PLASTERER	All	BLD		50.00	53.00	1.5	1.5	2.0	2.0	2.0	17.81	21.22	0.00	1.15	0.00	0.00	0.00
PLUMBER	All	BLD		58.55	62.05	1.5	1.5	2.0	2.0	2.0	17.75	17.74	0.00	1.83	0.00	0.00	0.00
ROOFER	All	BLD		50.25	55.25	1.5	1.5	2.0	2.0	2.0	11.98	17.34	0.00	1.11	0.00	0.00	0.00
SHEETMETAL WORKER	All	BLD		56.35	60.86	1.5	1.5	2.0	2.0	2.0	15.41	19.83	0.00	1.79	2.62	0.00	0.00
SPRINKLER FITTER	All	BLD		60.10	62.85	1.5	1.5	2.0	2.0	2.0	14.95	19.30	0.00	1.10	0.00	0.00	0.00
STONE MASON	All	BLD		52.06	57.27	1.5	1.5	2.0	2.0	2.0	12.70	24.54	0.00	1.24	0.00	3.99	7.98
SURVEY WORKER	All	BLD		56.50	57.50	1.5	1.5	2.0	2.0	2.0	17.75	14.15	0.00	1.49	0.00	0.00	0.00

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SURVEY WORKER	All	HWY		56.50	57.50	1.5	1.5	2.0	2.0	17.75	14.15	0.00	1.49		0.00	0.00
TERRAZZO FINISHER	All	BLD		48.94	48.94	1.5	1.5	2.0	2.0	13.00	18.42	0.00	1.11	0.00	4.22	8.44
TERRAZZO MECHANIC	All	BLD		52.85	56.35	1.5	1.5	2.0	2.0	13.00	19.81	0.00	1.15	0.00	4.47	8.94
TRAFFIC SAFETY WORKER I	All	HWY		42.10	43.70	1.5	1.5	2.0	2.0	11.11	9.81	0.00	1.05	0.00	0.00	0.00
TRAFFIC SAFETY WORKER II	All	HWY		43.10	44.70	1.5	1.5	2.0	2.0	11.11	9.81	0.00	1.05	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	1	45.10		1.5	1.5	2.0	2.0	11.65	13.76	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	2	45.25		1.5	1.5	2.0	2.0	11.65	13.76	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	3	45.45		1.5	1.5	2.0	2.0	11.65	13.76	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	4	45.65		1.5	1.5	2.0	2.0	11.65	13.76	0.00	0.25	0.00	0.00	0.00
TUCKPOINTER	All	BLD		51.53	52.53	1.5	1.5	2.0	2.0	10.05	22.66	0.00	1.15	0.00	0.00	0.00

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 WILL 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.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including

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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

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice, sound and vision production and reproduction, telephone and telephone interconnect, facsimile, equipment and appliances used for domestic, commercial, educational and entertainment purposes, pulling of wire through conduit but not the installation of conduit.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast

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tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Scream; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators; Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

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Class 1. Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types; Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators; Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Scream; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

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Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

SURVEY WORKER

Operates survey equipment (such as levels, transits, data collectors, GPS and robotic total stations) for the purpose of performing construction layout and/or grade checking.

SURVEY FOREMAN

Operates survey equipment (such as levels, transits, data collectors, GPS and robotic total stations) for the purpose of performing construction layout and/or grade checking; oversees survey crew operations; and/or coordinates work of survey crews.

TRAFFIC SAFETY Worker I

Traffic Safety Worker I - work associated with the delivery, installation, pick-up and servicing of safety devices during periods of roadway construction, including such work as set-up and maintenance of barricades, barrier wall reflectors, drums, cones, delineators, signs, crash attenuators, glare screen and other such items, and the layout and application or removal of conflicting and/or temporary roadway markings utilized to control traffic in construction zones, as well as flagging for these operations.

TRAFFIC SAFETY WORKER II

Work associated with the installation and removal of permanent pavement markings and/or pavement markers including both installations performed by hand and installations performed by truck.

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TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turntrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turntrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

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

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performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

**SECTION 01 10 00
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: 2025 Interior Improvements: Tenant Build Out at 1300 Copperfield Ave.
 - 1. Location: 1300 Copperfield Avenue, Joliet, Illinois 60432.
- B. Owner's Name: Will County
 - 1. Will County Office Building: 302 N. Chicago Street, Joliet, Illinois 60432.
- C. Architect's Name: Legat Architects.
 - 1. 2015 Spring Road, Suite 175, Oak Brook, IL 60523.
- D. The project consists of interior tenant improvements including MEP System Renovations and Interior build out of portions of the lower and main floor at the location as listed above.

1.02 CONTRACT DESCRIPTION

- A. Work covered by Contract Documents.
- B. Definitions. The following terms are used throughout the Contract Documents. The work will be governed in accord with the definitions.
 - 1. Fabricated: Fabricated pertains to items specifically assembled or made of selected materials or components to meet individual design requirements.
 - 2. Manufactured: Manufactured means standard units, usually mass produced by an established manufacturer of the respective item.
 - 3. Provide: Provide means furnish and install.
 - 4. Shop fabricated or shop made: Shop fabricated or shop made refers to items made by a Contractor or Subcontractor in their own Shop.
- C. Insurance
 - 1. Designated Purchaser:
 - a. Owner shall purchase and maintain Builder's Risk Insurance in accord with the General Conditions.
 - b. The Owner's insurance will be subject to a deductible of \$1,000.00 per occurrence.
- D. Contracts
 - 1. The owner intends to award a single construction contract for all work as specified herein.

1.03 WORK BY OWNER - NONE

1.04 DUTIES OF CONTRACTOR

- A. Except as specifically noted, provide and pay for:
 - 1. Labor, materials and equipment.
 - 2. Tools, construction equipment and machinery.
 - 3. Temporary water, heat and other utilities required for construction.
 - 4. Other facilities and services necessary for proper execution and completion of work.
- B. Secure and pay for as necessary for proper execution and completion of work, and as applicable at time of receipt of bids:
 - 1. Permits
 - 2. Government Fees
 - 3. Licenses
- C. Give required notices.
- D. Comply with codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on performance of work.
- E. Promptly submit written notice to Architect of known or observed variances of Contract Documents from legal requirements.

1. Appropriate modifications to Contract Documents will adjust necessary changes.
 2. Assume responsibility for Work known to be contrary to such requirements.
- F. Enforce strict discipline and good order among employees. Do not employ on Project:
1. Unfit persons.
 2. Persons not skilled in assigned task.
- G. This Project is exempt from all State and Local use taxes.
1. Obtain sales tax exemption certificate number from Owner.
 2. Pay legally assessed penalties for improper use of exemption certificate number.

1.05 WORK SEQUENCE AND OWNER OCCUPANCY

- A. The building is currently unoccupied. Work can commence immediately following, pending award and weather and as follows:
- B. The dates of Substantial Completion shall be no later than Friday, November 28, 2025. Except as follows:
- C. The dates of Final Completion shall be no later than 5:00 p.m., Friday, December 19, 2025.
- D. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- E. Schedule the Work to accommodate Owner occupancy.

1.06 JOB OPERATIONS

- A. Project Security:
1. Securely close-off all areas of construction after working hours to prevent entry by unauthorized persons.
- B. Project Communications:
1. Communications by all key project personnel shall be primarily via voice (telephone and mobile phone) and email (mobile smart phone and computer).
 2. The Contractor shall have the capability of communicating via voice (telephone and mobile phone), email (mobile smart phone and computer), and fax for the duration of the project.
 - a. The Contractor's main Office shall be equipped to communicate via voice (telephone), email (computer), and fax.
 - b. The Contractor's job site office(s) shall be equipped to communicate via voice (telephone), email (computer) and fax.
 - c. The Contractor's Project manager and two Site Superintendents shall be equipped with mobile 'smart' phones capable of communicating by voice and email.
- C. Contractor Staffing:
1. The Contractor shall be required to have a minimum of one full-time Site Superintendent on site for the duration of the project. while work is in progress.
 2. Additional site supervision necessitated by the project conditions shall be at the Contractor's discretion.

1.07 WORK LIMITATIONS

- A. Give Owner minimum three days notice before starting Construction Work in any area.

1.08 CONTRACTOR USE OF SITE AND PREMISES

- A. Confine operations at site to areas permitted by:
1. Law.
 2. Permits
 3. Contract.
 4. Owner's representative.
 5. Required use of adjacent existing facilities.
- B. Confer with Owner's representative and obtain full knowledge of all site rules and regulations affecting work.

- C. Conform to site rules and regulations while engaged in project construction.
- D. Site rules and regulations take precedence over others that may exist outside such jurisdiction.
- E. Employees On Site: The Owner's representative may examine Contractor's list of employees, including those of his subcontractors and their agents for all employees working on site.
- F. Vehicle use: Rigidly enforce the following:
 - 1. Keep all vehicles, mechanized or motorized equipment locked and secured at all times when parked and unattended on Owner's premises.
 - 2. Do not, under any circumstance, leave any vehicle unattended with motor or engine running, or with ignition key in place.
 - 3. All traffic control subject to Owner's representative's approval.
- G. Do not unreasonably encumber site with materials or equipment.
- H. Assume full responsibility for protection safety and safekeeping of products stored on premises.
- I. Move all stored products or equipment which interferes with operations of Owner or other subcontractors.
- J. Obtain and pay for use of additional storage or work area needed for operations.
- K. Limit use of site for work and storage:
 - 1. To areas approved in advance by Owner.
- L. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Others.
- M. Provide access to and from site as required by law and by Owner:
- N. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 1. Do not obstruct roadways, sidewalks, or other public ways without permit and the prior approval of the Owner.
- O. Utility Outages and Shutdown:
 - 1. Limit disruption of utility services to hours the building is unoccupied.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 00 72 00 - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- B. Section 01 21 00 - Allowances: Payment procedures relating to expenditure of allowances.
- C. Section 01 22 00 - Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.
- D. Section 01 78 00 - Closeout Submittals: Project record documents.

1.03 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- F. Preparation
 - 1. Itemize separate line costs for each of the following:
 - a. Insurance.
 - b. Bonds.
 - c. General Conditions and overhead.
 - d. Profit and fees.
 - e. Construction allowance amounts.
 - f. Hoisting and craning.
 - g. Attick stock materials and equipment.
 - h. Closeout Documents.
 - i. Any additional line items requested by the Owner or Architect.
 - 2. Itemize separate line item costs for work specified in each section of the specifications. Identify work of:
 - a. Trade contractor's own labor forces,
 - b. Any subcontractors.
 - c. All major suppliers of products or equipment.
 - 3. Break down installed costs into:
 - a. Delivered cost of product
 - b. Labor cost.
 - 4. For each line items that has and installed value of greater than \$10,000.00, break down costs to list amount of labor and amount of materials under each item.
 - a. Contractor, subcontractor or supplier.

- b. Specification section number.
- c. Description of work or material.
- d. Quantity.
- e. Unit price.
- f. Scheduled value.
- g. % of contract.
- 5. Round off figures to the nearest one dollar.
- 6. Make sum of total costs of all items listed in the Schedule equal to the total contract sum.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.
- F. Execute certification by signature of authorized officer.
- G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- I. Include the following with the application:
 - 1. Transmittal letter as specified for submittals in Section 01 30 00.
 - 2. Construction progress schedule, revised and current as specified in Section 01 30 00.
 - 3. Partial release of liens from major subcontractors and vendors.
 - 4. Affidavits attesting to off-site stored products.
- J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.
- K. Submission and review process for each payment application:
 - 1. Contractor is to submit one electronic copy of a draft Application for Payment (pencil copy) to Architect and Owner for initial review.
 - 2. If the Architect and Owner have comments or corrections, Contractor shall address all issues and resubmit one revised electronic copy of draft Application for Payment for final review.
 - 3. Upon approval of the draft Application for payment, Contractor shall submit one electronic copy of the Application for Payment, waivers of lien, and all substantiating paperwork to Legat Architects at the following address:
 - a. Attention: Cindy Hopkins, CC: Kayla Hopkins
 - b. Email: chopkins@legat.com; khopkins@legat.com

- c. Phone: (847) 662-3535
- 4. Legat Architects will send the approved Application for Payment to the owner.
- 5. The Owner will approve the Application for Payment at their regularly scheduled Board of Education meetings held monthly.
- L. Pay Schedule: Monthly, Date to be coordinated with Owner.
 - 1. Pencil Copy should be submitted to the Architect no later than the 2nd project meeting of the month.

1.05 MODIFICATION PROCEDURES

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
- B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- C. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- D. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 5 days.
- E. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 60 00.
- F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- G. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- H. Adjustments to the Contract Sum, excluding those calculated using unit prices, or allowance draws, shall calculate overhead, profit, and general conditions combined at the following percentages of the cost attributed to the change in the Work:
1. For the Contractor, for Work performed by the Contractor's own forces, add ten percent (10%) of the cost of the Work.
 2. For the Contractor, for Work performed by the Contractor's Subcontractors, add five percent (5%) of the cost of the Work.
 3. For each Subcontractor, or Sub-Subcontractor involved, for Work performed by the Sub-Contractor or Sub-subcontractor's own forces, add ten percent (10%) of the cost of the Work.
 4. For each Subcontractor, for work performed by the Subcontractor's Sub-subcontractor, add five percent (5%) of the cost of Work.
 5. When both additions and credits are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any.
- I. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- J. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- K. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- L. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 1. All closeout procedures specified in Section 01 70 00.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 21 00
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Contingency allowance.
- B. Payment and modification procedures relating to allowances.

1.02 RELATED REQUIREMENTS

- A. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 CONTINGENCY ALLOWANCE

- A. Description: Allowance dollars to be utilized for unforeseen Work related to Work identified in the Contract Documents or additional work as requested by the owner.
- B. Scope of work to be determined in the field based on actual field conditions.
- C. Contractor will provide a negotiated price for the determined scope of work.
- D. Contractor's costs shall include products, materials, delivery, equipment rental, installation, labor, payroll, and taxes.
- E. Contractor's costs shall exclude overhead, profit, insurance, and bonds which shall be included in the Base Bid and not in the Allowance Authorization Requests (AAR's).
- F. Funds will be drawn from the Contingency Allowance only be approved AAR's.
- G. Architect will keep a running list of allowance expenditures on a Project Modifications form.
- H. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.
- I. Expenditures exceeding the project Allowance will result in an Add Change Order.

1.04 OTHER PROVISIONS

- A. All Allowances specified herein for Base Bid Work, shall be included in the lump sum Base Bid.
- B. All Allowances specified herein for Alternate Bid Work, shall be included in the lump sum amount for the Alternate Number identified.

1.05 ALLOWANCES SCHEDULE

- A. Base Bid:
 - 1. Include the stipulated sum of \$75,000 for Work, in addition to the Work required by the Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 23 00
ALTERNATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Document 00 41 00 - Bid Form: Alternates listed on Bid Form.

1.03 ACCEPTANCE OF ALTERNATES

- A. Indicate Bid Price for Alternates listed on the Bid Form. Unless otherwise noted, indicate Bid Price for Alternates as adding to, or desucting from the Base Bid price.
- B. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- C. Bids will be evaluated based on the total of the Base Bid price and the Alternates being considered.
- D. Coordinate related work and Modify surrounding work to integrate the Work of each Alternate.

1.04 SCHEDULE OF ALTERNATES - REFER TO BID FORM

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 25 00
SUBSTITUTION PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 00 43 25 - Substitution Request Form - During Procurement: Required form for substitution requests made prior to award of contract (During procurement).

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
 - a. Substitution requests offering advantages solely to the Contractor will not be considered.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Forms indicated in the Project Manual are adequate for this purpose, and must be used.
- D. Limit each request to a single proposed substitution item.
 - 1. Submit an electronic document, combining the request form with supporting data into single document.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
 - 1. Instructions to Bidders specifies time restrictions and the documents required for submitting substitution requests during the bidding period.
- B. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing the form in Section 00 43 25; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Substitution Requests after Bid Opening will not be considered except for the following conditions:
 - 1. Product Discontinued.
 - 2. Insufficient quantity, except the following will not establish cause for substitution:
 - a. Failure to award subcontract in sufficient time, or failure to place orders for products so as to ensure delivery without delaying work.
 - 3. Delays beyond Contractor's control, such as strikes, lockouts, storms, fires, or acts of God, which may preclude the procurement and delivery of products for purposes of the Project.
- B. No consideration will be given to substitutions after the Contractor submits the Schedule of Values.

END OF SECTION

**SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 00 72 00 - General Conditions: Dates for applications for payment.
- B. Section 01 32 16 - Construction Progress Schedule: Form, content, and administration of schedules.
- C. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- D. Section 01 78 00 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 PROJECT COORDINATOR

- A. Project Coordinator: Contractor.
- B. Cooperate with the Owner in allocation of mobilization areas of the site, materials staging, construction traffic, deliveries and parking.
- C. During construction, coordinate use of site and facilities through the Owner.
- D. Comply with the instructions of the Owner for use of temporary utilities and construction facilities.
- E. Coordinate field engineering and layout work under the instructions of the Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. **Use of an electronic document submittal service is not required.** However, the Contractor is encouraged to utilize this type of service for this project.

3.02 PRECONSTRUCTION MEETING

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required:
 - 1. Owner.
 - 2. Architect.
 - 3. Contractor.
 - 4. Project Manager.
 - 5. Field Superintendent.
 - 6. Safety Representative.
 - 7. Major Subcontractors.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.

2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
5. Designation of personnel representing the parties to Contract and Architect.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
7. Preliminary Project Schedule.

D. Architect will record and distribute meeting minutes for the preconstruction meeting only.

3.03 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.

B. Attendance Required:

1. Contractor.
2. Owner.
3. Architect.
4. Contractor:
 - a. Project Manager.
 - b. Field Superintendent.

C. Agenda:

1. Review minutes of previous meetings.
2. Review of work progress.
3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of RFIs log and status of responses.
7. Review of off-site fabrication and delivery schedules.
8. Maintenance of progress schedule.
9. Corrective measures to regain projected schedules.
10. Planned progress during succeeding work period.
11. Coordination of projected progress.
12. Maintenance of quality and work standards.
13. Effect of proposed changes on progress schedule and coordination.
14. Other business relating to work.

D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.04 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01 32 16

3.05 SUBMITTALS FOR REVIEW

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

1. Product data.
2. Shop drawings.
3. Samples for selection.
4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.

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

D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - Closeout Submittals.

3.06 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

3.07 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 78 00 - Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.08 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
 - 1. Product Data: Submit electronic documents.
 - 2. Shop Drawings: Submit electronic documents.
 - 3. Color Charts for initial selection: Submit manufacturer's printed materials. Website links, printouts from websites, and digital scans are not acceptable.
 - 4. Samples for color and finish selection: Submit physical samples.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.09 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a single transmittal for related items.
 - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 - 3. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 4. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - 5. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.

6. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 7. Provide space for Contractor and Architect review stamps.
 8. When revised for resubmission, identify all changes made since previous submission.
 9. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 10. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
 11. Submittals not requested will be recognized, and will be returned "Not Reviewed",
- B. Product Data Procedures:
1. Submit only information required by individual specification sections.
 2. Collect required information into a single submittal.
 3. Submit concurrently with related shop drawing submittal.
 4. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 2. Do not reproduce Contract Documents to create shop drawings.
 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Contractor Responsibility:
1. Review shop drawings, product data and samples prior to submission to the next level of authority.
 2. Verify:
 - a. Field dimensions and drawing dimensions.
 - b. Field construction criteria.
 - c. Catalog numbers and similar
 - d. Compliance of items submitted with Contract Documents.
 - e. Dimensions and elevations requirements necessary to properly install products.
 3. Coordinate each submittal with requirements of:
 - a. The Work.
 - b. The Contract Documents.
 - c. The work of other subcontractors.
 4. Contractor's responsibility for errors and omissions in submittals is not relieved by Architect/ Engineer's review of submittals.
 5. Notify Architect in writing prior to submission and specifically on the submittal, of proposed deviations in submittal from contract documents.
 6. Contractor's responsibility for notifying Architect of deviations and for correcting deviations not properly identified in submittals is not relieved by Architect's review of improperly documented submittals.
 7. Do not begin and work which requires submittals without having Architect's stamp and initials or signature indicating review.
 8. After Architect's review, make response required by Architect's stamp and distribute copies. Indicate by transmittal, that copy of the approved data has been distributed.
- E. Architect's Responsibilities:
1. Review each submittal within 10 business days, excluding delivery time to and from the contractor.
 2. Review for compliance to design concept of the project.
 3. Review all requests for proposed deviations. Obtain Owner's concurrence and respond to Contractor's request
 4. Review of separate items does not constitute review of an assembly in which items

5. Affix stamp, date, and initials or signature certifying to review of submittal, and which instructions for contractor response.
6. Return submittals to contractor for response or distribution.
7. Select product colors upon receipt of ll shop drawings and submittals requiring color selections.

3.10 ELECTRONIC MEDIA FILES

- A. Construction drawings for this project have been prepared by the Architect and Engineer utilizing the following Computer Aided Drawing (CAD) Systems; Autodesk Revit 2024.
- B. Electronic media files of plan drawings only will be made available to Contractors and Subcontractors at no cost.
 1. Electronic media files of section drawings, detail drawings, and schedules will not be made available.
- C. Upon request to obtain electronic media files, the Contractor shall complete the "Request for Electronic Drawing Files" prepared and issued by the Architect. See Section 01 30 05 - Electronic File Waiver.
- D. Sheets can be formatted to provide background information only, background plus various layers of equipment; or of complete sheets as issued for construction.
- E. Contractor may utilize these CAD Drawings in the preparation of their shop drawings and as-built drawings only.
- F. The information issued is provided in a good faith effort to expedite the Project and simplify the efforts of the Contractor with no guarantee by the issuer as to the accuracy or correctness of the information provided. The Architect accepts no responsibility or liability for the Contractor's or subcontractor's use of these CAD documents.
- G. The use of these CAD documents by the Contractor does not relieve them of their responsibility to field measure existing conditions and to properly fit the work to the Project.
- H. These documents will be provided when obtained for the convenience of the Contractor and this Project. Ownership and use of the issued documents are governed by the terms of the General Conditions.

END OF SECTION

**SECTION 01 30 05
ELECTRONIC FILE WAIVER**

ELECTRONIC FILE WAIVER

1.01 PROJECT

- A. Project Name: 2025 Interior Improvements: Tenant Build Out at 1300 Copperfield Ave.
- B. Owner: Will County Board.
- C. Architect's Name: Legat Architects, Inc.
- D. Trade Contractor: _____
(Printed/Typed Name of Authorized Agent of Contractor)

1.02 GENERAL

- A. Legat Architects, Inc. agrees to convey the requested electronic file(s) identified below to the organization identified by the undersigned upon receipt of this document with an original signature by an authorized representative of said organization.
- B. The electronic file(s) are a copyrighted product of Legat Architects, Inc. Sale or distribution of these electronic files or their printed content without consent from Legat Architects, Inc. is prohibited.
- C. The information provided in the electronic file(s) is provided in a good faith effort to expedite the Project and simplify the efforts of the Trade Contractor with no guarantee by the issuer as to the accuracy or correctness of the information provided. The Architect accepts no responsibility or liability for the use of these CAD documents by the undersigned.
- D. The undersigned agrees to hold harmless Legat Architects, Inc. for any field conditions that vary from the information represented within the electronic file(s).
- E. The undersigned agrees to notify Legat Architects, Inc. within five business days of receipt of the electronic files of any issues preventing the electronic files from being accessed.
- F. Electronic Drawing Files to be conveyed include the following: Requested File Format:
 - 1. _____
 - 2. _____
 - 3. _____
- G. Company Name: _____
- H. Name of Contractor: _____
(Printed/Typed Name of Authorized Agent of Contractor)
- I. Name of Contractor: _____
(Signature of Authorized Agent of Contractor)
- J. Date: _____

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 RELATED SECTIONS

- A. Section 01 10 00 - Summary: Work sequence.

1.03 REFERENCE STANDARDS

- A. AGC (CPSM) - Construction Planning and Scheduling Manual; 2004.
- B. M-H (CPM) - CPM in Construction Management - Project Management with CPM; 2016.

1.04 SUBMITTALS

- A. Within ten (10) business days after the date of the Pre-Construction Meeting, submit Final Project Schedule which encompasses the full duration of the Project.

1.05 QUALITY ASSURANCE

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

1.06 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Sheet Size: Multiples of 8-1/2 x 11 inches (216 x 280 mm).
- C. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

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

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01 10 00 - Summary.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- G. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified under Allowances, and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes.
- H. Coordinate content with schedule of values specified in Section 01 20 00 - Price and Payment Procedures.
- I. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. The Preliminary Project Schedule will be reviewed at the Pre-Construction Meeting. After review, revise as necessary and submit Final Project Schedule within ten (10) business days.
- B. The Project Progress Schedule will be reviewed at every Progress meeting. Updates to the schedule are to be made prior to the next Progress Meeting.
- C. Participate in joint review and evaluation of schedule with Architect at each submittal.
- D. Evaluate project status to determine work behind schedule and work ahead of schedule.
- E. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION

**SECTION 01 35 53
SECURITY PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Security measures including entry control, personnel identification, and miscellaneous restrictions.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: use of premises and occupancy.
- B. Section 01 50 00 - Temporary Facilities and Controls: barriers and enclosures and temporary toilet facilities.

1.03 SECURITY PROGRAM

- A. Protect Work , existing premises and Owner's operations from theft, vandalism, and unauthorized entry.

1.04 ENTRY CONTROL

- A. Allow entrance only to authorized persons with proper identification.
- B. Owner will control entrance of persons and vehicles related to Owner's operations.

1.05 PERSONNEL IDENTIFICATION

- A. Badge to include: Personal photograph, name, assigned number, expiration date and employer.
- B. Contractor shall maintain a list of accredited persons who have been issued identification badges which shall be submitted to the Owner. Submit updated list upon request.
- C. Require return of badges at expiration of their employment or the Work.

1.06 RESTRICTIONS

- A. Do no work on Sundays.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 40 00
QUALITY REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. References and standards.
- C. Control of installation.
- D. Tolerances.
- E. Manufacturers' field services.
- F. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Document 00 31 00 - Available Project Information: Soil investigation data.
- B. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- D. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- E. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

1.04 REFERENCES AND STANDARDS

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

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

3.02 TOLERANCES

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

3.03 DEFECT ASSESSMENT

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

END OF SECTION

**SECTION 01 41 00
REGULATORY REQUIREMENTS**

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

- A. Regulatory requirements applicable to this project are the following:
- B. 28 CFR 35 - Nondiscrimination on the Basis of Disability in State and Local Government Services; Final Rule; Department of Justice; current edition.
- C. 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice; current edition.
- D. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- E. 29 CFR 1910 - Occupational Safety and Health Standards; Current Edition.
- F. ICC (IECC) - International Energy Conservation Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.02 RELATED REQUIREMENTS

- A. Section 01 40 00 - Quality Requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers, enclosures, and fencing.
- E. Vehicular access and parking.
- F. Waste removal facilities and services.

1.02 RELATED REQUIREMENTS

- A. Section 01 35 53 - Security Procedures

1.03 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power, consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.
- B. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- C. Existing facilities may be used.
- D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.04 TELECOMMUNICATIONS SERVICES

- A. The Contractor shall have and maintain the capability to communicate via voice (telephone and/ or mobile phone), text (mobile phone), email (mobile smart phone or computer), and electronic document submittal (mobile smart phone and/ or computer)
 - 1. The Contractor's place of business shall be equipped to communicate via voice, email, and electronic document submittal.
 - 2. The Contractor's Project Manager and Site Superintendent(s) shall be equipped with mobile smart phones capable of communicating via voice, text, email, and electronic document sub

1.05 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of existing facilities is not permitted.
- C. Maintain daily in clean and sanitary condition.

1.06 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for plants designated to remain. Replace damaged plants.
 - 1. Provide temporary barrier (min. 4 feet high) around each; or around each group of t
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

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

1.07 EXTERIOR ENCLOSURES

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.08 SECURITY - SEE SECTION 01 35 53

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

1.09 VEHICULAR ACCESS AND PARKING

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

1.10 WASTE REMOVAL

- A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.
- B. Use of Owner's waste removal facilities and services is not permitted.
- C. Locate waste removal facilities where d
- D. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- E. Provide containers with lids. Remove trash from site periodically.
- F. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- G. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- H. Methods of trash/ waste disposal that are not a
 1. Burning on the proje
 2. Burying on the project site.
 3. Dumping or burying on o
 4. Other illegal dumping or burty
 5. Incineration, either on or off-site.
- I. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.
- J. Prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations. Provide equipment and personnel, perform emergency measures to contain spillages, and to remove contaminated soil or liquids.

- K. Take special measures to prevent harmful substances from entering public waters. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to stre

1.11 CONSTRUCTION AIDS

- A. Provide and maintain all miscellaneous temporary facilities and equipment such as ladders, ramps, scaffolds, hoists, railings, chutes, barricades, enclosures, platforms, walks, etc., as required for the proper execution of work.
- B. Consult with Owner's representative to review site conditions and factors which may affect construction procedures and construction aids. Include review of adjacent properties and public ways which may also be affected by the Work.
- C. Installation:
 - 1. Comply with respective Project Manual Specification Sections.
 - 2. Relocate construction aids as construction progresses to expedite storage or work requirements and to accommodate legitimate requirements of Owner and other contractors at the site.

1.12 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 60 00
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 01 25 00 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 40 00 - Quality Requirements: Product quality monitoring.
- C. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 REFERENCE STANDARDS

- A. 16 CFR 260.13 - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; Recycled Content; Current Edition.

1.04 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 15 days after date of Agreement.
 - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

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

- D. Reused Products: Reused products include materials and equipment previously used in this or other construction, salvaged and refurbished as specified.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
 - 1. Made using or containing CFC's or HCFC's.
 - 2. Made of wood from newly cut old growth timber.
- C. Materials and Equipment Incorporated into the Work:
 - 1. **NO MATERIAL OR PRODUCT SHALL BE DELIVERED TO, PROVIDED FOR OR INSTALLED ON PROJECT WHICH CONTAINS ANY ASBESTOS OR ASBESTOS-CONTAINING MATERIAL.**
 - 2.
 - 3. Comply with size, make, type and quality standards.
 - 4. Manufactured and fabricated
 - a. Design, fabricate, and assemble in accord with best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
 - c. Two or more items of the same kind shall be identical from the same manufacturer.
 - d. All parts of systems shall be from the same manufacturer to the greatest extent practicable.
 - e. Adhere to equipment capacities, sizes, and dimensions shown or specified unless variations are specifically approved by Change Order.
- D. Where other criteria are met, Contractor shall give preference to products that:
 - 1. If used on interior, have lower emissions, as defined in Section 01 61 16.
 - 2. If wet-applied, have lower VOC content, as defined in Section 01 61 16.
 - 3. Result in less construction waste. See Section 01 74 19
 - 4. Are made of recycled materials.

2.03 PRODUCT OPTIONS

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

2.04 MAINTENANCE MATERIALS

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

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 25 00 - Substitution Procedures.
- B. Where the Bid Documents stipulate a particular product, substitutions will be considered.
 - 1. Prior to Bid Closing: Substitute products will be considered up to seven (7) business days prior to Bid Closing. Requests received after this date will not be considered.
 - a. When a request to substitute a product is made, the Architect may approve the substitution and, if approved, will document the approval by issuing an Addendum to all known bidders.

- b. Products approved by the Architect during the bidding period but not shown in the addenda shall be identified in the bidding forms on Document 00 43 10 - Proposed Substitutions is said materials are to be considered.
 - 2. At Time of Bid Closing: Substitute products will be considered if submitted as an attachment to the bidding forms using Document 00 43 10 - Proposed Substitutions.
 - a. Such substitutions will not be used to determine the low bid.
 - b. The Owner reserves the right to accept or reject such substitutions at their
 - 3. After the Bid Closing: No substitutions will be considered unless one or more of the following conditions exist:
 - a. Product is discontinued.
 - b. Insufficient quantity of product except any of the following will not establish cause for substitution:
 - 1) Failure to award subcontract in sufficient time;
 - 2) Failure to place orders to ensure delivery without delaying work.
 - c. Delays beyond control such as labor strikes, lockouts, sever weather conditions, fires, acts of God which may preclude the production and/ or delivery of products for purposes of the Project.
- C. After the Agreement is executed, no substitutions will be considered unless one or more of the following conditions exist:
 - 1. Product is discontinued.
 - 2. Insufficient quantity of product except any of the following will not establish cause for substitution:
 - a. Failure to award subcontract in sufficient time;
 - b. Failure to place orders to ensure delivery without delaying work.
 - 3. Delays beyond control such as labor strikes, lockouts, sever weather conditions, fires, acts of God which may preclude the production and/ or delivery of products for purposes of the Project.
- D. Products proposed for substitution that do not meet or exceed all aspects of the products specified will not be considered.
- E. Substitutions will be considered when a product, through no fault of the COntract, becomes unavailable or unsuitable due to regulatory change.
- F. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
 - 1. The burden of proof is on proposer.
 - 2. The substitution request shall clearly describe the items for which approval is requested and provide sufficient information to easily determine if the requested items meet or exceed the requirements of those specified.
 - a. Substitution requests for products specified shall identify brand, make, and model number of the specified product together with the brand, make, and model number of the product being proposed as a substitution.
 - b. Provide manufacturer's literature including:
 - 1) Product descriptions.
 - 2) Performance test data.
 - 3) Reference Standards.
 - c. Provide physical samples.
 - d. Provide name and address of similar projects on which product was used and date of installation.
 - 3. Provide complete information on required revisions to other work which may be required to accommodate each proposed substitution.
- G. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.

2. Agrees to provide the same warranty for the substitution as for the specified product.
 3. Agrees to coordinate installation and make changes to other Work that may be required for these Work to be completed with no additional cost to the Owner.
 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- H. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- I. Architect will notify Contractor in writing of decision to accept or reject request.

3.02 OWNER-SUPPLIED PRODUCTS

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

3.03 TRANSPORTATION AND HANDLING

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

3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.

- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide off-site storage and protection when site does not permit on-site storage or protection.
- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Do not store products directly on the ground.
- J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- K. Prevent contact with material that may cause corrosion, discoloration, or staining.
- L. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- N. Provide separate storage for combustible and non-combustible products. Store combustible materials in accordance with rules and recommendations of the Illinois State Fire Marshall and the local authority having jurisdiction.
- O. Completely remove and lawfully dispose of all temporary storage, packing materials, contents and utilities at the completion of the Work or when requested by the Owner.

END OF SECTION

**SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures, Electronic document submittal service.
- C. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 50 00 - Temporary Facilities and Controls: Temporary exterior enclosures.
- E. Section 01 74 19 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- F. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- G. Section 02 41 00 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.05 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
 - 2. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.

- C. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean-up of work of separate sections.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Contractor shall provide and maintain all tools and equipment required to complete the Work. Use of the Owner's tools and equipment is prohibited.
- B. Contractor shall be responsible for providing their own access to complete the Work including, but not limited to, carts, dollies, ladders, scaffolding, hoists, lifts, cranes, helicopter air-lifts, etc. Use of the Owner's access equipment is prohibited.
- C. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- D. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- E. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- F. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- G. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
- C. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Relocate items indicated on drawings.
 - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, and Electrical): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.

2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 4. Verify that abandoned services serve only abandoned facilities.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 1. Complete the work.
 2. Fit products together to integrate with other work.
 3. Provide openings for penetration of mechanical, electrical, and other services.
 4. Match work that has been cut to adjacent work.
 5. Repair areas adjacent to cuts to required condition.
 6. Repair new work damaged by subsequent work.
 7. Remove samples of installed work for testing when requested.
 8. Remove and replace defective and non-complying work.

- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- J. Patching:
 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 2. Match color, texture, and appearance.
 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.09 ADJUSTING

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

3.10 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D. Clean filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.11 CLOSEOUT PROCEDURES

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

END OF SECTION

SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Contractor Reporting Responsibilities: Submit periodic Waste Disposal Reports; report landfill disposal, incineration, recycling, salvage, and reuse regardless of to whom the cost or savings accrues; use the same units of measure on required reports.
- E. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- F. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. Section 01 50 00 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- C. Section 01 60 00 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- D. Section 01 70 00 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01 76 10
TEMPORARY PROTECTIVE COVERINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary protective coverings for installed floors.

1.02 RELATED REQUIREMENTS

- A. Section 01 70 00 - Execution and Closeout Requirements: Coordination of requirements for materials specified in this section.

1.03 REFERENCE STANDARDS

- A. ANSI A135.4 - Basic Hardboard; 2012 (Reaffirmed 2020).
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- C. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2023, with Errata.

PART 2 PRODUCTS

2.01 GENERAL

- A. Provide materials that are easily removed without damage to the surfaces covered and with the following characteristics:
 - 1. Impact resistant.
 - 2. Slip resistant.

2.02 MATERIALS

- A. Sheet Materials:
 - 1. Wood Hardboard: ANSI A135.4, tempered, 1/4 inch (6 mm) thick nominal.
 - 2. Flame Retardance: Meet requirements of NFPA 701.
 - 3. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.

PART 3 EXECUTION

3.01 PREPARATION

- A. Remove dirt and debris from surfaces to be protected.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Trim or overlap sheet materials to fit area to be covered.
- C. Tape seams. Avoid taping directly to finished surfaces.

3.03 REMOVAL

- A. Remove protective coverings prior to Date of Substantial Completion. Reuse or recycle materials if possible.

END OF SECTION

**SECTION 01 78 00
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 00 72 00 - General Conditions and 00 73 00 - Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

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

1.04 ELECTRONIC SUBMITTAL

- A. General: Provide a complete project closeout documentation package in electronic format. This package shall include:
 - 1. Issued for Construction Plans and Specifications.
 - 2. Project Record Documents.
 - 3. Approved Submittals.
 - 4. Operation and Maintenance Manuals.
 - 5. Warranties.
 - 6. Owner Training Manuals (.WMV or MP4 Format) if applicable.
 - 7. Project Contact Directory.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

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

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
 - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Additional information as specified in individual product specification sections.
- D. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 WARRANTIES AND BONDS

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

- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

END OF SECTION

**SECTION 01 79 00
DEMONSTRATION AND TRAINING**

PART 1 GENERAL

1.01 SUMMARY

- A. Demonstration of products and systems to be commissioned and where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
 - 1. All software-operated systems.
 - 2. HVAC systems and equipment.
 - 3. Plumbing equipment.
 - 4. Items specified in individual product Sections.

1.02 RELATED REQUIREMENTS

- A. Section 01 78 00 - Closeout Submittals: Operation and maintenance manuals.
- B. Section 01 91 13 - General Commissioning Requirements: Additional requirements applicable to demonstration and training.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures; except:
 - 1. Make all submittals specified in this section, and elsewhere where indicated for commissioning purposes, directly to the Commissioning Authority.
 - 2. Submit one copy to the Commissioning Authority, not to be returned.
 - 3. Make commissioning submittals on time schedule specified by Commissioning Authority.
 - 4. Submittals indicated as "Draft" are intended for the use of the Commissioning Authority in preparation of overall Training Plan; submit in editable electronic format, Microsoft Word 2003 preferred.
- B. Draft Training Plans: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
 - 1. Submit to Commissioning Authority for review and inclusion in overall training plan.
 - 2. Submit not less than four weeks prior to start of training.
 - 3. Revise and resubmit until acceptable.
 - 4. Provide an overall schedule showing all training sessions.
 - 5. Include at least the following for each training session:
 - a. Identification, date, time, and duration.
 - b. Description of products and/or systems to be covered.
 - c. Name of firm and person conducting training; include qualifications.
 - d. Intended audience, such as job description.
 - e. Objectives of training and suggested methods of ensuring adequate training.
 - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
 - g. Media to be used, such as slides, hand-outs, etc.
 - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
 - 1. Include applicable portion of O&M manuals.
 - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
 - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.

1.04 QUALITY ASSURANCE

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 DEMONSTRATION - GENERAL

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

3.02 TRAINING - GENERAL

- A. Commissioning Authority will prepare the Training Plan based on draft plans submitted.
- B. Conduct training on-site unless otherwise indicated.
- C. Owner will provide classroom and seating at no cost to Contractor.
- D. Do not start training until Functional Testing is complete, unless otherwise specified or approved by the Commissioning Authority.
- E. Provide training in minimum two hour segments.
- F. The Commissioning Authority is responsible for determining that the training was satisfactorily completed and will provide approval forms.
- G. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
- H. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
 - 1. The location of the O&M manuals and procedures for use and preservation; backup copies.
 - 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
 - 3. Typical uses of the O&M manuals.
- I. Product- and System-Specific Training:
 - 1. Review the applicable O&M manuals.
 - 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.

3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
 4. Provide hands-on training on all operational modes possible and preventive maintenance.
 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
 6. Discuss common troubleshooting problems and solutions.
 7. Discuss any peculiarities of equipment installation or operation.
 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
 9. Review recommended tools and spare parts inventory suggestions of manufacturers.
 10. Review spare parts and tools required to be furnished by Contractor.
 11. Review spare parts suppliers and sources and procurement procedures.
- J. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION

**SECTION 019113
GENERAL COMMISSIONING REQUIREMENTS**

PART 1 GENERAL

1.01 SUMMARY

- A. Commissioning is intended to achieve the following specific objectives; this section specifies the Contractor's responsibilities for commissioning:
 - 1. Verify that the work is installed in accordance with Contract Documents and the manufacturer's recommendations and instructions, and that it receives adequate operational checkout prior to startup: Startup reports and Prefunctional Checklists executed by Contractor are utilized to achieve this.
 - 2. Verify and document that functional performance is in accordance with Contract Documents: Functional Tests executed by Contractor and witnessed by the Commissioning Authority are utilized to achieve this.
 - 3. Verify that operation and maintenance manuals submitted to Owner are complete: Detailed operation and maintenance (O&M) data submittals by Contractor are utilized to achieve this.
 - 4. Verify that the Owner's operating personnel are adequately trained: Formal training conducted by Contractor is utilized to achieve this.
- B. Commissioning, including Functional Tests, O&M documentation review, and training, is to occur after startup and initial checkout and be completed before Functional Completion.
- C. The Commissioning Authority directs and coordinates all commissioning activities; this section describes some but not all of the Commissioning Authority's responsibilities.
- D. All documents and the management of the construction process will be done through the use of Procore. All contractors will be required to complete all construction checklists within the Procore site. AMSCO Engineering will provide access to the site.
- E. The Commissioning Process for systems defined in the scope of work in these specifications will be led by an independent Commissioning Authority (CxA), reporting directly to the Design Team/Owner/Construction Manager. The CxA for this project will be AMSCO Engineering + Cx

1.02 SCOPE OF COMMISSIONING

- A. The following are to be commissioned:
- B. HVAC System, including:
 - 1. Major and minor equipment items.

2. Piping systems and equipment.
 3. Ductwork and accessories.
 4. Terminal units.
 5. Control system.
 6. Variable frequency drives.
- C. Electrical Systems:
1. Lighting controls other than manual switches.
- D. Electronic Safety and Security:
1. Fire, CO and smoke alarms in conjunction to new mechanical equipment
- E. Other equipment and systems explicitly identified elsewhere in Contract Documents as requiring commissioning.

1.03 RELATED REQUIREMENTS

- A. Section 230800 - Commissioning of HVAC: HVAC control system testing; other requirements.
- B. Section 260800 - Commissioning of Electrical

1.04 REFERENCE STANDARDS

- A. PECE (Samples) - Sample Forms for Prefunctional Checklists and Functional Performance Tests; Current Edition.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures; except:
1. Make all submittals specified in this section, and elsewhere where indicated for commissioning purposes, directly to the Commissioning Authority, unless they require review by Engineer; in that case, submit to Engineer first.
 2. Submit one copy to the Commissioning Authority, not to be returned.
 3. Make commissioning submittals on time schedule specified by Commissioning Authority.
 4. Submittals indicated as "Draft" are intended for the use of the Commissioning Authority in preparation of Prefunctional Checklists or Functional Test requirements; submit in editable electronic format, Microsoft Word 2010 preferred.

5. As soon as possible after submittals made to Engineer are approved, submit copy of approved submittal to the Commissioning Authority.
- B. Product Data: If submittals to Engineer do not include the following, submit copies as soon as possible:
1. Manufacturer's product data, cut sheets, and shop drawings.
 2. Manufacturer's installation instructions.
 3. Startup, operating, and troubleshooting procedures.
 4. Fan and pump curves.
 5. Factory test reports.
 6. Warranty information, including details of Owner's responsibilities in regard to keeping warranties in force.
- C. Manufacturers' Instructions: Submit copies of all manufacturer-provided instructions that are shipped with the equipment as soon as the equipment is delivered.
- D. Startup Plans and Reports.
- E. Completed Prefunctional Checklists.

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required Functional Testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Calibration Tolerances: Provide testing equipment of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified. If not otherwise noted, the following minimum requirements apply:
1. Temperature Sensors and Digital Thermometers: Certified calibration within past year to accuracy of 0.5 degree F and resolution of plus/minus 0.1 degree F.
 2. Pressure Sensors: Accuracy of plus/minus 2.0 percent of the value range being measured (not full range of meter), calibrated within the last year.
 3. Calibration: According to the manufacturer's recommended intervals and when dropped or damaged; affix calibration tags or keep certificates readily available for inspection.
- C. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are

required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.

- D. Dataloggers: Independent equipment and software for monitoring flows, currents, status, pressures, etc. of equipment.
 - 1. Dataloggers required to for Functional Tests will be provided by the Commissioning Authority and will not become the property of Owner.

PART 3 EXECUTION

3.01 COMMISSIONING PLAN

- A. Commissioning Authority will prepare the Commissioning Plan.
 - 1. Attend meetings called by the Commissioning Authority for purposes of completing the commissioning plan.
 - 2. Require attendance and participation of relevant subcontractors, installers, suppliers, and manufacturer representatives.
- B. Contractor is responsible for compliance with the Commissioning Plan.
- C. Commissioning Plan: The commissioning schedule, procedures, and coordination requirements for all parties in the commissioning process.
- D. Commissioning Schedule:
 - 1. Submit anticipated dates of startup of each item of equipment and system to Commissioning Authority within 60 days after award of Contract.
 - 2. Re-submit anticipated startup dates monthly, but not less than 4 weeks prior to startup.
 - 3. Prefunctional Checklists and Functional Tests are to be performed in sequence from components, to subsystems, to systems.
 - 4. Provide sufficient notice to Commissioning Authority for delivery of relevant Checklists and Functional Test procedures, to avoid delay.

3.02 STARTUP PLANS AND REPORTS

- A. Startup Plans: For each item of equipment and system for which the manufacturer provides a startup plan, submit the plan not less than 8 weeks prior to startup.
- B. Startup Reports: For each item of equipment and system for which the manufacturer provides a startup checklist (or startup plan or field checkout sheet), document compliance by submitting the completed startup checklist prior to startup, signed and

dated by responsible entity.

C. Submit directly to the Commissioning Authority.

3.03 PREFUNCTIONAL CHECKLISTS

A. A Prefunctional Checklist is required to be filled out for each item of equipment or other assembly specified to be commissioned.

1. No sampling of identical or near-identical items is allowed.
2. These checklists do not replace manufacturers' recommended startup checklists, regardless of apparent redundancy.
3. Prefunctional Checklist forms will not be complete until after award of the contract; the following types of information will be gathered via the completed Checklist forms:
 - a. Certification by installing contractor that the unit is properly installed, started up, and operating and ready for Functional Testing.
 - b. Confirmation of receipt of each shop drawing and commissioning submittal specified, itemized by unit.
 - c. Manufacturer, model number, and relevant capacity information; list information "as specified," "as submitted," and "as installed."
 - d. Serial number of installed unit.
 - e. List of inspections to be conducted to document proper installation prior to startup and Functional Testing; these will be primarily static inspections and procedures; for equipment and systems may include normal manufacturer's start-up checklist items and minor testing.
 - f. Sensor and actuator calibration information.
4. PECEI (Samples) found at <http://www.peci.org/library/mcpgs.htm> indicate anticipated level of detail for Prefunctional Checklists.

B. Contractor is responsible for filling out Prefunctional Checklists, after completion of installation and before startup; witnessing by the Commissioning Authority is not required unless otherwise specified.

1. Each line item without deficiency is to be witnessed, initialed, and dated by the actual witness; checklists are not complete until all line items are initialed and dated complete without deficiencies.
2. Checklists with incomplete items may be submitted for approval provided the Contractor attests that incomplete items do not preclude the performance of safe

and reliable Functional Testing; re-submission of the Checklist is required upon completion of remaining items.

3. Individual Checklists may contain line items that are the responsibility of more than one installer; Contractor shall assign responsibility to appropriate installers or subcontractors, with identification recorded on the form.
 4. If any Checklist line item is not relevant, record reasons on the form.
 5. Contractor may independently perform startup inspections and/or tests, at Contractor's option.
 6. Regardless of these reporting requirements, Contractor is responsible for correct startup and operation.
 7. Submit completed Checklists to Commissioning Authority within two days of completion.
- C. Commissioning Authority is responsible for furnishing the Prefunctional Checklists to Contractor.
1. Initial Drafts: Contractor is responsible for initial draft of Prefunctional Checklist where so indicated in Contract Documents.
 2. Provide all additional information requested by Commissioning Authority to aid in preparation of checklists, such as shop drawing submittals, manufacturers' startup checklists, and O&M data.
 3. Commissioning Authority may add any relevant items deemed necessary regardless of whether they are explicitly mentioned in Contract Documents or not.
 4. When asked to review the proposed Checklists, do so in a timely manner.
- D. Commissioning Authority Witnessing: Required for:
1. Each piece of primary equipment, unless sampling of multiple similar units is allowed by the commissioning plan.
 2. A sampling of non-primary equipment, as allowed by the commissioning plan.
- E. Deficiencies: Correct deficiencies and re-inspect or re-test, as applicable, at no extra cost to Owner.
1. If difficulty in correction would delay progress, report deficiency to the Commissioning Authority immediately.

3.04 FUNCTIONAL TESTS

- A. A Functional Test is required for each item of equipment, system, or other assembly specified to be commissioned, unless sampling of multiple identical or near-identical units is allowed by the final test procedures.
- B. Contractor is responsible for execution of required Functional Tests, after completion of Prefunctional Checklist and before closeout.
- C. Commissioning Authority is responsible for witnessing and reporting results of Functional Tests, including preparation and completion of forms for that purpose.
- D. Contractor is responsible for correction of deficiencies and re-testing at no extra cost to Owner; if a deficiency is not corrected and re-tested immediately, the Commissioning Authority will document the deficiency and the Contractor's stated intentions regarding correction.
 - 1. Deficiencies are any condition in the installation or function of a component, piece of equipment or system that is not in compliance with Contract Documents or does not perform properly.
 - 2. When the deficiency has been corrected, the Contractor completes the form certifying that the item is ready to be re-tested and returns the form to the Commissioning Authority; the Commissioning Authority will reschedule the test and the Contractor shall re-test.
 - 3. Identical or Near-Identical Items: If 10 percent, or three, whichever is greater, of identical or near-identical items fail to perform due to material or manufacturing defect, all items will be considered defective; provide a proposal for correction within 2 weeks after notification of defect, including provision for testing sample installations prior to replacement of all items.
 - 4. Contractor shall bear the cost of Owner and Commissioning Authority personnel time witnessing re-testing.
 - 5. Contractor shall bear the cost of Owner and Commissioning Authority personnel time witnessing re-testing if the test failed due to failure to execute the relevant Prefunctional Checklist correctly; if the test failed for reasons that would not have been identified in the Prefunctional Checklist process, Contractor shall bear the cost of the second and subsequent re-tests.
- E. Functional Test Procedures:
 - 1. Some test procedures are included in Contract Documents; where Functional Test procedures are not included in Contract Documents, test procedures will be determined by the Commissioning Authority with input by and coordination with Contractor.

2. Examples of Functional Testing:

- a. Test the dynamic function and operation of equipment and systems (rather than just components) using manual (direct observation) or monitoring methods under full operation (e.g., the chiller pump is tested interactively with the chiller functions to see if the pump ramps up and down to maintain the differential pressure setpoint).
 - b. Systems are tested under various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, fire alarm, power failure, etc.
 - c. Systems are run through all the HVAC control system's sequences of operation and components are verified to be responding as the sequence's state.
 - d. Traditional air or water test and balancing (TAB) is not Functional Testing; spot checking of TAB by demonstration to the Commissioning Authority is Functional Testing.
- F. Deferred Functional Tests: Some tests may need to be performed later, after substantial completion, due to partial occupancy, equipment, seasonal requirements, design or other site conditions; performance of these tests remains the Contractor's responsibility regardless of timing.

3.05 SENSOR AND ACTUATOR CALIBRATION

- A. Calibrate all field-installed temperature, relative humidity, carbon monoxide, carbon dioxide, and pressure sensors and gauges, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. Sensors installed in the unit at the factory with calibration certification provided need not be field calibrated.
- B. Calibrate using the methods described below; alternate methods may be used, if approved by Commissioning Authority and Owner beforehand. See PART 2 for test instrument requirements. Record methods used on the relevant Prefunctional Checklist or other suitable forms, documenting initial, intermediate and final results.
- C. All Sensors:
 1. Verify that sensor location is appropriate and away from potential causes of erratic operation.
 2. Verify that sensors with shielded cable are grounded only at one end.
 3. For sensor pairs that are used to determine a temperature or pressure difference, for temperature make sure they are reading within 0.2 degree F of each other, and for pressure, within tolerance equal to 2 percent of the reading, of each other.

4. Tolerances for critical applications may be tighter.

D. Sensors Without Transmitters - Standard Application:

1. Make a reading with a calibrated test instrument within 6 inches of the site sensor.
2. Verify that the sensor reading, via the permanent thermostat, gauge or building automation system, is within the tolerances in the table below of the instrument-measured value.
3. If not, install offset, calibrate or replace sensor.

E. Sensors With Transmitters - Standard Application.

1. Disconnect sensor.
2. Connect a signal generator in place of sensor.
3. Connect ammeter in series between transmitter and building automation system control panel.
4. Using manufacturer's resistance-temperature data, simulate minimum desired temperature.
5. Adjust transmitter potentiometer zero until 4 mA is read by the ammeter.
6. Repeat for the maximum temperature matching 20 mA to the potentiometer span or maximum and verify at the building automation system.
7. Record all values and recalibrate controller as necessary to comply with specified control ramps, reset schedules, proportional relationship, reset relationship and P/I reaction.
8. Reconnect sensor.
9. Make a reading with a calibrated test instrument within 6 inches of the site sensor.
10. Verify that the sensor reading, via the permanent thermostat, gauge or building automation system, is within the tolerances in the table below of the instrument-measured value.
11. If not, replace sensor and repeat.
12. For pressure sensors, perform a similar process with a suitable signal generator.

F. Sensor Tolerances for Standard Applications: Plus/minus the following maximums:

1. Watthour, Voltage, Amperage: 1 percent of design.
2. Pressure, Air, Water, Gas: 3 percent of design.

3. Air Temperatures (Outside Air, Space Air, Duct Air): 0.4 degrees F.
 4. Relative Humidity: 4 percent of design.
 5. Barometric Pressure: 0.1 inch of Hg.
 6. Flow Rate, Air: 10 percent of design.
 7. Flow Rate, Water: 4 percent of design.
 8. AHU Wet Bulb and Dew Point: 2.0 degrees F.
 9. Hot Water Coil and Boiler Water Temperature: 1.5 degrees F.
 10. Cooling Coil, Chilled and Condenser Water Temperatures: 0.4 degrees F.
 11. Combustion Flue Temperature: 5.0 degrees F.
 12. Oxygen and CO2 Monitors: 0.1 percentage points.
 13. CO Monitor: 0.01 percentage points.
- G. Critical Applications: For some applications more rigorous calibration techniques may be required for selected sensors. Describe any such methods used on an attached sheet.
- H. Valve/Damper Stroke Setup and Check:
1. For all valve/damper actuator positions checked, verify the actual position against the control system readout.
 2. Set pump/fan to normal operating mode.
 3. Command valve/damper closed; visually verify that valve/damper is closed and adjust output zero signal as required.
 4. Command valve/damper to open; verify position is full open and adjust output signal as required.
 5. Command valve/damper to a few intermediate positions.
 6. If actual valve/damper position does not reasonably correspond, replace actuator or add pilot positioner (for pneumatics).
- I. Isolation Valve or System Valve Leak Check: For valves not associated with coils.
1. With full pressure in the system, command valve closed.
 2. Use an ultra-sonic flow meter to detect flow or leakage.

3.06 TEST PROCEDURES - GENERAL

- A. Provide skilled technicians to execute starting of equipment and to execute the Functional Tests. Ensure that they are available and present during the agreed upon schedules and for sufficient duration to complete the necessary tests, adjustments and problem-solving.
- B. Provide all necessary materials and system modifications required to produce the flows, pressures, temperatures, and conditions necessary to execute the test according to the specified conditions. At completion of the test, return all affected equipment and systems to their pre-test condition.
- C. Sampling: Where Functional Testing of fewer than the total number of multiple identical or near-identical items is explicitly permitted, perform sampling as follows:
 - 1. Identical Units: Defined as units with same application and sequence of operation; only minor size or capacity difference.
 - 2. Sampling is not allowed for:
 - a. Major equipment.
 - b. Life-safety-critical equipment.
 - c. Prefunctional Checklist execution.
 - 3. XX = the percent of the group of identical equipment to be included in each sample; defined for specific type of equipment.
 - 4. YY = the percent of the sample that if failed will require another sample to be tested; defined for specific type of equipment.
 - 5. Randomly test at least XX percent of each group of identical equipment, but not less than three units. This constitutes the "first sample."
 - 6. If YY percent of the units in the first sample fail, test another XX percent of the remaining identical units.
 - 7. If YY percent of the units in the second sample fail, test all remaining identical units.
 - 8. If frequent failures occur, resulting in more troubleshooting than testing, the Commissioning Authority may stop the testing and require Contractor to perform and document a checkout of the remaining units prior to continuing testing.
- D. Manual Testing: Use hand-held instruments, immediate control system readouts, or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation").

- E. Simulating Conditions: Artificially create the necessary condition for the purpose of testing the response of a system; for example apply hot air to a space sensor using a hair dryer to see the response in a VAV box.
- F. Simulating Signals: Disconnect the sensor and use a signal generator to send an amperage, resistance or pressure to the transducer and control system to simulate the sensor value.
- G. Over-Writing Values: Change the sensor value known to the control system in the control system to see the response of the system; for example, change the outside air temperature value from 50 degrees F to 75 degrees F to verify economizer operation.
- H. Indirect Indicators: Remote indicators of a response or condition, such as a reading from a control system screen reporting a damper to be 100 percent closed, are considered indirect indicators.
- I. Monitoring: Record parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of the relevant control systems; where monitoring of specific points is called for in Functional Test Procedures:
 - 1. All points that are monitored by the relevant control system shall be trended by Contractor; at the Commissioning Authority's request, Contractor shall trend up to 20 percent more points than specified at no extra charge.
 - 2. Other points will be monitored by the Commissioning Authority using dataloggers.
 - 3. At the option of the Commissioning Authority, some control system monitoring may be replaced with datalogger monitoring.
 - 4. Provide hard copies of monitored data in columnar format with time down left column and at least 5 columns of point values on same page.
 - 5. Graphical output is desirable and is required for all output if the system can produce it.
 - 6. Monitoring may be used to augment manual testing.

3.07 OPERATION AND MAINTENANCE MANUALS

- A. Add design intent documentation furnished by Engineer to manuals prior to submission to Owner.
- B. Submit manuals related to items that were commissioned to Commissioning Authority for review; make changes recommended by Commissioning Authority.
- C. Commissioning Authority will add commissioning records to manuals after submission to Owner.

3.08 TRAINING OF USING AGENCY PERSONNEL

- A. The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that training is completed.
- B. The CxA shall be responsible for overseeing and approving the content and adequacy of the training of Using Agency personnel for commissioned equipment.
 - 1. The CxA shall interview the facility manager and lead engineer to determine the special needs and areas where training will be most valuable. The Using Agency and CxA shall decide how rigorous the training should be for each piece of commissioned equipment. The CxA shall communicate the results to the Subs and vendors who have training responsibilities.
 - a. In addition to these general requirements, the specific training requirements of Using Agency personnel by Subcontractors and vendors is specified in Division 22, 23, and 26.
 - 2. Each Subcontractor and vendor responsible for training will submit a written training plan to the CxA for review and approval prior to training. The plan will cover the following elements:
 - a. Equipment (included in training)
 - 1) Intended audience
 - 2) Location of training
 - 3) Objectives
 - 4) Subjects covered (description, duration of discussion, special methods, etc.)
 - 5) Duration of training on each subject
 - 6) Instructor for each subject
 - 7) Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
 - 8) Instructor and qualifications
 - 9) For the primary HVAC equipment, the contractor shall provide a short discussion of the control of the equipment during the mechanical or electrical training conducted by others.
 - b. The CxA develops an overall training plan and coordinates and schedules, with the CM and GC, the overall training for the commissioned systems. The CxA develops criteria for determining that the training was satisfactorily

completed, including attending some of the training, etc. The CxA recommends approval of the training to the CM using a standard form. The CM also signs the approval form at one of the training sessions, the CxA presents a one hour presentation discussing the use of the blank functional test forms for re-commissioning equipment. Video recording of the training sessions will be provided by the Trade Contractor with media cataloged by the CxA and added to the O&M manuals.

3. The design engineer shall at the first training session present the overall system design concept and the design concept of each equipment section. This presentation shall be one to two hours in length and include a review of all systems using the simplified system schematics (one-line drawings) including chilled water systems, condenser water or heat rejection systems, heating systems, fuel oil and gas supply systems, supply air systems, exhaust system and outside air strategies.
4. Training Sessions
 - a. Training shall be performed in a two phase process occurring at the same training session. The first step will be performed in the classroom with the contractor or equipment manufacturer providing a Power Point presentation on the overall functioning and maintenance required of the representative system. Actual photos of the each represented piece of equipment as well as O&M manuals shall be reviewed in the presentation. The second step of the training will be a tour of the building showing the specific equipment. It shall be noted that all training sessions will be videotaped there will be no exceptions or exclusions.

END OF SECTION

**SECTION 02 41 00
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- D. Section 01 74 19 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.05 QUALITY ASSURANCE

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

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 DEMOLITION SCOPE - REFER TO DRAWINGS

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Use of explosives is not permitted.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 6. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
 - 7. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.

8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
- D. Do not begin removal until vegetation to be relocated has been removed and vegetation to remain has been protected from damage.
- E. Protect existing structures and other elements to remain in place and not removed.
 1. Provide bracing and shoring as required.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.
- F. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- G. Hazardous Materials:
 1. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCBs, and mercury.
- H. Perform demolition in a manner that maximizes salvage and recycling of materials.
 1. Dismantle existing construction and separate materials.
 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
 1. Verify construction and utility arrangements are as indicated.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Maintain weatherproof exterior building enclosure, except for interruptions required for replacement or modifications; prevent water and humidity damage.
- C. Remove existing work as indicated and required to accomplish new work.
 1. Remove items indicated on drawings.
- D. Services including, but not limited to, HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications: Remove existing systems and equipment as indicated.
 1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
 1. Prevent movement of structure. Provide shoring and bracing as required.
 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch to match new work.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Remove materials not to be reused on site; comply with requirements of Section 01 74 19 - Waste Management.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

**SECTION 03 30 00
CAST-IN-PLACE CONCRETE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Infill of Existing Floors.
- B. Concrete reinforcement.
- C. Joint devices associated with concrete work.
- D. Concrete curing.

1.02 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.
- B. Section 09 05 61 - Common Work Results for Flooring Preparation.
- C. Section 09 68 13 - Tile Carpeting

1.03 REFERENCE STANDARDS

- A. ACI 211.2 - Standard Practice for Selecting Proportions for Structural Lightweight Concrete; 1998 (Reapproved 2004).
- B. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary; 2019 (Reapproved 2022).
- C. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- D. ACI PRC-302.1 - Guide to Concrete Floor and Slab Construction; 2015.
- E. ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- F. ACI PRC-305 - Guide to Hot Weather Concreting; 2020.
- G. ACI PRC-308 - Guide to External Curing of Concrete; 2016.
- H. ACI SPEC-117 - Specification for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).
- I. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- J. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2022.
- K. ASTM A775/A775M - Standard Specification for Epoxy-Coated Steel Reinforcing Bars; 2022.
- L. ASTM A884/A884M - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement; 2019, with Editorial Revision (2020).
- M. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2023.
- N. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2023.
- O. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2024.
- P. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.
- Q. ASTM C150/C150M - Standard Specification for Portland Cement; 2022.
- R. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2023.
- S. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).

- T. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete; 2023.
- U. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2019, with Editorial Revision (2022).
- V. ASTM C618 - Standard Specification for Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2023, with Editorial Revision.
- W. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2017.
- X. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2020a.
- Y. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2021.
- Z. ASTM C1116/C1116M - Standard Specification for Fiber-Reinforced Concrete; 2023.
- AA. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2020.
- BB. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- CC. ASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Steel Reinforcing Bars; 2021.
- DD. ASTM E1155 - Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers; 2020.
- EE. ASTM E1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2018a.
- FF. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017 (Reapproved 2023).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
- C. Mix Design: Submit proposed concrete mix design.
 - 1. Indicate proposed mix design complies with requirements of ACI SPEC-301, Section 4 - Concrete Mixtures.
- D. Test Reports: Submit report for each test or series of tests specified.
- E. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.
- F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.
- B. Follow recommendations of ACI PRC-305 when concreting during hot weather.
- C. For slabs required to include moisture vapor reducing admixture (MVRA), do not proceed with placement unless manufacturer's representative is present for every day of placement.

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Slabs with Porosity Inhibiting Admixture (PIA) or Moisture Vapor Reducing Admixture (MVRA): Provide warranty to cover cost of flooring failures due to moisture migration from slabs for life of

the concrete.

1. Include cost of repair or removal of failed flooring, placement of topical moisture remediation system, and replacement of flooring with comparable flooring system.
2. Provide warranty by admixture manufacturer matching terms of flooring adhesive or primer manufacturer's material defect warranty.

PART 2 PRODUCTS

2.01 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) (420 MPa).
 1. Type: Deformed billet-steel bars.
 2. Finish: Epoxy coated in accordance with ASTM A775/A775M, unless otherwise indicated.
- B. Steel Welded Wire Reinforcement (WWR): Class A epoxy coated, deformed type, ASTM A884/A884M.
 1. Form: Flat Sheets.
 2. WWR Style: 4 x 8-W6 x W10 (102 x 203-MW39 x MW65).
- C. Reinforcement Accessories:
 1. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 2. Provide stainless steel, plastic, or plastic coated steel components for placement within 1-1/2 inches (38 mm) of weathering surfaces.

2.02 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
 1. Acquire cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
 1. Acquire aggregates for entire project from same source.
- C. Fly Ash: ASTM C618, Class C or F.
- D. Calcined Pozzolan: ASTM C618, Class N.
- E. Silica Fume: ASTM C1240, proportioned in accordance with ACI PRC-211.1.
- F. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.03 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C260/C260M.
 1. Manufacturers:
 - a. Euclid Chemical Company, Air-Mix.
 - b. Sika Chemical Corporation, Sika-Aer.
 - c. Grace CONstruction Products, Darex or Daravair.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Water Reducing Admixture: ASTM C494/C494M Type A.
 1. Products:
 - a. Euclid Chemical Company; Eucon WR75: www.euclidchemical.com.
 - b. Sika Chemical Corporation, Plastocrete 161.
 - c. Grace Construction Products, WRDA Hycol or WRDA 64.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Moisture Vapor Reducing Admixture (MVRA): Liquid, inorganic admixture free of volatile organic compounds (VOCs). Closes capillary systems formed during concrete curing to reduce moisture vapor emission and transmission. Reduces concrete shrinkage with no adverse effect on concrete properties or applied flooring.
 1. Provide admixture in slab infill.

2. Products:
 - a. Barrier One Concrete Admixtures; MVRA-CPS: www.barrierone.com.
 - b. Specialty Products Group; Vapor Lock 20/20: www.spggogreen.com.

2.04 ACCESSORY MATERIALS

- A. Non-Shrink Cementitious Grout: Premixed compound consisting of nonmetallic aggregate, cement, water reducing and plasticizing agents.
 1. Flowable Products:
 - a. Dayton Superior Corporation; Sure-Grip Precision Grout: www.daytonsuperior.com/#sle.

2.05 BONDING AND JOINTING PRODUCTS

- A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.
 1. Products:
 - a. SpecChem, LLC; Strong Bond Acrylic Bonder: www.specchemllc.com/#sle.
 - b. W. R. Meadows, Inc; ACRY-LOK: www.wrmeadows.com/#sle.
 - c. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Epoxy Bonding System:
- C. Slab Isolation Joint Filler: 1/2-inch (13 mm) thick, height equal to slab thickness, with removable top section forming 1/2-inch (13 mm) deep sealant pocket after removal.

2.06 CURING MATERIALS

- A. Evaporation Reducer: Liquid thin-film-forming compound that reduces rapid moisture loss caused by high temperature, low humidity, and high winds; intended for application immediately after concrete placement.
- B. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
 1. Product dissipates within 4 to 6 weeks.
 2. Products:
 - a. Dayton Superior Corporation; Clear Cure VOC J7WB: www.daytonsuperior.com/#sle.
 - b. W. R. Meadows, Inc; 1100: www.wrmeadows.com/#sle.
 - c. Substitutions: See Section 01 60 00 - Product Requirements.

2.07 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations.
- B. Admixtures: Add acceptable admixtures as recommended in ACI PRC-211.1 and at rates recommended or required by manufacturer.
- C. Normal Weight Concrete:
 1. Application: Interior floor infills.
 - a. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 3,500 pounds per square inch (24.2 MPa).
 - b. Coarse Aggregate: 100 percent passing 1-1/2 inch sieve.
 - c. Fine Aggregate: 100 percent passing 3/8 inch sieve.
 - d. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
 - e. Water-Cement Ratio: Maximum 45 percent by weight.
 - f. Total Air Content: 5 percent, determined in accordance with ASTM C173/C173M.
 - g. Maximum Slump: 2-4 inches.
 - h. Maximum Aggregate Size: 5/8 inch (16 mm).

2.08 MIXING

- A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
- B. Transit Mixers: Comply with ASTM C94/C94M.
- C. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.
- D. Do not use shrinkage-reducing admixture (SRA) in same concrete batch with MVRA or PIA.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in accordance with bonding agent manufacturer's instructions.
 - 1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
 - 2. Use latex bonding agent only for non-load-bearing applications.
- B. Where new concrete with integral waterproofing is to be bonded to previously placed concrete, prepare surfaces to be treated in accordance with waterproofing manufacturer's instructions. Saturate cold joint surface with clean water, and remove excess water before application of coat of waterproofing admixture slurry. Apply slurry coat uniformly with semi-stiff bristle brush at rate recommended by waterproofing manufacturer.
- C. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

3.03 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. Fabricate and handle epoxy-coated reinforcing in accordance with ASTM D3963/D3963M.
- B. Comply with requirements of ACI SPEC-301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
- C. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.
- D. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.04 PLACING CONCRETE

- A. Place concrete in accordance with ACI PRC-304.
- B. Notify Architect not less than 24 hours prior to commencement of placement operations.
- C. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- D. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- E. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- F. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.05 SLAB JOINTING

- A. Locate joints as indicated on drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.

3.06 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Exposed Concrete Floors: 1/8 inch (3 mm) in 10 feet (3 m).
 - 2. Under Seamless Resilient Flooring: 1/8 inch (3 mm) in 10 feet (3 m).
 - 3. Under Carpeting: 1/8 inch (3 mm) in 10 feet (3 m).
- B. Correct the slab surface if tolerances are less than specified.
- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.07 CONCRETE FINISHING

- A. Repair surface defects, immediately after removing formwork.
- B. Concrete Slabs: Finish to requirements of ACI PRC-302.1 and as follows:
 - 1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI PRC-302.1; thin floor coverings include carpeting, resilient flooring, and seamless flooring.
 - 2. Other Surfaces to Be Left Exposed: Trowel as described in ACI PRC-302.1, minimizing burnish marks and other appearance defects.

3.08 CURING AND PROTECTION

- A. Comply with requirements of ACI PRC-308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
 - 1. Normal concrete: Not less than seven days.
- C. Surfaces Not in Contact with Forms:
 - 1. Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
 - 2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
 - 3. Final Curing: Begin after initial curing but before surface is dry.

3.09 FIELD QUALITY CONTROL

- A. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- B. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- C. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards (76 cu m) or less of each class of concrete placed.
- D. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

- E. Slab Testing: Cooperate with manufacturer of specified moisture vapor reducing admixture (MVRA) to allow access for sampling and testing concrete for compliance with warranty requirements.

3.10 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

3.11 PROTECTION

- A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION

**SECTION 03 54 00
CAST UNDERLAYMENT**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Liquid-applied self-leveling floor underlayment.
 - 1. Use cementitious type at all locations.

1.02 RELATED REQUIREMENTS

- A. Section 01 70 00 - Execution and Closeout Requirements: Alteration project procedures; selective demolition for remodeling.

1.03 REFERENCE STANDARDS

- A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2023.
- B. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- C. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2021.
- D. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair; 2013.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.
- C. Manufacturer's Instructions.

1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

1.07 FIELD CONDITIONS

- A. Do not install underlayment until floor penetrations and peripheral work are complete.
- B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.
- C. During the curing process, ventilate spaces to remove excess moisture.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Cementitious Underlayment:
 - 1. Basis of Design: ARDEX Engineered Cements; ARDEX V 1200: with Ardex P51 Primer www.ardexamericas.com/#sle.

2. Other Approved Manufacturers:
 - a. Custom Building Products: www.custombuildingproducts.com/#sle.
 - b. Dayton Superior Corporation: www.daytonsuperior.com/#sle.
 - c. Mapei Corporation: www.mapei.com/#sle.
3. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PRODUCTS:

- A. Underlayment Type 1:
 1. Application: Floor Leveling
 - a. Thickness: 0 inch (0 mm) to 1/4 inch (12.7 mm)

2.03 MATERIALS

- A. Cast Underlayments, General:
 1. Comply with applicable code for combustibility or flame spread requirements.
- B. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
 1. Compressive Strength: Minimum 4000 pounds per square inch (27.6 MPa) after 28 days, tested per ASTM C109/C109M.
 2. Flexural Strength: Minimum 1000 psi (6.9 MPa) after 28 days, tested per ASTM C348.
 3. Density: 125 pounds per cubic foot (2002 kg/cu m), nominal.
 4. Final Set Time: 1-1/2 to 2 hours, maximum.
 5. Thickness: Capable of thicknesses from feather edge to maximum 3-1/2 inch (89 mm).
 6. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0 in accordance with ASTM E84.
- C. Aggregate: Dry, well graded, washed silica aggregate, approximately 1/8 inch (3 mm) in size and acceptable to underlayment manufacturer.
- D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to underlayment mix materials.
- E. Primer: Manufacturer's recommended type.
- F. Joint and Crack Filler: Latex-based filler, as recommended by manufacturer.

2.04 MIXING

- A. Site mix materials in accordance with manufacturer's instructions.
- B. Mix to self-leveling consistency without over-watering.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

- A. All surfaces must be sound, solid and clean.
- B. Prepare existing substrate in accordance with manufacturer's instructions.
- C. Provide primer as recommended by the manufacturer for the application and the product to be installed. Allow to dry.
- D. Concrete: Prepare surfaces according to ICRI 310.2R.
- E. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.
- F. Vacuum clean surfaces.
- G. Prime substrate in accordance with manufacturer's instructions. Allow to dry.

H. Close floor openings.

3.03 APPLICATION

- A. Install underlayment in accordance with manufacturer's instructions.
- B. Pump or pour material onto substrate. Do not retemper or add water.
 - 1. Pump, move, and screed while the material is still highly flowable.
 - 2. Be careful not to create cold joints.
 - 3. Wear spiked shoes while working in the wet material to avoid leaving marks.
- C. Place to indicated thickness, with top surface level to 1/16 inch in 10 ft (1:2000).
- D. If a fine, feathered edge is desired, steel trowel the edge after initial set, but before it is completely hard.

3.04 CURING

- A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.
- B. Air cure in accordance with manufacturer's instructions.

3.05 PROTECTION

- A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.
- B. Do not permit traffic over unprotected floor underlayment surfaces.

END OF SECTION

**SECTION 06 10 00
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 09 21 16 - Gypsum Board Assemblies: Gypsum-based sheathing.

1.03 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard; 2022.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- C. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- E. PS 20 - American Softwood Lumber Standard; 2021.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide technical data on wood blocking.

1.05 DELIVERY, STORAGE, AND HANDLING

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

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

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

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 ACCESSORIES

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

2. Gypsum Board Screws: ASTM C1002; Type W, bugle head, self-piercing, tapping screws; length to penetrate wood members 5/8 inch (15.9 mm) minimum.

PART 3 EXECUTION

3.01 PREPARATION

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

3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to authorities having jurisdiction may be used in lieu of solid wood blocking.
- C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.
- D. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- E. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- F. Provide the following specific nonstructural framing and blocking:
 1. Cabinets and shelf supports.
 2. Wall brackets.
 3. Wall-mounted door stops.
 4. Chalkboards and marker boards.
 5. Joints of rigid wall coverings that occur between studs.

3.04 TOLERANCES

- A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
- B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.

3.06 CLEANING

- A. Waste Disposal: See Section 01 74 19 - Construction Waste Management and Disposal.
 1. Comply with applicable regulations.
 2. Do not burn scrap on project site.
 3. Do not burn scraps that have been pressure treated.
 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

**SECTION 07 92 00
JOINT SEALANTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Joint backings and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 09 21 16 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.
- B. Section 09 30 00 - Tiling: Sealant between tile and plumbing fixtures and at junctions with other materials and changes in plane.

1.03 REFERENCE STANDARDS

- A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- C. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.
- D. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
 - 5. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
 - 6. Certification by manufacturer indicating that product complies with specification requirements.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Executed warranty.

1.05 QUALITY ASSURANCE

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

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a five year period after the date of Substantial Completion.

- C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Nonsag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
 - 1. Bostik Inc: www.bostik-us.com/#sle.
 - 2. Dow: www.dow.com/#sle.
 - 3. Pecora Corporation: www.pecora.com/#sle.
 - 4. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
 - 5. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.

2.02 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Interior Joints:
 - a. Seal the following joints:
 - 1) Joints between door frames and window frames and adjacent construction.
 - 2) In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, and piping penetrations.
 - 3) In sound-rated wall and ceiling assemblies, seal joints between wall assemblies and ceiling assemblies; between wall assemblies and other construction; between ceiling assemblies and other construction.
 - 2. Do Not Seal:
 - a. Intentional weep holes in masonry.
 - b. Joints indicated to be covered with expansion joint cover assemblies.
 - c. Joints where sealant installation is specified in other sections.

2.03 NONSAG JOINT SEALANTS

- A. Type SE-1 - Nonstaining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
 - 2. Nonstaining to Porous Stone: Nonstaining to light-colored natural stone when tested in accordance with ASTM C1248.
 - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
 - 4. Color: To be selected by Architect from manufacturer's standard range.
 - 5. Service Temperature Range: Minus 20 to 180 degrees F (Minus 29 to 82 degrees C).
 - 6. Products:
 - a. Dow; DOWSIL 790 Silicone Building Sealant: www.dow.com/#sle.
 - b. Pecora Corporation; Pecora 890 NST (Non-Staining Technology): www.pecora.com/#sle.
 - c. Tremco Commercial Sealants & Waterproofing; Spectrem 1: www.tremcosealants.com/#sle.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 - 1. Color: Clear.
 - 2. Products:
 - a. Adfast USA Inc; ADSEAL KB 4800 Series: www.adfastcorp.com/#sle.
 - b. Everkem Diversified Products, Inc; TruSil 100: www.everkemproducts.com/#sle.
 - c. Pecora Corporation; Pecora 898 NST (Non-Staining Technology): www.pecora.com/#sle.
 - d. Sika Corporation; Sikasil GP: www.usa.sika.com/#sle.
 - e. Substitutions: See Section 01 60 00 - Product Requirements.

2.04 ACCESSORIES

- A. Sealant Backing Rod, Closed-Cell Type:
 - 1. Cylindrical flexible sealant backings complying with ASTM C1330 Type C.
 - 2. Size: 25 to 50 percent larger in diameter than joint width.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Provide joint sealant installations complying with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION

**SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Hollow metal borrowed lites glazing frames.
- C. Accessories, including glazing.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.
- B. Section 08 80 00 - Glazing: Glass for doors and borrowed lites.
- C. Section 09 91 23 - Interior Painting: Field painting.

1.03 ABBREVIATIONS AND ACRONYMS

- A. ANSI: American National Standards Institute.
- B. HMMA: Hollow Metal Manufacturers Association.
- C. NAAMM: National Association of Architectural Metal Manufacturers.
- D. NFPA: National Fire Protection Association.
- E. UL: Underwriters Laboratories.

1.04 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ANSI/SDI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames; 2019.
- C. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2024.
- D. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames; 2024.
- E. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023.
- F. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2020.
- G. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- H. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2023, with Editorial Revision.
- I. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2023.
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- K. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.
- L. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- M. NAAMM HMMA 805 - Recommended Selection and Usage Guide for Hollow Metal Doors and Frames; 2012.
- N. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.

- O. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2024.
- P. NAAMM HMMA 840 - Guide Specifications for Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2024.
- Q. NAAMM HMMA 860 - Guide Specifications for Hollow Metal Doors and Frames; 2018.
- R. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; 2014.
- S. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames; 2023.
- T. UL (DIR) - Online Certifications Directory; Current Edition.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
- D. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- E. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide hollow metal doors and frames from SDI Certified manufacturer: <https://steeldoors.org/sdi-certified/#sle>.
- B. Maintain at project site copies of reference standards relating to installation of products specified.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
 1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 3. Republic Doors, an Allegion brand: www.republicdoor.com/#sle.
 4. Steelcraft, an Allegion brand: www.allegion.com/#sle.
 5. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
 3. Door Edge Profile: Beveled, both sides.
 4. Typical Door Face Sheets: Flush.

5. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.
 - a. Doors and Frames at Interior Applications: 1/4 inch glazing unless noted otherwise on the drawings.
 6. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
 7. Minimum Hardware Reinforcing for all Steel Doors;
 - a. Butt Hinges: 7 gauge steel; Full interior width of door by 10 inches long.
 - b. Locks: 12 gauge steel; side to template.
 - c. Closers: inverted steel channel with 6 inch sides by 18 inches long.
 - d. Surface Applied hardware: 12 gauge steel, Size to template.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Interior Doors, Non-Fire-Rated:
 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 18 gauge, 0.042 inch (1.0 mm), minimum.
 2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 3. Door Thickness: 1-3/4 inches (44.5 mm), nominal.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
 1. Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch (150 mm), maximum, above floor at 45 degree angle.
 2. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
- D. Hardware Reinforcing:
 1. Butt and Pivot Hinges 7 gauge steel, Full interior width of door by 10 inches long.
 2. Locks: 12 gauge steel; Size to template.
 3. Closers: Full width of frame by 18 inches long.
 4. Surface Applied Hardware: 12 gauge steel, Size to template.
 5. Dust Covers: 20 gauge.
- E. Frame Anchors:
 1. As required to fit application.
- F. Pre-drill frames to receive rubber door silencers.
- G. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.
- H. Frames Wider than 48 inches (1219 mm): Reinforce with steel channel fitted tightly into frame head, flush with top.

2.05 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.06 ACCESSORIES

- A. Glazing: As specified in Section 08 80 00, factory installed.
- B. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.
- C. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- D. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 08 71 00.
- D. Comply with glazing installation requirements of Section 08 80 00.
- E. Coordinate installation of electrical connections to electrical hardware items.
- F. Touch up damaged factory finishes.

3.03 TOLERANCES

- A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.

3.04 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION

SECTION 08 43 13
ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum-framed storefront, with vision glass.
- B. Infill panels of metal and glass.
- C. Aluminum doors and frames.
- D. Weatherstripping.

1.02 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.

1.03 REFERENCE STANDARDS

- A. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site; 2015.
- B. AAMA 503 - Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls and Sloped Glazing Systems; 2014.
- C. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- D. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- E. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.
- F. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- G. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- H. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.
- I. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.
- J. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2019.
- K. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference; 2015 (Reapproved 2023).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with installation of other components that comprise the exterior enclosure.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.

D. Manufacturer's qualification statement.

1.06 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.

1.07 DELIVERY, STORAGE, AND HANDLING

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

1.08 FIELD CONDITIONS

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

1.09 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Storefront System Type 1 - Interior Application:
 - 1. Basis of Design: EFCO Corporation; Series 433 NT, non-thermally broken system, shear block type, center glazed, www.efcocorp.com.
- B. Entrance Doors:
 - 1. Basis of Design: EFCO Corporation; D500 Series (interior applications) www.efcocorp.com.
- C. Aluminum-Framed Storefronts and Doors: Other Acceptable Manufacturers:
 - 1. Kawneer North America: www.kawneer.com/#sle.
 - 2. Oldcastle BuildingEnvelope: www.oldcastlebe.com/#sle.
 - 3. Tubelite, Inc: www.tubeliteinc.com/#sle.
 - 4. Trulite Glass & Aluminum Solutions, LLC: www.trulite.com/#sle.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 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 (6 mm) monolithic glazing.
 - 2. Glazing Position: Centered (front to back).
 - 3. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (50 mm wide by 114 mm deep).
 - 4. Horizontal Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (50 mm wide by 114 mm deep).
 - 5. Finish: Superior performing 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.
 - 6. Finish Color: Valspar #399B365 Brilliant Gold.
 - 7. 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.

8. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.
9. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
10. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
11. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
12. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

2.03 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, drainage holes and internal weep drainage system.
 1. Framing members for interior applications need not be thermally broken.
 2. Glazing Stops: Flush.
- B. Glazing: See Section 08 80 00.
- C. Swing Doors: Glazed aluminum.
 1. Thickness: 1-3/4 inches (43 mm).
 2. Top Rail: 5 inches (127 mm) wide.
 3. Vertical Stiles: 5 inches (127 mm) wide.
 4. Bottom Rail: 10 inches (254 mm) wide.
 5. Glazing Stops: Square.
 6. Finish: Same as storefront.
 7. Door Stops: Provide solid bar stops. No fin stops permitted.

2.04 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.
- D. Glazing Accessories: See Section 08 80 00.

2.05 FINISHES

- A. High Performance Organic Coating: AAMA 2604; multiple coats, thermally cured fluoropolymer system.

2.06 HARDWARE

- A. Other Door Hardware: See Section 08 71 00.
- B. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.
- C. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 INSTALLATION

- A. Install wall system in accordance with manufacturer's instructions.

- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Install glass and infill panels using glazing method required to achieve performance criteria; see Section 08 80 00.
- J. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.03 TOLERANCES

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

3.04 ADJUSTING

- A. Adjust operating hardware for smooth operation.

3.05 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.

3.06 PROTECTION

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

END OF SECTION

**SECTION 08 71 00
DOOR HARDWARE**

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware for:
 - a. Swinging doors.
2. Field verification, preparation and modification of existing doors and frames to receive new door hardware.
3. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the contractor's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors
6. Shower doors
7. Access doors and panels
8. Conduit, junction boxes and wiring.

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:
 - a. "Metal Doors and Frames"
 - b. "Flush Wood Doors"
 - c. "Stile and Rail Wood Doors"
 - d. "Interior Aluminum Doors and Frames"
 - e. "Aluminum-Framed Entrances and Storefronts"
 - f. "Stainless Steel Doors and Frames"
 - g. "Special Function Doors"
 - h. "Entrances"
6. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
7. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
8. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

**SECTION 08 71 00
DOOR HARDWARE**

1.2 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 294 - Standard for Access Control System Units
5. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2019 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

E. WHI – Warnock Hersey Incorporated

F. WI – Woodwork Institute

G. AWI – Architectural Woodwork Institute

H. NAAMM – National Association of Architectural Metal Manufacturers

I. Local applicable codes

1. Use date of standard in effect as of Bid Date.

1.3 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:
 - a. Review drawings and Sections from related trades to verify compatibility with specified hardware.

**SECTION 08 71 00
DOOR HARDWARE**

- b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
- c. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.

B. Action Submittals:

- 1. **Product Data:** Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
- 2. **Riser and Wiring Diagrams:** After final approval of hardware schedule, submit details of electrified door hardware, indicating:
 - a. **Wiring Diagrams:** For power, signal, and control wiring and including:
 - 1) Details of interface of electrified door hardware and building safety and security systems.
 - 2) Schematic diagram of systems that interface with electrified door hardware.
 - 3) Point-to-point wiring.
 - 4) Risers.
- 3. **Samples for Verification:** If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
 - a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
- 4. **Door Hardware Schedule:**
 - a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
 - b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
 - c. Indicate complete designations of each item required for each opening, include:
 - 1) Door Index: door number, heading number, and Architect's hardware set number.
 - 2) Quantity, type, style, function, size, and finish of each hardware item.
 - 3) Name and manufacturer of each item.
 - 4) Fastenings and other pertinent information.
 - 5) Location of each hardware set cross-referenced to indications on Drawings.
 - 6) Explanation of all abbreviations, symbols, and codes contained in schedule.
 - 7) Mounting locations for hardware.
 - 8) Door and frame sizes and materials.
 - 9) Degree of door swing and handing.
 - 10) Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include operational descriptions for: egress, ingress (access), and fire/smoke alarm connections.
 - d. **Submittal Sequence:** Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.

**SECTION 08 71 00
DOOR HARDWARE**

5. Key Schedule:
 - a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
 - b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
 - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
 - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
 - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
 - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.
 6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory or shop prepared for door hardware installation.
- C. Informational Submittals:
1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
 2. Provide Product Data:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
 - b. Include warranties for specified door hardware.
 3. Certificates of Compliance:
 - a. UL listings for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
 - b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.
 - c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in "QUALITY ASSURANCE" article, herein.
- D. Closeout Submittals:
1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
 - a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Factory order acknowledgement numbers (for warranty and service)
 - d. Final approved hardware schedule edited to reflect conditions as installed.
 - e. Final keying schedule
 - f. Copies of floor plans with keying nomenclature
 - g. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
 - h. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
- E. Inspection and Testing:

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1. Submit a written report of the results of functional testing and inspection for fire door assemblies, in compliance with NFPA 80.
 - a. Written report to be provided to the Owner and be made available to the Authority Having Jurisdiction (AHJ).
 - b. Report to include the door number for each fire door assembly, door location, door and frame material, fire rating, and summary of deficiencies.
2. Submit a written report of the results of functional testing and inspection for required egress door assemblies, in compliance with NFPA 101.
 - a. Written report to be provided to the Owner and be made available to the Authority Having Jurisdiction (AHJ).
 - b. Report to include the door number for each required egress door assembly, door location, door and frame material, fire rating, and summary of deficiencies.

1.4 QUALITY ASSURANCE

- A. If discrepancy between drawings and scheduled material in this section, bid the more expensive of the two choices, note the discrepancy in the submittal and request direction from Architect for resolution.
- B. Qualifications and Responsibilities:
 1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
 - a. Warehousing Facilities: In Project's vicinity.
 - b. Scheduling Responsibility: Preparation of door hardware and keying schedules.
 - c. 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 like those indicated for this Project.
 - d. Coordination Responsibility: Assist in coordinating installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.
 - 1) Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.
 2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
 3. Architectural Hardware Consultant: 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 meets these requirements:
 - a. For door hardware: DHI certified AHC or DHC.
 - b. Can provide installation and technical data to Architect and other related subcontractors.
 - c. Can inspect and verify components are in working order upon completion of installation.
 - d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

**SECTION 08 71 00
DOOR HARDWARE**

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.
 - a. Bid and submit manufacturer's updated/improved item if scheduled item is discontinued.
- C. Certifications:
1. Fire-Rated Door Openings:
 - a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
 - b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
 2. Smoke and Draft Control Door Assemblies:
 - a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
 - b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
 3. Electrified Door Hardware
 - a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.
 4. Accessibility Requirements:
 - a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.
- D. Pre-Installation Meetings
1. Keying Conference
 - a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
 - 1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - 2) Preliminary key system schematic diagram.
 - 3) Requirements for key control system.
 - 4) Requirements for access control.
 - 5) Address for delivery of keys.
 2. Pre-installation Conference
 - a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Inspect and discuss preparatory work performed by other trades.
 - c. Inspect and discuss electrical roughing-in for electrified door hardware.
 - d. Review sequence of operation for each type of electrified door hardware.
 - e. Review required testing, inspecting, and certifying procedures.
 3. Coordination Conferences

**SECTION 08 71 00
DOOR HARDWARE**

- a. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
 - 1) Attendees: Door hardware supplier, door hardware installer, Contractor.
 - 2) After meeting, provide letter of compliance to Architect, indicating when meeting was held and who was in attendance.
- b. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.
 - 1) Attendees: electrified door hardware supplier, doors and frames supplier, electrified door hardware installer, electrical subcontractor, Owner, Owner's security consultant, Architect and Contractor.
 - 2) After meeting, provide letter of compliance to Architect, indicating when coordination conference was held and who was in attendance.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery:

- 1. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.
- 2. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
- 3. Deliver each article of hardware in manufacturer's original packaging.

B. Project Conditions:

- 1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
- 2. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

C. Protection and Damage:

- 1. Promptly replace products damaged during shipping.
- 2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
- 3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

D. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.6 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

**SECTION 08 71 00
DOOR HARDWARE**

- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
- E. Existing Openings:
 - 1. Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation. If a conflict arises between the specified/scheduled hardware and existing conditions, then submit request for direction from Architect. Include date of jobsite visit in the submittal.
 - 2. Submittals prepared without thorough jobsite visit by qualified hardware expert will be rejected as non-compliant.
- F. Direct shipments not permitted, unless approved by Contractor.

1.7 WARRANTY

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.
 - 1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
 - 2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
 - a. Mechanical Warranty
 - 1) Locks
 - a) Schlage ND Series, Keys and Cylinders: 10 years
 - 2) Exit Devices
 - a) Von Duprin 98/99 and 33/35A: 10 years
 - 3) Closers
 - a) LCN 4000 Series: 30 years
 - 4) Weatherstrip, Seals
 - a) Zero: 5 years

1.8 MAINTENANCE

- A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

**SECTION 08 71 00
DOOR HARDWARE**

- A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."
 - 1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.
- B. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Basis of Design" shall be in accordance with substitution procedure in division 01 25 00. In the individual article for the product category items, shall be in accordance with the QUALITY ASSURANCE article, herein
- C. Approval of products is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval in accordance with substitution procedure in division 01 25 00.

2.2 MATERIALS

- A. Fasteners
 - 1. Provide door hardware manufactured to comply with published templates generally prepared for machine screw installation.
 - 2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
 - 3. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
 - 4. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru bolts are required.
 - a. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper reinforcements.
- B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.
 - 1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
 - 2. Use materials which match materials of adjacent modified areas.
 - 3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.
- C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

**SECTION 08 71 00
DOOR HARDWARE**

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

D. Cable and Connectors:

1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.3 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Von Duprin 99/33A series - No Substitution.

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide grooved touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices with weather resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer's approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
13. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.
 - a. Provide levers that return to within 1/2 inch (13 mm) of door face.
14. Accessibility: Require not more than 5 lb. to retract the latchbolt, per CBC 2019 11B-404.2.7 and 11B-309.4.
 - a. Mechanical method: Von Duprin AX feature, where touchpad directly retracts the latchbolt with 5 lb. or less of force. Provide testing lab certification confirming that the mechanical device is independent third-party tested to meet this 5 lb. requirement.
 - b. Electrical method: Von Duprin's RX-QEL feature, where lightly pressing the touchpad with 5 lb. or less of force closes an electric switch, activating quiet electric latch retraction.

**SECTION 08 71 00
DOOR HARDWARE**

15. Special Options:

a. QM

- 1) Rim Exit Devices: provide devices with damper-controlled re-latching to reduce operational noise. Where lever trim is specified, provide damper controlled lever return.

2.4 CYLINDERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

- a. Schlage Everest 29 Primus XP - No Substitution.

B. Requirements:

1. Provide cylinders/cores, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.
 - a. High Security: dual-locking cylinder with permanent core requiring restricted, patented keyway. Dual-locking mechanism with interlocking finger pin(s) to check for patented features on keys.
3. Patent Protection: Cylinders/cores requiring use of restricted, patented keys, patent protected.
4. Nickel silver bottom pins.

2.5 KEYING

A. Scheduled System:

1. Existing factory registered system:

- a. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:

a. Replaceable Construction Cores.

- 1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
 - a) 3 construction control keys
 - b) 12 construction change (day) keys.
- 2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.

2. Permanent Keying:

- a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - 1) Master Keying system as directed by the Owner.

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DOOR HARDWARE**

- b. Forward biting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
- c. Provide keys with the following features:
 - 1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
 - 2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
 - 3) Geographically Exclusive: Where High Security or Security cylinders/cores are indicated, provide nationwide, geographically exclusive key system complying with the following restrictions.
- d. Identification:
 - 1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
 - 2) Identification stamping provisions must be approved by the Architect and Owner.
 - 3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
 - 4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
 - 5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
- e. Quantity: Furnish in the following quantities.
 - 1) Change (Day) Keys: 3 per cylinder/core.
 - 2) Permanent Control Keys: 3.
 - 3) Master Keys: 6.

2.6 KEY CONTROL SYSTEM

A. Manufacturers:

- 1. Scheduled Manufacturer:
 - a. Telkee

B. Requirements:

- 1. Provide key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of number of locks required for Project.
 - a. Provide complete cross index system set up by hardware supplier, and place keys on markers and hooks in cabinet as determined by final key schedule.
 - b. Provide hinged-panel type cabinet for wall mounting.

2.7 PROTECTION PLATES

A. Manufacturers:

- 1. Scheduled Manufacturer:
 - a. Ives - No Substitution.

B. Requirements:

- 1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.

**SECTION 08 71 00
DOOR HARDWARE**

2. Size plates 1 1/2 inches (38 mm) less width of door on single doors, 2 inches (51 mm) less width of door on pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.8 SEALS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Zero International - No Substitution.

B. Requirements:

1. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
2. Provide seals, and astragals only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.9 FINISHES

A. FINISH: BHMA 626/652 (US26D); EXCEPT:

1. Aluminum Geared Continuous Hinges: BHMA 628 (US28)
2. Protection Plates: BHMA 630 (US32D)
3. Door Closers: Powder Coat to Match
4. Weatherstripping: Clear Anodized Aluminum

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Field verify existing conditions and measurements at existing doors and frames receiving new hardware. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
 1. Where existing wall conditions will not allow door to swing using the scheduled hinges, provide wide-throw hinges and if needed, extended arms on closers.
- B. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
- C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- D. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

**SECTION 08 71 00
DOOR HARDWARE**

3.2 INSTALLATION

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - 2. Custom Steel Doors and Frames: HMMA 831.
 - 3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
 - 4. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity 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.
- I. Lock Cylinders:
 - 1. Install construction cores to secure building and areas during construction period.
 - 2. Replace construction cores with permanent cores as indicated in keying section.
 - 3. Furnish permanent cores to Owner for installation.
- J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:
 - 1. Conduit, junction boxes and wire pulls.
 - 2. Connections to and from power supplies to electrified hardware.
 - 3. Connections to fire/smoke alarm system and smoke evacuation system.
 - 4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
 - 5. Connections to panel interface modules, controllers, and gateways.
 - 6. Testing and labeling wires with Architect's opening number.
- K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

**SECTION 08 71 00
DOOR HARDWARE**

- L. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
- M. Closer/holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
- N. Kickplates: Mount kickplates and armor plates flush to bottom of door, centered on door leaf between jambs or jamb seals and mullions.
- O. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
- P. Stops: Provide wall stops for doors unless floor or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
- Q. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- R. Magnetic Wall holders: Install magnetic holders to strike side near top of doors, max 78" from finished floor.
- S. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

3.3 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.4 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items per manufacturer's instructions to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.5 DOOR HARDWARE SCHEDULE

- A. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.

**SECTION 08 71 00
DOOR HARDWARE**

HARDWARE GROUP NO. 3

2000A

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

1	EA	CONT. HINGE	224XY	628	IVE
1	EA	PANIC HARDWARE	99-L-17-SNB	626	VON
1	EA	FSIC RIM CYLINDER	20-057 ICX	626	SCH
1	EA	PRIMUS CORE	20-740-XP	626	SCH
1	EA	OH STOP	100S	630	GLY
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	PA MOUNTING PLATE - AS REQUIRED	4040XP-18PA SRT	689	LCN
1	EA	CUSH SHOE SUPPORT - AS REQUIRED	4040XP-30 SRT	689	LCN
1	EA	BLADE STOP SPACER - AS REQUIRED	4040XP-61 SRT	689	LCN
1		SEALS - AS REQUIRED	BY DOOR AND FRAME MANUFACTURER		B/O

NOTE: NEW DOOR / RELOCATED FRAME

HARDWARE GROUP NO. 4

S1-3 S1-4 S2-3 S2-4 2000B 2009A 2009B

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

1	EA	FIRE EXIT HARDWARE	99-L-F-17-SNB	626	VON
1	EA	FSIC RIM CYLINDER	20-057 ICX	626	SCH
1	EA	PRIMUS CORE	20-740-XP	626	SCH

NOTE: EXISTING DOOR / EXISTING
FRAME - REPLACE LOCK WITH
NEW EXIT HARDWARE

END OF SECTION

**SECTION 08 80 00
GLAZING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glazing units.
- B. Glazing compounds.

1.02 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Sealants for other than glazing purposes.
- B. Section 08 11 13 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.
- C. Section 08 14 16 - Flush Wood Doors: Glazed lites in doors.
- D. Section 08 43 13 - Aluminum-Framed Storefronts: Glazing provided as part of storefront assembly.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (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 C1036 - Standard Specification for Flat Glass; 2021.
- F. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- G. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2019.
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- I. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- J. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- K. ASTM E413 - Classification for Rating Sound Insulation; 2022.
- L. ASTM E1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes; 2023.
- M. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- N. GANA (GM) - GANA Glazing Manual; 2022.
- O. GANA (SM) - GANA Sealant Manual; 2008.
- P. GANA (LGRM) - Laminated Glazing Reference Manual; 2019.
- Q. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- R. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (Reaffirmed 2016).
- S. ITS (DIR) - Directory of Listed Products; Current Edition.
- T. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data on Insulating Glass Unit, Glazing Unit, and Plastic Film 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. Certificate: Certify that products of this section meet or exceed specified requirements.
- E. Manufacturer's qualification statement.
- F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA (GM), GANA (SM), GANA (LGRM), IGMA TM-3000, and IGMA for glazing installation methods. Maintain one copy on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years documented experience.

1.06 FIELD CONDITIONS

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

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Glass Fabricators:
 - 1. GGI - General Glass International: www.generalglass.com/#sle.
 - 2. Oldcastle Building Envelope; www.obe.com.
 - 3. Trulite Glass & Aluminum Solutions, LLC: www.trulite.com/#sle.
 - 4. Viracon, Inc: www.viracon.com/#sle.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Float Glass Manufacturers:
 - 1. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
 - 2. Guardian Glass, LLC: www.guardianglass.com/#sle.
 - 3. Pilkington North America Inc: www.pilkington.com/na/#sle.
 - 4. Saint Gobain North America: www.saint-gobain.com/#sle.
 - 5. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.
 - 6. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
 - 1. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
 - 2. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

2.03 GLAZING UNITS

- A. Type I-1 - Monolithic Safety Glazing: Non-fire-rated. 2-py.
 - 1. Applications:
 - a. Glazed lites in doors, except fire doors.
 - b. Glazed sidelights to doors, except in fire-rated walls and partitions.
 - c. Other locations required by applicable federal, state, and local codes and regulations.
 - d. Other locations indicated on drawings.
 - 2. Glass Type: Fully tempered safety glass as specified.
 - 3. Tint: Clear.
 - 4. Thickness: 1/4 inch (6.4 mm), nominal.
- B. Type I-2, Fire-Resistance Rated Glazing: Type, thickness, and configuration of glazing that contains flame, smoke, and blocks radiant heat, as required to achieve indicated fire rating period up to 45 minutes.
 - 1. Applications:
 - a. Glazing in fire-rated door assembly.
 - b. Other locations as indicated on drawings.
 - 2. Safety Glazing Certification: 16 CFR 1201 Category II.
 - 3. Glazing Method: As required for fire rating.
 - 4. Fire-Rating Period: As indicated on drawings.
 - 5. Markings for Fire-Resistance-Rated Glazing Assemblies: Provide permanent markings on fire-resistance-rated glazing in compliance with local building code and authorities having jurisdiction.
 - a. "W" - Meets wall assembly criteria of ASTM E119 or UL 263 fire test standards.
 - b. "D" - Meets fire door assembly criteria of NFPA 252, UL 10B, or UL 10C fire test standards.
 - c. "T" - Meets temperature rise of not more than 450 degrees F (232 degrees C) above ambient at end of 30 minutes of fire exposure in accordance with NFPA 252, UL 10B, or UL 10C fire test standards.
 - 6. Manufacturers:
 - a. SAFTIFIRST, a division of O'Keeffe's Inc.; SupeLite II-XL: www.safti.com.
 - b. Technical Glass Products; Pilkington Pyrostop: www.fireglass.com.
 - c. Vetrotech Saint Gobain North America; Contraflam: www.vetrotech.com
 - d. Substitutions: Refer to Section 01 60 00 - Product Requirements.

2.04 GLAZING COMPOUNDS

- A. Type GC-2 - Butyl Sealant: Single component; ASTM C920 Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.
- B. 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 as selected.
- C. Manufacturers:
 - 1. Bostik Inc: www.bostik-us.com/#sle.
 - 2. Dow Corning Corporation: www.dowcorning.com/construction/#sle.Dow Corning Corporation: www.dowcorning.com/construction/#sle.
 - 3. Momentive Performance Materials, Inc: www.momentive.com/#sle.
 - 4. Pecora Corporation: www.pecora.com/#sle.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.

2.05 ACCESSORIES

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit

glazing method and pane weight and area.

- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch (75 mm) long by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing 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.
 - 1. Width: As required for application.
 - 2. Thickness: As required for application.
 - 3. Spacer Rod Diameter: As required for application.
- D. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.
- E. Glazing Clips: Manufacturer's standard type.

2.06 SOURCE QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Provide shop inspection and testing for Type _____ glass.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

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

3.02 PREPARATION

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

3.03 INSTALLATION, GENERAL

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

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

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

3.05 INSTALLATION - DRY GLAZING METHOD (TAPE AND GASKET SPLINE GLAZING)

- A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.
- B. Cut glazing tape to length; install on glazing pane. Seal corners by butting tape and sealing junctions with butyl sealant.
- C. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.
- D. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.
- E. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.
- F. Carefully trim protruding tape with knife.

3.06 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Glass and Glazing product manufacturers to provide field surveillance of the installation of their products.
- C. Monitor and report installation procedures and unacceptable conditions.

3.07 CLEANING

- A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.
- B. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- C. Remove nonpermanent labels immediately after glazing installation is complete.
- D. Clean glass and adjacent surfaces after sealants are fully cured.
- E. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.08 PROTECTION

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

END OF SECTION

**SECTION 09 05 61
COMMON WORK RESULTS FOR FLOORING PREPARATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
 - 1. Resilient Tile
 - 2. Carpet tile.
- B. Removal of existing floor coverings.
- C. Preparation of existing concrete floor slabs for installation of floor coverings.
- D. Testing of concrete floor slabs for moisture and alkalinity (pH).

1.02 RELATED REQUIREMENTS

- A. Section 09 65 00 - Resilient Flooring: Self-leveling underlayment applied under all new floor areas.

1.03 REFERENCE STANDARDS

- A. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.
- B. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- C. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Visual Observation Report: For existing floor coverings to be removed.
- C. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
 - 1. Moisture and alkalinity (pH) limits and test methods.
 - 2. Manufacturer's required bond/compatibility test procedure.
- D. Adhesive Bond and Compatibility Test Report.
- E. Copy of RFCI (RWP).

1.06 QUALITY ASSURANCE

- A. Contractor may perform adhesive and bond test with Contractor's own personnel or hire a testing agency.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated:
 - 1. Existing concrete slabs (on-grade and elevated) with existing floor coverings:
 - a. Visual observation of existing floor covering, for adhesion, water damage, alkaline deposits, and other defects.
 - b. Removal of existing floor covering.
 - 2. Preliminary cleaning.
 - 3. Moisture vapor emission tests; 3 tests in the first 1000 square feet (100 square meters) and one test in each additional 1000 square feet (100 square meters), unless otherwise indicated or required by flooring manufacturer.
 - 4. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 - 5. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 - 6. Specified remediation, if required.
 - 7. Patching, smoothing, and leveling, as required.
 - 8. Other preparation specified.
 - 9. Adhesive bond and compatibility test.
 - 10. Protection.

3.02 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Remove existing flooring in its entirety in all areas to receive new floor covering.
- B. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering being removed.
- C. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.03 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet (1.4 kg per 93 square meters) per 24 hours.
- F. Report: Report the information required by the test method.

3.04 INTERNAL RELATIVE HUMIDITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F2170 Procedure A and as follows.

- D. Testing with electrical impedance or resistance apparatus may not be substituted for the specified ASTM test method, as the values determined are not comparable to the ASTM test values and do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if any test value exceeds 75 percent relative humidity.
- F. Report: Report the information required by the test method.

3.05 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.06 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer.
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- D. Do not fill expansion joints, isolation joints, or other moving joints.

3.07 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

3.08 PROTECTION

- A. Cover prepared floors with building paper or other durable covering.

END OF SECTION

**SECTION 09 21 16
GYPSUM BOARD ASSEMBLIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Gypsum sheathing.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood blocking product and execution requirements.
- B. Section 09 51 00 - Acoustical Ceilings

1.03 REFERENCE STANDARDS

- A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2020).
- B. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.
- C. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- E. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.
- F. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020.
- G. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).
- H. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2023.
- I. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.
- J. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.
- K. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.
- L. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.
- M. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- N. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- O. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.

- P. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- Q. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- R. ASTM E413 - Classification for Rating Sound Insulation; 2022.
- S. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.
- T. GA-600 - Fire Resistance and Sound Control Design Manual; 2024.
- U. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- V. UL (FRD) - Fire Resistance Directory; Current Edition.
- W. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.
- X. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data:
 - 1. Provide data on metal framing, gypsum board, accessories, and joint finishing system.
 - 2. Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.
- C. Samples: Submit two samples of gypsum board finished with proposed texture application, 12 by 12 inches (300 by 300 mm) in size, indicating finish color and texture.
- D. Steel Framing Industry Association (SFIA) Certification:
 - 1. Submit documentation that metal studs and connectors used on project meet or exceed requirements of International Building Code.
- E. Test Reports: For stud framing products that do not comply with AISI S220 or ASTM C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

1.05 QUALITY ASSURANCE

- A. SFIA Code Compliance Certification Program: www.CFSteel.org/#sle: Use metal studs and connectors certified for compliance with International Building Code.
- B. Manufacturer Qualifications: Member of Steel Stud Manufacturers Association (SSMA): www.ssma.com/#sle.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store gypsum products and accessories indoors and keep above freezing. Elevate boards above floor, on nonwicking supports, in accordance with manufacturer's recommendations.
- B. Store metal products to prevent corrosion.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
 - 1. See PART 3 for finishing requirements.
- B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:

1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

2.02 METAL FRAMING MATERIALS

- A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.
- B. Manufacturers - Metal Framing, Connectors, and Accessories:
 1. ClarkDietrich: www.clarkdietrich.com/#sle.
 2. Jaimes Industries: www.jaimesind.com/#sle.
 3. MarinoWARE: www.marinoware.com/#sle.
 4. Phillips Manufacturing Co: www.phillipsmfg.com/#sle.
 5. Telling Industries: www.tellingindustries.com/#sle.
 6. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf (L/120 at 240 Pa).
 1. Studs: C-shaped with knurled or embossed faces.
 2. Runners: U shaped, sized to match studs.
 3. Ceiling Channels: C-shaped.
 4. Flexible Track: Flexible framing consisting of adjustable leg straps and pivoting, hinged track brackets designed to provide curved framing assemblies of varying radii.
 5. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch (22 mm).
- D. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection and prevent rotation of studs while maintaining structural performance of partition.
 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
 2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
 3. Provide components UL-listed for use in UL-listed fire-resistance-rated head of partition joint systems indicated on drawings.
 4. Provide mechanical anchorage devices as described above that accommodate deflection while maintaining the fire-resistance rating of the wall assembly.
- E. Non-structural Framing Accessories:
 1. Steel Column and Beam Drywall Clip: UL-listed slip-on clips to connect gypsum board to steel beams and columns for fireproofing.

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 1. American Gypsum Company: www.americangypsum.com/#sle.
 2. CertainTeed Corporation: www.certainteed.com/#sle.
 3. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.
 4. Gold Bond Building Products, LLC provided by National Gypsum Company: www.goldbondbuilding.com/#sle.
 5. USG Corporation: www.usg.com/#sle.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - a. Mold resistant board is required at all locations.
 3. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.

4. Thickness:
 - a. Vertical Surfaces: 5/8 inch (16 mm).
 - b. Ceilings: 1/2 inch (13 mm).
 - c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
5. Mold-Resistant, Paper-Faced Products:
 - a. American Gypsum Company; M-Bloc: www.americangypsum.com/#sle.
 - b. American Gypsum Company; M-Bloc Type X: www.americangypsum.com/#sle.
 - c. CertainTeed Corporation; M2Tech 5/8" Type X Moisture & Mold Resistant Drywall: www.certainteed.com/#sle.
 - d. Gold Bond Building Products, LLC provided by National Gypsum Company; Gold Bond XP Gypsum Board: www.goldbondbuilding.com/#sle.
 - e. USG Corporation; Sheetrock Brand EcoSmart Panels Mold Tough Firecode X 5/8 in. (15.9 mm): www.usg.com/#sle.
 - f. Substitutions: See Section 01 60 00 - Product Requirements.

2.04 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness 2 inches (50.8 mm).
- B. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
 1. Corner Beads: Low profile, for 90 degree outside corners.
 - a. Products:
 - 1) Trim-Tex, Inc: www.trim-tex.com/#sle.
 - 2) Substitutions: See Section 01 60 00 - Product Requirements.
 2. Expansion Joints:
 - a. Type: V-shaped PVC with tear away fins.
 - b. Products:
 - 1) Trim-Tex, Inc; Fire Rated 093V Expansion Bead: www.trim-tex.com/#sle.
 - 2) Substitutions: See Section 01 60 00 - Product Requirements.
- C. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 1. Paper Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
 2. Joint Compound: Drying type, vinyl-based, ready-mixed.
- D. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- E. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C1007/AISI S220 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
- C. Studs: Space studs at 16 inches on center (at 406 mm on center).
 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.

3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- E. Standard Wall Furring: Install at concrete walls scheduled to receive gypsum board, not more than 4 inches (100 mm) from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches (600 mm) on center.
- F. Furring for Fire-Resistance Ratings: Install as required for fire-resistance ratings indicated and to GA-600 requirements.
- G. Blocking: Install wood blocking for support of:
 1. Framed openings.
 2. Wall-mounted cabinets.
 3. Wall-mounted door hardware.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated. Lack of control or expansion joints on drawings does not remove the Contractor's responsibility for providing such. In the event no control joints are shown, contact the Architect for direction prior to commencing work. The following general guidelines shall be considered:
 1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.
- D. Moisture Guard Trim: Install on bottom edge of gypsum board according to manufacturer's instructions and in locations indicated on drawings.

3.06 JOINT TREATMENT

- A. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
 2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
 3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).
 2. Taping, filling, and sanding are not required at surfaces behind fixed cabinetry.

3.07 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

END OF SECTION

**SECTION 09 51 00
ACOUSTICAL CEILINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.02 RELATED REQUIREMENTS

- A. Division 23: Air Outlets and Inlets - Air diffusion devices in ceiling.
- B. Division 26: Interior Lighting - Light fixtures in ceiling system
- C. Division 28: Fire Detection and Alarm - Fire alarm components in ceiling system.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- B. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2023.
- C. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
- D. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.
- G. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.
- H. CHPS (HPPD) - High Performance Products Database; Current Edition.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Samples: Submit two samples 6 by 6 inch (152.4 by 152.4 mm) in size illustrating material and finish of acoustical units.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

1.06 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

1.07 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F (16 degrees C), and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
 - 1. Basis of Design Manufacturer:
 - a. USG Corporation: www.usg.com/ceilings.
 - 2. Other Acceptable Manufacturers:
 - a. Acoustic Ceiling Products, Inc: www.acpideas.com/#sle.
 - b. Certainteed Architectural: www.certainteed.com/ceilings-and-walls/#sle.
 - 3. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 ACOUSTICAL UNITS

- A. Acoustical Panels, Type ACT-1: Painted mineral fiber, with the following characteristics:
 - 1. Classification: ASTM E1264 Type III.
 - 2. Size: 24 by 24 inches (610 by 610 mm).
 - 3. Thickness: 3/4 inch (19 mm).
 - 4. Composition: Wet felted.
 - 5. Light Reflectance: 70 percent, determined in accordance with ASTM E1264.
 - 6. NRC: 0.65, determined in accordance with ASTM E1264.
 - 7. Ceiling Attenuation Class (CAC): 35, determined in accordance with ASTM E1264.
 - 8. Panel Edge: Reveal. SL
 - 9. Color: White.
 - 10. Suspension System: Exposed grid Type ACT-1.
 - 11. Products:
 - a. Basis of Design: USG Corporation; Glacier Basic Acoustical Panels: www.usg.com/ceilings
 - 1) Item 711
 - b. Substitutions: See Section 01 60 00 - Product Requirements.

2.03 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
 - 1. Materials:
 - a. Steel Grid: ASTM A653/A653M, G30 coating, unless otherwise indicated.
- B. Exposed Suspension System Types ACT-1: Formed steel, commercial quality, cold rolled; intermediate duty.
 - 1. Profile: Tee; 15/16 inch (24 mm) face width.
 - 2. Construction: Double Web.
 - 3. Finish: Baked enamel.
 - 4. Products:
 - a. Basis of Design: USG Corporation, USG DXL
 - b. Substitutions: See Section 01 60 00 - Product Requirements.
 - c. Suspension system shall match provided ceiling tile manufacturer.

2.04 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

- B. Hanger Wire: 12 gauge, 0.08 inch (2 mm) galvanized steel wire.
- C. Perimeter Moldings: Same metal and finish as grid.
 - 1. Angle Molding: L-shaped, for mounting at same elevation as face of grid.
 - 2. Acoustical Sealant For Perimeter Moldings: Non-hardening, non-skinning, for use in conjunction with suspended ceiling system.
- D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Locate system on room axis according to reflected plan.
- D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
- E. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- F. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- G. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- H. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- I. Support fixture loads using supplementary hangers located within 6 inches (152 mm) of each corner, or support components independently.
- J. Do not eccentrically load system or induce rotation of runners.
- K. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.

3.02 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- E. Install units after above-ceiling work is complete.
- F. Cutting Acoustical Units:
 - 1. Cut to fit irregular grid and perimeter edge trim.
 - 2. Make field cut edges of same profile as factory edges.
 - 3. Double cut and field paint exposed reveal edges.
- G. Where round obstructions occur, provide preformed closures to match perimeter molding.

3.03 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.04 CLEANING

- A. Replace damaged or abraded components.

END OF SECTION

**SECTION 09 65 00
RESILIENT FLOORING**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 03 54 00 - Cast Underlayment: Flooring infill at recessed carpet mat locations.
- B. Section 09 05 61 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

1.03 REFERENCE STANDARDS

- A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2023.
- B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- C. ASTM F1861 - Standard Specification for Resilient Wall Base; 2021.
- D. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- E. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2023.
- F. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate seaming plans and floor patterns.
- D. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Provide three unopened cartons of LVT Field Tile (Ash)
 - 3. Provide three unopened cartons of LVT Accent Tile (Antique Walnut).
 - 4. Provide two unopened cartons of wall base.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum ten years documented experience in the fabrication of resilient flooring types equivalent to those specified. Manufacturers proposed for use, which are not named in this section, shall submit evidence of ability to meet the performance requirements specified. Submission shall not be less than 10 days prior to bid date.
- B. Color Matching: Provide resilient flooring products from one manufacturer to ensure color match.

- C. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience and who is acceptable to the product manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages.
- B. Store and handle in strict accordance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
- C. Store all materials off of the floor in an acclimatized, weather-tight space.

1.07 FIELD CONDITIONS

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).

1.08 WARRANTY

- A. Provide two-year warranty against defects in manufacturing and workmanship of resilient flooring products. Provide manufacturer's standard limited wear warranty/ conductivity warranty as specified under each product as applicable.

PART 2 PRODUCTS

2.01 TILE FLOORING

- A. Luxury Vinyl Tile: Printed film type, with transparent or translucent wear layer, and:
 - 1. Minimum Requirements: Comply with ASTM F1700 Class III Solid Vinyl Tile.
 - 2. Overall Thickness: 0.120"/ 3mm.
 - 3. Wear Layer Thickness: 0.020" clear, rigid high density PVC.
 - 4. Size: Approximately 7 inches by 47.25 inches.
 - 5. Edge: Square Edge (SE).
 - 6. Surface Texture: Natural Grain (NG).
 - 7. Warranty: 20 Years Commercial.
 - 8. Recycling: Suitable.
 - 9. Manufacturers:
 - a. Basis of Design: Gerflor, Creation GrovePoint
 - b. Other Manufacturers:
 - 1) Tarkett.
 - 2) Armstrong.
 - c. Substitutions: See 01 60 00 - Product Requirements
 - 1) Proposed product must match colors and patterns of the Basis of Design Products and must be pre-approved by the owner.
 - 10. Color: to be selected from manufacturer's full color line.

2.02 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS, rubber, vulcanized thermoset; Style B, Cove.
 - 1. Manufacturers:
 - a. Johnsonite, a Tarkett Company: www.johnsonite.com/#sle.
 - b. Roppe Corporation: www.roppe.com/#sle.
 - c. Substitutions: See Section 01 60 00 - Product Requirements.
 - 2. Height: 4 inches (100 mm).
 - 3. Thickness: 0.125 inch (3.2 mm).
 - 4. Finish: Satin.
 - 5. Length: Roll.
 - 6. Color: To be selected by Architect from manufacturer's full range.
 - 7. Accessories: Premolded external corners and internal corners.

2.03 ACCESSORIES

- A. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
 - 1. Provide only products having lower volatile organic compound (VOC) content than required by the more stringent of the South Coast Air Quality Management District Rule No. 1168 and the Bay Area Quality Management District Regulation 8, Rule 51.
 - 2. Manufacturers:
 - a. All Locations: Mapei, ECO 399, resists up to 99%RH.
 - b. Other manufacturers approved by the Flooring Manufacturer.
- B. Moldings, Transition and Edge Strips: Rubber: shapes and profiles appropriate for application.
 - 1. Manufacturers: Same as Rubber Base Manufacturer.
- C. Filler for Coved Base: Plastic.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive resilient floor.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within the limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- D. Verify that concrete sub-floor surfaces are dry enough and ready for resilient flooring installation by testing for moisture emission rate and alkalinity in accordance with ASTM F710; obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive material manufacturer.
 - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- B. Comply with ASTM F 710-92 and manufacturer's recommendations for surface preparation. Remove substances incompatible with resilient flooring adhesive by method acceptable to manufacturer.
- C. Concrete floors with steel troweled (slick) finish shall be properly roughed up (sanded) to ensure suitable adhesion.
- D. Concrete floors with curing, hardening, and breaking compounds shall be abraded with mechanical methods only to remove compounds. Use blastrac or similar equipment.
- E. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.
- F. Grind down high spots.
- G. Fill voids, cracks and depressions with leveling compounds acceptable to manufacturer. Remove projections and repair other defects to tolerances acceptable to manufacturer.
- H. Prohibit traffic until filler is fully cured.
- I. Clean substrate by vacuuming subfloors immediately prior to installation to remove loose particles.

- J. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.03 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Adhesive-Applied Installation:
 - 1. Spread only enough adhesive to permit installation of materials before initial set.
 - 2. Fit joints and butt seams tightly.
 - 3. Set flooring in place, press with heavy roller to attain full adhesion.
- D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
 - 1. Resilient Strips: Attach to substrate using adhesive.
- F. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- G. Install flooring in recessed floor access covers, maintaining floor pattern.
- H. Install feature strips where indicated.

3.04 INSTALLATION - TILE FLOORING

- A. Install in accordance with manufacturer's instructions.
- B. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.
- C. Spread only enough adhesive to permit installation of materials before initial set.
- D. Set flooring in place in accordance with manufacturer's recommendations to achieve full adhesion and to pattern indicated on the drawings.
- E. Where floor finishes are different on opposite sides of door, terminate flooring under the centerline of the door.
- F. Install edge strips at unprotected or exposed edges, where flooring terminates, and
- G. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- H. Install plank tile with a random offset of at least 6 inches (152 mm) from adjacent rows.

3.05 INSTALLATION - RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches (45 mm) between joints.
- B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.
- D. Scribe and fit to door frames and other interruptions.

3.06 CLEANING

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

3.07 PROTECTION

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

END OF SECTION

SECTION 09 65 66
RESILIENT ATHLETIC FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Recycled Rubber sheet flooring, adhesively installed.
- B. Painted game lines.
- C. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 09 05 61 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.
- B. Section 09 65 00 - Resilient Flooring.

1.03 REFERENCE STANDARDS

- A. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2016 (Reapproved 2021).
- B. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015 (Reapproved 2021).
- C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- D. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- E. ASTM F2772 - Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems; 2011 (Reapproved 2019).
- F. DIN EN 14904 - Surfaces for Sports Areas – Indoor Surfaces for Multi-Sports Use – Specification; 2006.
- G. SCS (CPD) - SCS Certified Products; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed data sheets for products specified.
- C. Shop Drawings: Fabrication and installation details, and layout, colors, and widths of game lines and equipment locations.
- D. Selection Samples: Manufacturer's color charts for flooring materials specified and game line paints, indicating full range of colors and textures available.
- E. Verification Samples: Actual flooring material specified, not less than 12 inch (305 mm) square, mounted on solid backing.
 - 1. Include samples of game lines, illustrating colors selected.
- F. Installer's qualification statement.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Flooring Material: 10 square yards (9 sq m) matching installed flooring.

1.05 QUALITY ASSURANCE

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

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in unopened containers clearly labeled with manufacturer's name and identification of contents.
- B. Store materials in dry and clean location until needed for installation. During installation, handle in a manner that will prevent marring and soiling of finished surfaces.

1.07 FIELD CONDITIONS

- A. Maintain temperature in spaces to receive adhesively installed resilient flooring within range of 70 to 95 degrees F (21 to 35 degrees C) for not less than 48 hours before the beginning of installation and for not less than 48 hours after installation has been completed. Subsequently, do not allow temperature in installed spaces to drop below 50 degrees F (10 degrees C) or to go above 100 degrees F (38 degrees C).

PART 2 PRODUCTS

2.01 PREFORMED ATHLETIC FLOORING

- A. Manufacturers: All products by the same manufacturer.
 - 1. Basis of Design: Moose Sport.; RubberRoll.
 - 2. Other Acceptable Manufacturers:
 - a. Tarkett Sports; www.tarkettsportsindoor.com
 - 3. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Rubber Roll Flooring: Recycled SBR (styrene butadiene rubber) and colored EPDM granules with urethane binder, lengths to avoid transverse seams.
 - 1. Thickness: 9mm
 - 2. Roll Width: Minimum 48 inches (1220 mm).
 - 3. Roll Length: As required (in 1 foot increments).
 - 4. Tensile Strength: Minimum 200 psi (1.38 MPa), per ASTM D412.
 - 5. Coefficient of Friction: >0.9
 - 6. Color: As selected from manufacturer's standard range.
 - a. RF-1 (Track 1): 30% Fleck.
 - b. RF-2 (Field): 95% Fleck.

2.02 ACCESSORIES

- A. Leveling Compound: Latex-modified cement formulation as recommended by flooring manufacturer for substrate conditions.
- B. Flooring Adhesive: Waterproof; types recommended by flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates for conditions detrimental to installation of athletic flooring. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of athletic flooring to substrate.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

- A. Concrete: Use leveling compound as necessary to achieve substrate flatness of plus or minus 1/8 inch within 10 ft radius (1/1000).

- B. Remove coatings that are incompatible with flooring adhesives, using methods recommended by flooring manufacturer.
- C. Broom clean areas to receive athletic flooring immediately before beginning installation.

3.03 INSTALLATION

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Resilient Roll Flooring:
 - 1. Unroll flooring and allow to relax before beginning installation.
 - 2. Mix adhesive thoroughly and apply to substrate with notched trowel. Roll flooring into fresh adhesive, overlapping end seams and double cutting, butting factory edges and compression fitting.
 - 3. Roll entire flooring surface with steel roller to assure adhesion to substrate and eliminate air bubbles.
 - 4. Immediately remove any adhesive from flooring surface, using chemical recommended by flooring manufacturer.
 - 5. Weld seams using techniques and equipment recommended by manufacturer.
 - 6. Lay out game lines using tape and taping machine approved by flooring manufacturer. Apply game line paint with roller, and allow to dry before removing tape.
 - 7. Apply transparent top coat over flooring if recommended by manufacturer, to achieve a uniform finished appearance.

3.04 CLEANING

- A. Clean flooring using methods recommended by manufacturer.

3.05 PROTECTION

- A. Protect finished athletic flooring from construction traffic to ensure that it is without damage upon Date of Substantial Completion.

END OF SECTION

**SECTION 09 68 13
TILE CARPETING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Carpet tile, fully adhered.
- B. Removal of existing flooring.

1.02 RELATED REQUIREMENTS

- A. Section 02 41 00 - Demolition.
- B. Section 03 54 00 - Cast Underlayment.
- C. Section 09 05 61 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.
- D. Section 09 65 00 - Resilient Flooring.

1.03 REFERENCE STANDARDS

- A. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2016 (Reapproved 2021).
- B. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2023.
- C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.
- E. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- F. CRI 104 - Standard for Installation of Commercial Carpet; 2015.
- G. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Current Edition.
- H. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- C. Shop Drawings: Indicate layout of joints.
- D. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed. Provide full, unopened boxes.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in installing carpet tile with minimum five years documented experience and approved by carpet tile manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Tile Carpeting Type CPTT-1:

- a. Interface, Inc: www.interface.com.
- b. Mohawk Group: www.mohawkgroup.com.
- c. Shaw Contract: www.shawcontract.com.
- d. Substitutions: Not permitted.

2.02 MATERIALS

A. Tile Carpeting; Type CPTT-1 (Offices): Tufted, manufactured in one dye lot.

- 1. Basis of Design: Interface
 - a. Price Group 3
 - 1) Open Air Stria (402, 410).
 - 2) Third Space 308.
 - 3) Whole Earth WE 151.
 - b. Basis of Design: Interface, Inc.: Open Air Stria 402, 410.
- 2. Tile Size:
 - 1) Interface; 25cm x 1 m
 - 2) Mohawk Group: 12 inches x 36 inches.
 - 3) Shaw Contract: 9 inches x 36 inches.
- b. Color: To be selected from manufacturer's full line of colors.
- c. Yarn System:
 - 1) Interface; 100% Recycled Content Nylon.
 - 2) Mohawk Group: ColorStrand Solution Dyed Nylon.
 - 3) Shaw Contract: Ecosolution Q Solution Dyed Nylon.
- d. Gauge:
 - 1) Interface: 1/12 inch.
 - 2) Mohawk Group: 1/12 inch.
 - 3) Shaw Contract: 1/12 inch.
- e. Stitches Per Inch:
 - 1) Interface: 8.3.
 - 2) Mohawk Group: 12.
 - (a) Shaw Contract: 9.5.
- f. Pile Weight:
 - 1) Interface: 18 oz/ sq. yd.
 - 2) Mohawk Group: 17 oz/ sq. yd.
 - 3) Shaw Contract: 18 oz/ sq. yd.
- g. Primary Backing:
 - (a) Interface: GlasBac.
 - (b) Mannington Commercial: Infinity 2 Modular.
 - (c) Mohawk Group: EcoFlex NXT.
 - (d) Shaw Contract: Ecoworx Tile.
- 2) Pattern: Ashlar.

2.03 ACCESSORIES

- A. Edge Strips: Rubber, color as selected by Architect.
- B. Carpet Tile Adhesive: Recommended by carpet tile manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet tile.

- C. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.
- D. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).
 - 1. Test in accordance with Section 09 05 61.
 - 2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

- A. Remove existing carpet tile.
- B. Prepare floor substrates for installation of flooring in accordance with Section 09 05 61.

3.03 INSTALLATION

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install carpet tile in accordance with manufacturer's instructions.
- C. Blend carpet from different cartons to ensure minimal variation in color match.
- D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.
- F. Locate change of color or pattern between rooms under door centerline.
- G. Fully adhere carpet tile to substrate.
- H. Trim carpet tile neatly at walls and around interruptions.
- I. Complete installation of edge strips, concealing exposed edges.

3.04 CLEANING

- A. See Section 01 70 00 - Execution and Closeout Requirements for additional requirements.
- B. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- C. Clean and vacuum carpet surfaces.

END OF SECTION

**SECTION 09 91 13
EXTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Exposed surfaces of main entry canopy.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Non-metallic roofing and flashing.
 - 6. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, zinc, and lead.
 - 7. Floors, unless specifically indicated.
 - 8. Brick, glass unit masonry, architectural concrete, cast stone, integrally colored plaster and stucco.
 - 9. Glass.

1.02 RELATED REQUIREMENTS

- A. Section 09 91 23 - Interior Painting.

1.03 DEFINITIONS

- A. Comply with ASTM D16 for interpretation of terms used in this section.

1.04 REFERENCE STANDARDS

- A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.
- B. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- C. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- D. SSPC-SP 2 - Hand Tool Cleaning; 2024.
- E. SSPC-SP 3 - Power Tool Cleaning; 2024.
- F. SSPC-SP 6/NACE No.3 - Commercial Blast Cleaning; 2006.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Paint Samples for Initial Selection: Submit one heavy paper "fan deck" illustrating range of colors and sheens available for each surface finishing product scheduled.

- D. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens not required.
 - 3. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- E. Manufacturer's Instructions: Indicate special surface preparation procedures.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum ten years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum three years experience and approved by manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

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

1.08 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Benjamin Moore & Co. www.benjaminmoore.com
 - 2. PPG Paints: www.ppgpaints.com/#sle.
 - 3. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
 - 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions.
- B. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- C. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.
 - 2. Extend colors to surface edges; colors may change at any edge as directed by Architect.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including primed metal.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s):
 - a. Benjamin Moore; DTM Alkyd, Low Lustre.
 - b. Comparable product by other approved manufacturers.
 - c. Substitutions: Section 01 60 00 - Product Requirements.
 - 3. Primer: As recommended by top coat manufacturer for specific substrate.

2.04 ACCESSORY MATERIALS

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.

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 for 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. 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.
- H. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning in accordance with SSPC-SP 6/NACE No.3. Protect from corrosion until coated.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.
- F. Sand metal surfaces lightly between coats to achieve required finish.
- G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

3.04 CLEANING

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

3.05 PROTECTION

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

END OF SECTION

**SECTION 09 91 23
INTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, and lead items.
 - 6. Floors, unless specifically indicated.
 - 7. Glass.
 - 8. Acoustical materials, unless specifically indicated.
 - 9. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 05 50 00 - Metal Fabrications: Shop-primed items.
- B. Section 08 12 13 - Hollow Metal Frames.
- C. Section 09 21 15 - Gypsum Board Assemblies.

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; 2024.
- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- E. SCAQMD 1113 - Architectural Coatings; 1977, with Amendment (2016).
- F. SSPC V1 (PM1) - Good Painting Practice: Painting Manual Volume 1; 2016.
- G. SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual Volume 2; 2021.
- H. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- I. SSPC-SP 2 - Hand Tool Cleaning; 2024.
- J. SSPC-SP 6/NACE No.3 - Commercial Blast Cleaning; 2006.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
 - 2. MPI product number (e.g., MPI #47).
 - 3. Cross-reference to specified paint system products to be used in project; 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 (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
- D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- E. Manufacturer's Instructions: Indicate special surface preparation procedures.
- F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gal (4 L) of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum five years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience and approved by manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

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

1.08 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 (3 degrees C) above the dew point, or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F (10 degrees C) for interiors unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 fc (860 lux) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Paints:
 - 1. Basis of Design:
 - a. Sherwin-Williams Company: www.sherwin-williams.com.
 - 2. Other Acceptable Manufacturers:
 - a. Benjamin Moore & Co.: www.benjaminmoore.com.
 - b. PPG Paints: www.ppgpaints.com.
 - c. Pratt & Lambert Paints: www.prattandlambert.com.
- B. Primer Sealers: Same manufacturer as top coats.
- C. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
 - 1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
 - 2. 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.
 - 3. 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.
 - 4. 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.
 - 5. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 6. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Flammability: Comply with applicable code for surface burning characteristics.
- D. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.
 - 2. 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 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, shop primed steel, and galvanized steel.
 - 1. Two top coats and one coat primer.

2. Top Coat(s): Institutional Low Odor/VOC Interior Latex; MPI #143, 144, 145, 146, 147, or 148.
 - a. Basis of Design Product:
 - 1) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Flat.
 - 2) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Semi-Gloss.
 - 3) Substitutions: See Section 01 60 00 - Product Requirements
 3. Top Coat Sheen:
 - a. Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
 - b. Eggshell: MPI gloss level 3; use this sheen at vertical wall locations.
 - c. Semi-Gloss: MPI gloss level 5; use this sheen at concrete block locations.
- B. Paint I-OP-MD-WC - Medium Duty Vertical and Overhead: Including shop primed steel.
1. Two top coats and one coat primer.
 2. Top Coat(s): Interior Epoxy-Modified Latex; MPI #115 or 215.
 - a. Basis of Design Product:
 - 1) Sherwin-Williams Pro Industrial Waterbased Catalyzed Epoxy, Gloss. (MPI #115)
 - 2) Substitutions: See Section 01 60 00 - Product Requirements
 3. Top Coat Sheen:
 - a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.
 4. Primer: As specified under "PRIMERS" below.

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
1. Interior Institutional Low Odor/VOC Primer Sealer; MPI #149.
 - a. Basis of Design Product:
 - 1) Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer.
 - 2) Substitutions: See Section 01 60 00 - Product Requirements
 2. Interior/Exterior Quick Dry Alkyd Primer for Metal; MPI #76.
 - a. Basis of Design Product:
 - 1) Sherwin-Williams Protective & marine Kem Bond HS Universal primer
 - 2) Substitutions: See Section 01 60 00 - Product Requirements

2.05 ACCESSORY MATERIALS

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 1. Gypsum Wallboard: 12 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing paints or finishes that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.
- I. 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.
- J. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning in accordance with SSPC-SP 6/NACE No.3. Protect from corrosion until coated.

3.03 APPLICATION

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

3.04 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection.

3.05 CLEANING

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

3.06 PROTECTION

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

END OF SECTION

**SECTION 12 34 00
MANUFACTURED PLASTIC LAMINATE CASEWORK**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Modular and special fabricated cabinet units.
- B. Cabinet hardware.
- C. Fixed shelving, adjustable shelving and shelf supports.
- D. Preparation for installing utilities.

1.02 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard; 2022.
- B. BHMA A156.9 - Cabinet Hardware; 2020.
- C. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2020.
- D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- E. NHLA G-101 - Rules for the Measurement and Inspection of Hardwood and Cypress; 2023.
- F. PS 1 - Structural Plywood; 2023.
- G. PS 20 - American Softwood Lumber Standard; 2021.

1.03 RELATED WORK

- A. Section 12 36 00 - Countertops.
- B. Division 22 - Mechanical: Plumbing, utilities, and fixtures. Coordinate with Casework.
- C. Division 26 - Electrical: Power, signal, and data wiring. Coordinate with Casework.

1.04 REFERENCES

- A. AHA A135.4 - Basic Hardboard; American Hardboard Association; 1995.
- B. ANSI A208.1 - American National Standard for Particleboard; 1999.
- C. AWI P-200 - Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute; 1997, Seventh Edition, Version 1.0.
- D. BHMA A156.9 - American National Standard for Cabinet Hardware; Builders Hardware Manufacturers Association; 2001 (ANSI/BHMA A156.9).
- E. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association; 1995.
- F. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce); 1999.
- G. WIC (MAN) - Manual of Millwork; Woodwork Institute of California 2001.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit one two sets of plastic laminate samples, illustrating cabinet and countertop color choices.
- E. Samples: Submit two samples of drawer pulls, hinges, slides, and other accessories illustrating hardware finish .

1.06 QUALITY ASSURANCE

- A. Perform all work in accordance with AWI Architectural Woodwork Quality Standards Illustrated, Custom quality. excepting that all sight exposed shelving and casework interior surfaces of open shelving units shall be clad in high pressure laminate of type to match that used for door and drawer fronts.
- B. Provide 5 year Manufacturer warranty against delamination.
- C. Provide Manufacturer certification that products do not contain in excess of one (1) part per million of formaldehyde.
- D. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Protect units from moisture damage.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. During and after installation of work of this section, maintain the same temperature and humidity conditions in building spaces as will occur after occupancy.

1.09 WARRANTY

- A. All materials and workmanship covered by this section shall carry a 3 year warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS - GENERAL CASEWORK

- A. Case Systems, P.O. Box 2044, Midland, MI 48641 Phone: (517) 835-7773
- B. LSI Corp., 2100 Xenium Ln., Minneapolis, MN 55441 Phone: (612) 559-4664
- C. Stevens, 704 W. Main Street, Teutopolis, IL 62467 Phone: (217) 857-6411
- D. TMI, 050 3rd Avenue, West Dickinson, ND 58601 Phone: (701) 225-6716
- E. Cut to Size Technologies; 345 S Fairbank St, Addison, IL 60101; Phone: (630) 543-8328

2.02 PANEL MATERIALS

- A. Particleboard: ANSI A208.1; type as specified in AWI Architectural Woodwork Quality Standards Illustrated, composed of wood chips, medium density, made with high waterproof resin adhesive; of grade to suit application; sanded faces, located as described in FABRICATION.
- B. Hardboard: AHA A135.4; Pressed wood fiber with resin binder, Class 1 - Tempered, 1/4 inch (6.35 mm) thick, smooth one side (S1S), located as described in FABRICATION.

2.03 MANUFACTURERS - PLASTIC LAMINATE

- A. Manufacturers:
 - 1. Basis of Design: Wilsonart International, Inc.
 - a. Formica.
 - b. Nevamar.
 - 2. Substitutions: Not permitted. Architect to approve final selection.
- B. Laminate Colors:
 - 1. To be selected from full color line.
- C. Laminate Color Selections
 - 1. Basic Cabinet Body Color:
 - a. To include closed interior surfaces of all components, including drawer boxes, to be covered with melamine laminate as a minimum requirement; drawer boxes not matching basic color will be rejected.

- b. Melamine laminate shall be available in manufacturer's standard dove grey, frosty white, or light beige color. Two colors may be selected.
- c. Colors for sight exposed cabinet surfaces, including open shelving and interiors of doorless cabinets, grade GP28, shall be selected from the manufacturer's current year laminate series. A maximum of 2 colors to be selected per unit face.
- d. Colors for countertop grades, GP50 and PF42, shall be selected from the manufacturer's current year standard solid and patterned laminate series.

2.04 LAMINATE MATERIALS

- A. Definition: Identification of casework components by surface visibility. Listed are definitions and materials commonly used in defining decorative laminate clad casework. Refer to FABRICATION section for those items selected for use on this project.
 - 1. Open Interiors: Any open storage unit without solid door or drawer fronts and units with full glass doors and/or acrylic doors.
 - 2. Closed Interiors: Any closed storage unit behind solid door or drawer fronts, sliding solid doors.
 - 3. Exposed Ends: Any storage unit exterior side surface that is visible after installation.
 - 4. Other Exposed Surfaces: Faces of doors and drawers when closed, tops of cabinets less than 72" above finished floor.
 - 5. Semi-Exposed Surfaces: Interior surfaces which are visible, bottoms of wall cabinets and tops of cabinets 72" or more above finished floor.
 - 6. Concealed Surfaces: Any surface not visible after installation.
- B. Decorative Laminates / Veneer Where Applicable:
 - 1. High pressure decorative laminate GP28 (.028), NEMA Test LD-3-1995
 - 2. High pressure decorative laminate PG50 (.050), NEMA Test LD-3-1995.
 - 3. High pressure decorative laminate PF42 (.042), NEMA Test LD-3-1995.
 - 4. High pressure cabinet liner CL20 (.020), NEMA Test LD-3-1995.
 - 5. Melamine laminate tested to meet NEMA Test LD
 - 6. High pressure backer BK20 (.020).
- C. Side panels, back, top, drawer fronts, and doors shall be ¾" thick particleboard, laminated on the exterior with high pressure decorative laminate GP28 and on the closed interiors with high pressure cabinet liner CL20 in dove grey, frosty white, or light beige color to match basic cabinet body color selected for project. All exposed edges shall be finished with machine applied OBC banding, 3mm thickness.

2.05 ACCESSORIES

- A. Adhesive: FS MMM-A-130 contact adhesive. Type recommended by AWI and laminate manufacturer to suit application.
- B. PVC Edge Trim: Edging Materials / Colors
 - 1. 3mm PVC banding, machine applied with waterproof hot melt adhesive with external edges and outside corners of doors, drawer fronts and back splashes where applicable, machine profiled to 1/2" radius for safety.
 - 2. PVC banding shall be available in colors matched to manufacturer's laminates of the same name. Width shall match component thickness. Color to be chosen by Architect from manufacturer's full range. Architect may choose color rather than matching laminate. Banding color to be custom color to match selected laminate if not a standard color
 - 3. Barbed T-edging or laminate self edge on cabinet components will not be acceptable.
 - 4. Undercounter support frames, legs and miscellaneous metal parts shall be furniture steel unless noted otherwise, welded, degreased, cleaned, treated and epoxy powder painted in standard colors to match basic cabinet body color, or in a contrasting color
- C. Laminate Backing Sheet: 0.020 inch (0.51 mm) Backing Sheet grade, undecorated plastic laminate.

2.06 HARDWARE

- A. Hardware: BHMA A156.9. Unless exceeded herein.
- B. Shelf Standards and Brackets: Where rear support of shelving is required standards shall be heavy duty recessed formed channels, cut for heavy duty shelf brackets with CAM lock lever. Electroplated or powder coated finish as selected by Architect.
- C. Adjustable Shelf Supports:
 - 1. Shall be metal, friction fit into cabinet end panels and vertical dividers, readily adjustable on 32mm (approximately 1¼") CENTERS. Each shelf support shall have two (2) integral support pins, 5mm diameter, to interface pre-drilled holes, and to prevent accidental rotation of support. The supports shall be automatically adaptable to ¾" or 1" thick shelving and shall provide non-tip feature for shelving. Supports are designed to readily permit field fixing of shelf if desired. Structural load testing shall show loading to 1,040 pounds (260 lbs. per support) without failure.
- D. Drawer and Door Pulls: to be selected from manufacturers full product line.
- E. Cabinet Locks: Keyed cylinder, two keys per lock, 5 disc tumbler, cam type, master keyed, brushed chrome - US26D finish.
 - 1. Provide Locks on all cabinets.
 - 2. Keying: Keyed alike by building.
- F. Catches: Magnetic; minimum 7 lb. pull, provide 2 per door for units over 48 inches (1219.2 mm) high. Elbow catches shall be used on inactive doors less than 73" tall.
- G. Drawer Slides: Heavy-duty galvanized steel construction, steel ball bearings separating tracks, nylon rollers full extension type.
 - 1. Standard use and knee space drawers shall be Blum Style No. BS230M with epoxy finish. Slides will have a 100 lbs. load rating at full extension and a built-in, positive stop both directions, with self-closing feature. Slides shall have a lifetime warranty as offered by the slide manufacturer.
 - 2. File drawer slides shall be Blum BS430E full extension. Slides shall have a lifetime warranty as offered by the slide manufacturer.
 - 3. Pencil drawers shall be equipped with Blum No. 320 for under counter or support frame mounting.
- H. Hinges:
 - 1. Shall be five knuckle, institutional grade, 2¾" overlay type with hospital tip. Steel shall be minimum .095" thick and have minimum of nine (9) edge and leaf fastenings. Hinges shall pass ANSI-BMHA standard A156.9, Grade 1 requirement for both vertical and horizontal set and sag (pair of hinges will hold minimum of 310 lbs); copy of test result shall be provided upon request. Casework manufacturer shall use specifically engineered screws for attachment of hinges; wood screws shall not be permitted. Doors 48" and over in height shall have three (3) hinges per door. Available in epoxy finish, or brushed chrome. Provide magnetic door catch with minimum seven (7) pound pull, attached with screws and slotted for adjustment.
- I. Bolts:
 - 1. Chain bolts shall be 3" long, shall have an 18" pull and an angle strike to secure inactive door on cabinets over 72" in height.

2.07 FABRICATION

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

- C. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet (60.96 cm) from sink cut-outs.
- D. Fabricate casework to dimensions, profiles, and details shown.
- E. Cabinet Body Construction:
 - 1. Tops and bottoms shall be joined to cabinet ends and internal cabinet components such as fixed horizontals, rails and verticals shall be joined using 10mm diameter industrial grade hardwood dowels, laterally fluted with chamfered ends, securely glued and clamped under pressure during assembly to secure joints and cabinet squareness. Use minimum of six (6) dowels at each joint for 24 inch (609.6 mm). deep cabinet and minimum of four (4) dowels at each joint for 12" deep cabinets.
 - 2. Unless specifically indicated, core shall be ¾" thick particleboard. Edging and surface finishes as indicated herein.
 - 3. Backs shall be ¾" particleboard, color matched to cabinet interior, exterior surface GP28 laminate as selected.
 - 4. All fixed under counter and tall units shall have individual factory applied base, constructed of ¾" moisture resistant plywood. Base shall be 96mm (nominal 4") high unless otherwise indicated on the drawings.
 - 5. All under counter units except sink base units, shall be provided with full sub-top. Sink base units shall be provided with open top, front welded steel/epoxy painted sink rail full width at top front edge concealed behind face rail/doors, split back removable access panels and bottom panel to have CL20 high pressure cabinet liner both faces, color to match interior color. No exceptions will be permitted.
 - 6. All end panels and vertical dividers, except sink base units, shall be prepared to receive adjustable shell hardware at 32mm (approximately 1¼") centers. Door hinge, drawer slides and pull-out shelves shall mount on line boring to maintain vertical alignment of components and provide for future relocation of doors, drawers, shelves and/or pull-out shelves.
 - 7. All exposed and semi exposed edges of basic cabinet components shall be factory edged with PVC banding, machine applied with waterproof hot melted adhesive.
 - a. Edging shall be 3mm PVC, available in complimentary or contrasting colors.
 - b. Provide custom color edge band where color selection does not match manufacturer's standard colors.
 - 8. Open adjustable shelf units shall be ¾" thick particleboard up to 30" wide, 1" thick particleboard over 30" wide.
 - 9. Front edge of shelves and unit shall be plastic laminate in color to match units.
 - 10. Interior finish, units with open interiors:
 - a. Sides, top, bottom, horizontal, and vertical members, and adjustable shelving faced with high pressure decorative laminate GP28 (.028) color from approved laminate manufacturers full range.
 - 11. Interior finish, units with closed interiors:
 - a. Sides, top, bottom, horizontal, and vertical members, and adjustable shelving faced with melamine laminate with matching prefinished back.
 - 12. Exposed ends:
 - a. Shall be faced with high pressure decorative laminate GP28 (.028) color from laminate manufacturer's full range.
 - 13. Wall unit bottom:
 - a. Shall be faced with melamine laminate.
 - 14. Wall and tall unit tops:
 - a. The top edge of all wall and tall unit end panels shall be factory edged with 3mm PVC to match basic cabinet body color; raw edges at top of wall and tall end panels will be not be permitted.

- b. Top surface will be laminated with melamine.
- 15. Balanced construction of all laminated panels is mandatory. Unfinished core stock surfaces, even on concealed surfaces (excluding edges), will not be permitted. No exceptions.
- F. Drawers:
 - 1. Sides, back and sub-front shall be particleboard, 1/2" thick, laminated with melamine in dove grey, frosty white or light beige to match basic cabinet body color. The back and sub-front are doweled and glued into the side. Dowels shall be fluted, with chamfered ends and a minimum diameter of 8mm. Top edge is banded with 3mm PVC edging in a matching color.
 - 2. Drawer bottom shall be particleboard, 1/2" thick, laminated with melamine, screwed directly to the bottom edges of the drawer box. Drawer bottom less than 1/2" thick will not be permitted.
 - 3. Paper storage drawers are constructed similar except retaining hood shall be included at the rear of each drawer.
 - 4. Painted finishes on drawer sides and/or bottom will not be permitted.
- G. Door/Drawer Fronts:
 - 1. Core for all doors and applied drawer fronts shall be 3/4" thick particleboard, reveal overlay style. All edges shall be finished as indicated herein.
 - 2. Double doors shall be used on all cabinets in excess of 24" wide.
 - 3. Exterior faces shall be laminated with high pressure decorative laminate GP28, color as selected. Interior face shall be high pressure cabinet liner CL20.
 - 4. All edges shall be finished with 3mm PVC. External edges and outside corners shall be machine profiled.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing in both existing spaces to receive casework and new spaces to receive casework
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

- A. Set and secure casework in place; rigid, plumb, and level.
- B. Use fixture attachments in concealed locations for wall mounted components.
- C. Use concealed joint fasteners to align and secure adjoining cabinet units.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch (0.79 mm). Do not use additional overlay trim for this purpose.
- E. Secure cabinet to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.03 ADJUSTING

- A. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

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

END OF SECTION

**SECTION 12 36 00
COUNTERTOPS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Countertops for manufactured casework.

1.02 RELATED REQUIREMENTS

- A. Section 12 34 00 - Manufactured Plastic Laminate Casework.

1.03 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard; 2022.
- B. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications; 2022.
- C. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018 (Reapproved 2023).
- D. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2022.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- G. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- H. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.
- D. Verification Samples: For each finish product specified, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- E. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.05 QUALITY ASSURANCE

- A. Fabricator/ Installer Qualifications: Approved by manufacturer of solid polymer manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Handle materials to prevent damage to finished surfaces. Provide protective coverings to prevent physical damage or staining following installation, for the duration of the project.

1.07 WARRANTY

- A. Provide manufacturer's 10 year warranty against defects in materials written in the name of the Owner. Warranty shall provide material and labor to repair or replace defective materials.

PART 2 PRODUCTS

2.01 COUNTERTOPS

- A. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
 - 1. Flat Sheet Thickness: 1/2 inch (12 mm), minimum.
 - 2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
 - a. Basis of Design Manufacturer:
 - 1) Dupont; Corian: Barley Mill Plaza, 12-2204, P.O. Box 80012, Wilmington DE, 19880-0012, Phone: (1-800-626-7426); www.corian.com.
 - 2) Substitutions: See Section 01 60 00 - Product Requirements.
 - b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
 - c. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
 - d. Color and Pattern: As selected by Architect from manufacturer's full line.
 - 3. Other Components Thickness: 1/2 inch (12 mm), minimum.
 - 4. Exposed Edge Treatment: Built up to minimum 1-1/4 inch (32 mm) thick; square edge; use marine edge at sinks.
 - 5. Back and End Splashes: Same sheet material, square top; minimum 4 inches (102 mm) high.
 - 6. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Premium Grade.

2.02 MATERIALS

- A. Solid Polymer Material: Homogenous filled acrylic meeting ANSI Z124.3 and Z124.6, Type Six, and FS WW-P_54E/GEN(1); no coated, laminated, or of composite construction.
 - 1. Tensile Strength: 5000 psi (34.5 MPa) minimum, when tested in accordance with ASTM D 638.
 - 2. Tensile Modulus: 500,000 PSI minimum, when tested in accordance with ASTM D 638.
 - 3. Flexural Strength: 7000 psi (48 MPa) minimum, when tested in accordance with ASTM D 790.
 - 4. Flexural Modulus: 1000000 psi (6,900 MPa) minimum, when tested in accordance with ASTM D 790.
 - 5. Elongation: 0.3 percent minimum, when tested in accordance with ASTM D 638.
 - 6. Hardness: 90-Rockwell "M" scale, minimum.
 - 7. Thermal Expansion: 1.95×10^{-6} inch/inch/F degree (3.5×10^{-6} inch/inch/C degree) maximum, when tested in accordance with ASTM D 696.
 - 8. Color Stability: No Change, 100 hours minimum, when tested in accordance with NEMA LD3-3.10.
 - 9. Wear and Cleanability: Passing ANSI Z124.3 tests.
 - 10. Abrasion Resistance: No loss of pattern, maximum weight loss (1000 cycles) equal to 0.9g when tested in accordance with NEMA LD3-3.01, ANSI Z124.3.
 - 11. Boiling Water Surface Resistance: No change, when tested in accordance with NEMA LD-3.05.
 - 12. High Temperature Resistance: No change, when tested in accordance with NEMA LD3-3.06.
 - 13. Impact Resistance:

- a. Notched Izod: 0.24 foot-pounds (0.325 J) minimum, when tested in accordance with ASTM D 256, Method A.
 - b. Gardner Ball Drop: 9.0 foot-pounds (12.2 J) minimum, when tested in accordance with ASTM D 5420.
 - c. 1/2 inch Sheet: 125 inches minimum, 1/2 pound (0.227 kg) ball, no failure when tested in accordance with NEMA LD303.03.
 - d. Bowls Point Impact: No cracks or chips, when tested in accordance with ANSI Z124.3 and Z124.6.
- 14. Stain Resistance: Passing ANSI Z124.3 tests.
 - 15. Weatherability: No change, minimum 1000 hours, when tested in accordance with ASTM D 1499.
 - 16. Fungi and Bacteria: No attack, when tested in accordance with ASTM G 21 and G22.
 - 17. Specific Gravity: 1.56 minimum.
 - 18. Water Absorption by WWeight: Maximum percentage, when tested in accordance with ASTM D 570, of:
 - a. 24 hours, 1/4 inch (6 mm): 0.05.
 - b. 24 hours, 3/4 inch (19 mm): 0.10
 - c. Long term, 1/4 inch (6 mm): 0.05.
 - d. Long term, 3/4 inch (19 mm): 0.90.
 - 19. Surface Burning Characteristics: Flame spread index of 25, smoke developed index of 30; when tested in accordance with ASTM E 84 (Class I).
 - 20. Pittsburg Protocol: Solids - 80g minimum rating, per "LC50" Test.
 - 21. Toxicity (as used by NT State): Patterns - 65g minimum.
 - 22. Superficial Damage: 0.010 Inch (0.25) Deep; Repairable by sanding and polishing.
- B. Joint Adhesive: Manufacturer's standard two-part adhesive kit to create inconspicuous, nonporous joints, with chemical bond.
 - C. Panel Adhesive: Manufacturer's standard neoprene-based panel adhesive meeting ANSI A136.1, UL listed.
 - D. Sealant: Manufacturer's standard mildew-resistant, FDA/ UL recognized silicone sealant in color-matching or clear formulations.
 - E. Countertop Build-Up: Particleboard, ANSI A208.1; type as specified in AWI Architectural Woodwork Quality Standards Illustrated, composed of wood chips, medium density, made with waterproof resin binders; of grade to suit application; sanded faces, single thickness for depth of edge build-up; 1 1/2 inches wide; 2 continuous strips at rear of top and at mid width unless otherwise noted; use for all tops.

2.03 SOLID POLYMER FABRICATIONS

- A. Countertops: Horizontal and vertical surfaces of solid polymer material, edge detail as indicated on the drawings.
 - 1. Thickness, Horizontal Surfaces: 1/2 inch (13mm), adhesively joined with inconspicuous
 - 2. Thickness, Vertical Surfaces: 1/2 inch (13mm).
 - 3. Back & Side Splashes: Provide 1/2 inch thick by 4 inches high, same color as the top material for all locations in contact with vertical surfaces unless otherwise noted. Provide 1/16 inch round-over on all exposed edges.

2.04 ACCESSORIES

- A. Fixed Top-Mounted Countertop Support Brackets:
 - 1. Material: Steel.
 - 2. Finish: Manufacturer's standard, factory-applied, textured powder coat.
 - 3. Color: Black.
 - 4. Products:
 - a. Centerline Brackets; Front Mounting Countertop Support:
www.countertopbracket.com.

- b. Substitutions: See Section 01 60 00 - Product Requirements.

2.05 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 - 1. Join lengths of tops using best method recommended by manufacturer.
 - 2. Fabricate to overhang fronts and ends of cabinets 1 inch (25 mm) except where top butts against cabinet or wall.
 - a. Rout a 1/8 inch (3 mm) drip groove at underside of exposed overlapping edges, set back 1/2 inch (13 mm) from face of edge.
 - 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
 - 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
 - 2. Height: 4 inches (102 mm), unless otherwise indicated.
- C. Wall-Mounted Counters: Provide skirts, aprons, brackets, and braces as indicated on drawings, finished to match.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 INSTALLATION

- A. Install vanities in accordance with manufacturer's instructions and approved shop drawings
- B. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- C. Form field joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work. Keep components and hands clean when making joints.
- D. Keep components and hands clean during installation. Remove adhesives, sealants, and other stains. Components shall be clean on Date of Substantial Completion.
- E. Seal joint between back/end splashes and vertical surfaces.

3.03 CLEANING

- A. Clean countertop surfaces thoroughly.

3.04 PROTECTION

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

END OF SECTION

**SECTION 220800
COMMISSIONING OF PLUMBING**

PART 1 GENERAL

1.01 SUMMARY

- A. See Section 019113 - General Commissioning Requirements for overall objectives; comply with the requirements of Section 019113.
- B. This section covers the Contractor's responsibilities for commissioning; each subcontractor or installer responsible for the installation of a particular system or equipment item to be commissioned is responsible for the commissioning activities relating to that system or equipment item.
- C. The Commissioning Authority (CA) directs and coordinates all commissioning activities and provides Prefunctional Checklists and Functional Test Procedures for Contractor's use.
- D. The entire Plumbing system is to be commissioned, including commissioning activities for the following specific items:
 - 1. Plumbing equipment including domestic water heaters, pumps, plumbing fixtures, and all other equipment furnished under this Division.
 - 2. Sanitary waste and vent piping, storm drainage piping, sump pumps and automatic sprinkler system.
 - 3. Fire stopping in fire rated construction, including caulking, gasketing and sealing of smoke barriers.
 - 4. Other equipment and systems explicitly identified elsewhere in Contract Documents as requiring commissioning.
- E. All documents and the management of the construction process will be done through the use of Procore.
- F. The Prefunctional Checklist and Functional Test requirements specified in this section are in addition to, not a substitute for, inspection or testing specified in other sections.

1.02 RELATED REQUIREMENTS

- A. Section 019113 - General Commissioning Requirements: Commissioning requirements that apply to all types of work.

1.03 REFERENCE STANDARDS

- A. ASHRAE Guideline 1.1 - HVAC&R Technical Requirements for the Commissioning Process; 2007, with Errata (2012).

1.04 SUBMITTALS

- A. Updated Submittals: Keep the Commissioning Authority informed of all changes to control system documentation made during programming and setup; revise and resubmit when substantial changes are made.
- B. Startup Reports, Prefunctional Checklists, and Trend Logs: Submit for approval of Commissioning Authority.
- C. Project Record Documents: See Section 017800 for additional requirements.
 - 1. Submit updated version of control system documentation, for inclusion with operation and maintenance data.
 - 2. Show actual locations of all static and differential pressure sensors (air, water and building pressure) and air-flow stations on project record drawings.
- D. Draft Training Plan: In addition to requirements specified in Section 017900, include:
 - 1. Follow the recommendations of ASHRAE Guideline 1.1.
 - 2. Control system manufacturer's recommended training.
 - 3. Demonstration and instruction on function and overrides of any local packaged controls not controlled by the Plumbing control system.
- E. Training Manuals: See Section 017900 for additional requirements.
 - 1. Provide three extra copies of the controls training manuals in a separate manual from the O&M manuals.

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required functional performance testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.
- C. Proprietary test equipment and software required by any equipment manufacturer for program-ming and/or start-up, whether specified or not, shall be provided by the manufacturer of the equipment. The Manufacturer shall provide the test equipment, demonstrate its use, and assist in the commissioning process as needed. Proprietary

test equipment (and software) shall become the property of the Using Agency upon completion of the commissioning process.

- D. Data logging equipment and software required to test equipment will be provided by the CxA, but shall not become the property of the Using Agency.
- E. All testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Specifications. If not otherwise noted, the following minimum requirements apply: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.5F and a resolution of + or - 0.1F. Pressure sensors shall have an accuracy of + or - 2.0% of the value range being measured (not full range of meter) and have been calibrated within the last year.

PART 3 EXECUTION

3.01 GENERAL DOCUMENTATION REQUIREMENTS

- A. With assistance from the installing contractors, the CxA will prepare Pre-Functional Checklists for all commissioned components, equipment, and systems
- B. Red-lined Drawings:
 - 1. The contractor will verify all equipment, systems, instrumentation, wiring and components are shown correctly on red-lined drawings.
 - 2. Preliminary red-lined drawings must be made available to the Commissioning Team for use prior to the start of Functional Performance Testing.
 - 3. Changes, as a result of Functional Testing, must be incorporated into the final as-built drawings, which will be created from the red-lined drawings.
 - 4. The contracted party, as defined in the Contract Documents will create the as-built drawings.
- C. Operation and Maintenance Data:
 - 1. Contractor will provide a copy of O&M literature within 45 days of each submittal acceptance for use during the commissioning process for all commissioned equipment and systems.
 - 2. The CxA will review the O&M literature once for conformance to project requirements.
 - 3. The CxA will receive a copy of the final approved O&M literature once corrections have been made by the Contractor.
- D. Demonstration and Training:

1. Contractor will provide demonstration and training as required by the specifications.
2. A complete training plan and schedule must be submitted by the contractor to the CxA four weeks (4) prior to any training.
3. A training agenda for each training session must be submitted to the CxA one (1) week prior the training session.
4. The CxA shall be notified at least 72 hours in advance of scheduled tests so that testing may be observed by the CxA and Using Agency's representative. A copy of the test record shall be provided to the CxA, Using Agency, and Architect.
5. Engage a Factory-authorized service representative to train Using Agency's maintenance personnel to adjust, operate, and maintain specific equipment.
6. Train Using Agency's maintenance personnel on procedures and schedules for starting and stopping, trouble shooting, servicing, and maintaining equipment.
7. Review data in O&M Manuals.

E. Systems manual requirements:

1. The Systems Manual is intended to be a usable information resource containing all of the information related to the systems, assemblies, and Commissioning Process in one place with indexes and cross references.
2. The CM shall include final approved versions of the following information for the Systems Manual:
 - a. As-Built System Schematics
 - b. Verified Record Drawings
 - c. Test Results (not otherwise included in Cx Record)
 - d. Periodic Maintenance Information for computer maintenance management system
 - e. Recommendations for recalibration frequency of sensors and actuators
 - f. A list of contractors, subcontractors, suppliers, architects, and engineers involved in the project along with their contact information
 - g. Training Records, Information on training provided, attendees list, and any on-going training
3. This information shall be organized and arranged by building system, such as fire alarm, chilled water, heating hot water, etc.

4. Information should be provided in an electronic version to the extent possible. Legible, scanned images are acceptable for non-electronic documentation to facilitate this deliverable.

3.02 CONTRACTOR'S RESPONSIBILITIES

- A. Division 22 Contractors. The commissioning responsibilities applicable to each of the contractors of Division 22 are as follows (all references apply to commissioned equipment only):
 - B. Perform commissioning tests at the direction of the CxA.
 - C. Attend construction phase controls coordination meetings.
 - D. Attend testing, adjusting, and balancing review and coordination meetings.
 - E. Participate in Plumbing systems, assemblies, equipment, and component maintenance orientation and inspection as directed by the CxA.
 - F. Provide information requested by the CxA for final commissioning documentation.
 - G. Include requirements for submittal data, operation and maintenance data, and training in each purchase order or sub-contract written.
 - H. Prepare preliminary schedule for Plumbing system orientations and inspections, operation and maintenance manual submissions, training sessions, pipe system testing, flushing and cleaning, equipment start-up, testing and task completion for Using Agency. Distribute preliminary schedule to commissioning team members.
 - I. Update schedule as required throughout the construction period.
 - J. During the startup and initial checkout process, execute the related portions of the prefunctional checklists for all commissioned equipment.
 - K. Assist the CxA in all verification and functional performance tests.
 - L. Provide measuring instruments and logging devices to record test data, and provide data acquisition equipment to record data for the complete range of testing for the required test period.
 - M. Gather operation and maintenance literature on all equipment, and assemble in binders as required by the specifications. Submit to CxA (45) days after submittal acceptance.
 - N. Coordinate with the CxA to provide (48) hour advance notice so that the witnessing of equipment and system start-up and testing can begin.
 - O. Notify the CxA a minimum of (2) weeks in advance of the time for start of the testing and balancing work. Attend the initial testing and balancing meeting for review of the

official testing procedures.

- P. Participate in, and schedule vendors and contractors to participate in the training sessions.
- Q. Provide written notification to the CM/GC and CxA Authority that the following work has been completed in accordance with the contract documents, and that the equipment, systems, and sub-system are operating as required.
 - 1. Plumbing equipment including all equipment furnished under this Division.
 - 2. Fire stopping in the fire rated construction, including fire and smoke damper installation, caulking, gasketing and sealing of smoke barriers.
 - 3. Fire detection and smoke detection devices furnished under other divisions of the specification.
- R. The equipment supplier shall document the performance of his equipment.
- S. Provide a complete set of red-lined drawings to the CxA prior to the start of Functional Performance Testing.
- T. Balance Contractor
 - 1. Attend initial commissioning coordination meeting scheduled by the CxA.
 - 2. Submit the site specific balancing plan to the CxA and Design Professional for review and acceptance.
 - 3. Attend the balancing review meeting scheduled by the CxA. Be prepared to discuss the procedures that shall be followed in balancing the Plumbing system.
 - 4. At the completion of the balancing work, and the submittal of the final balancing report, notify the Plumbing contractor and the CM/GC.
 - 5. At the completion of balancing work, and the submittal of the final balancing report, notify the Plumbing Contractor and the CM/GC.
 - 6. Participate in verification of the balancing report, which will consist of repeating measurements contained in the balancing reports. Assist in diagnostic purposes when directed.
- U. Provide training of the Using Agency's operating staff using expert qualified personnel, as specified.
- V. Equipment Suppliers
 - 1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Using Agency, to keep warranties in force.

2. Assist in equipment testing per agreements with contractors.
 3. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
- W. Refer to Division 01 Section 019113 “General Commissioning Requirements” for additional contractor responsibilities.

3.03 USING AGENCY RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 “General Commissioning Requirements” for Using Agency’s Responsibilities.

3.04 DESIGN PROFESSIONAL'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 “General Commissioning Requirements” for Design Professional’s Responsibilities.

3.05 CXA'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 “General Commissioning Requirements” for CxA’s Responsibilities.

3.06 PREPARATION

- A. Cooperate with the Commissioning Authority in development of the Prefunctional Checklists and Functional Test Procedures.
- B. Furnish additional information requested by the Commissioning Authority.
- C. Prepare a preliminary schedule for Plumbing pipe system testing, flushing and cleaning, equipment start-up and testing, adjusting, and balancing start and completion for use by the Commissioning Authority; update the schedule as appropriate.
- D. Notify the Commissioning Authority when pipe and duct system testing, flushing, cleaning, startup of each piece of equipment and testing, adjusting, and balancing will occur; when commissioning activities not yet performed or not yet scheduled will delay construction notify ahead of time and be proactive in seeing that the Commissioning Authority has the scheduling information needed to efficiently execute the commissioning process.
- E. Put all Plumbing equipment and systems into operation and continue operation during each working day of testing, adjusting, and balancing and commissioning, as required.
- F. Provide temperature and pressure taps in accordance with the contract documents.
1. Provide a pressure/temperature plug at each water sensor that is an input point to the control system.

- G. Certify in writing to the CxA that Plumbing systems, subsystems, and equipment have been installed, calibrated, and started and are operating according to the Contract Documents.
- H. Certify in writing to the CxA that Plumbing instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents, and that pretest set points have been recorded.
- I. Certify in writing that balancing procedures have been completed and that testing, adjusting, and balancing reports have been submitted, discrepancies corrected, and corrective work approved.
- J. Place systems, subsystems, and equipment into operating mode to be tested (e.g., normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).
- K. Inspect and verify the position of each device and interlock identified on checklists.
- L. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.
- M. Testing Instrumentation: Install measuring instruments and logging devices to record test data as directed by the CxA.

3.07 INSPECTING AND TESTING - GENERAL

- A. Submit startup plans, startup reports, and Prefunctional Checklists for each item of equipment or other assembly to be commissioned.
- B. Provide technicians, instrumentation, and tools to perform commissioning test at the direction of the CxA.
- C. Scope of Plumbing testing shall include entire Plumbing installation, from central equipment through distribution systems to each space. Testing shall include measuring capacities and effectiveness of operational and control functions.
- D. Test all operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and verify proper response of building automation system controllers and sensors.
- E. The CxA along with the Plumbing contractor shall prepare detailed testing plans, procedures, and checklists for Plumbing systems, subsystems, and equipment.
- F. Tests will be performed using design conditions whenever possible.
- G. Simulated conditions may need to be imposed using an artificial load when it is not practical to test under design conditions. Before simulating conditions, calibrate testing instruments. Provide equipment to simulate loads. Set simulated conditions as

directed by the CxA and document simulated conditions and methods of simulation.
After tests, return settings to normal operating conditions.

- H. The CxA may direct that set points be altered when simulating conditions is not practical.
- I. The CxA may direct that sensor values be altered with a signal generator when design or simulating conditions and altering set points are not practical.
- J. If tests cannot be completed because of a deficiency outside the scope of the Plumbing system, document the deficiency and report it to the Using Agency. After deficiencies are resolved, reschedule tests.
- K. If the testing plan indicates specific seasonal testing, complete appropriate initial performance tests and documentation and schedule seasonal tests.
- L. Perform the Functional Tests directed by the Commissioning Authority for each item of equipment or other assembly to be commissioned.
- M. Provide two-way radios for use during the testing.
- N. Deficiencies: Correct deficiencies and re-inspect or re-test, as applicable, at no extra cost to Owner.

3.08 DOMESTIC WATER BALANCING VERIFICATION

- A. Prior to performance of Domestic Water Balancing work, provide copies of reports, sample forms, checklists, and certificates to the CxA.
- B. Notify the CxA at least ten (10) days in advance of testing and balancing Work, and provide access for the CxA to witness balancing Work.
- C. Provide technicians, instrumentation, and tools to verify testing and balancing of Plumbing systems at the direction of the CxA.
 - 1. The CxA will notify testing and balancing subcontractor ten (10) days in advance of the date of field verification. Notice will not include data points to be verified.
 - 2. The balancing subcontractor shall use the same instruments (by model and serial number) that were used when original data were collected.
 - 3. Failure of an item includes a deviation of more than 10 percent. Failure of more than 10 percent of selected items shall result in rejection of final balancing report.
 - 4. Remedy the deficiency and notify the CxA so verification of failed portions can be performed.

3.09 PLUMBING SYSTEMS, SUBSYSTEMS, AND EQUIPMENT TESTING PROCEDURES

- A. Equipment Testing and Acceptance Procedures: Testing requirements are specified in individual Division 22 sections. Provide submittals, test data, inspector record, and certifications to the CxA.
- B. Pipe system cleaning, flushing, hydrostatic tests, and chemical treatment: Test requirements are specified in Division 22 piping Sections. Plumbing Contractor shall prepare a pipe system cleaning, flushing, and hydrostatic testing plan. Provide cleaning, flushing, testing, and treating plan and final reports to the CxA. Plan shall include the following:
 - 1. Sequence of testing and testing procedures for each section of pipe to be tested, identified by pipe zone or sector identification marker. Markers shall be keyed to Drawings for each pipe sector, showing the physical location of each designated pipe test section. Drawings keyed to pipe zones or sectors shall be formatted to allow each section of piping to be physically located and identified when referred to in pipe system cleaning, flushing, hydrostatic testing, and chemical treatment plan.
 - 2. Description of equipment for flushing operations.
 - 3. Minimum flushing water velocity.
 - 4. Tracking checklist for managing and ensuring that all pipe sections have been cleaned, flushed, hydrostatically tested, and chemically treated.
- C. Plumbing Distribution System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of air, fuel gas, sanitary waste and vent piping, storm drainage piping, sprinkler and domestic water distribution systems.
- D. Vibration and Sound Tests: Provide technicians, instrumentation, tools, and equipment to test performance of vibration isolation and seismic controls.
- E. The work included in the commissioning process involves a complete and thorough evaluation of the operation and performance of all components, systems and sub-systems. The following equipment and systems shall be evaluated:
 - 1. Domestic Hot Water System
 - a. Domestic Water System
 - b. Domestic Water Heater
 - c. Hot Water Circulating Pump
 - d. Hot Water Tempering Station
 - e. Plumbing Fixtures

3.10 OPERATION AND MAINTENANCE MANUALS

- A. Add design intent documentation furnished by Engineer to manuals prior to submission to Owner.
- B. Submit manuals related to items that were commissioned to Commissioning Authority for review; make changes recommended by Commissioning Authority.
- C. Commissioning Authority will add commissioning records to manuals after submission to Owner.

3.11 DEMONSTRATION AND TRAINING

- A. Demonstrate operation and maintenance of Plumbing system to Owner' personnel; if during any demonstration, the system fails to perform in accordance with the information included in the O&M manual, stop demonstration, repair or adjust, and repeat demonstration. Demonstrations may be combined with training sessions if appropriate.
- B. These demonstrations are in addition to, and not a substitute for, Prefunctional Checklists and demonstrations to the Commissioning Authority during Functional Testing.
- C. Provide classroom and hands-on training of Owner's designated personnel on operation and maintenance of the Plumbing system, control system, and all equipment items indicated to be commissioned.
- D. Provide classroom and hands-on training of Owner's designated personnel on operation and maintenance of the Plumbing system, control system, and all equipment items indicated to be commissioned. All training is required to be recorded and a copy shall be provided to the commissioning and design team for review and inclusion in the final commissioning plan
- E. TAB Review: Instruct Owner's personnel for minimum 4 hours, after completion of TAB, on the following:
- F. Provide the services of manufacturer representatives to assist instructors where necessary.
- G. Training shall include:
 - 1. Use of the printed installation, operation and maintenance instruction material included in the O&M manuals.
 - 2. A review of the written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and spare parts inventory suggestions. The training shall include start-up, operation in all modes possible, shut-down, seasonal changeover and any emergency procedures.

3. Discussion of relevant health and safety issues and concerns.
4. Discussion of warranties and guarantees.
5. Common troubleshooting problems and solutions.
6. Explanatory information included in the O&M manuals and the location of all plans and manuals in the facility.
7. Discussion of any peculiarities of equipment installation or operation.
8. The format and training agenda in The HVAC Commissioning Process, ASHRAE Guideline 1-2007, is recommended.
9. Hands-on training shall include start-up, operation in all modes possible, including manual, shut-down and any emergency procedures and preventative maintenance for all pieces of equipment.
10. The mechanical contractor shall fully explain and demonstrate the operation, function and overrides of any local packaged controls, not controlled by the central control system.
11. Training shall occur after functional testing is complete, unless approved otherwise by the Using Agency.

END OF SECTION

**SECTION 230800
COMMISSIONING OF HVAC**

PART 1 GENERAL

1.01 SUMMARY

- A. See Section 019113 - General Commissioning Requirements for overall objectives; comply with the requirements of Section 019113.
- B. This section covers the Contractor's responsibilities for commissioning; each subcontractor or installer responsible for the installation of a particular system or equipment item to be commissioned is responsible for the commissioning activities relating to that system or equipment item.
- C. The Commissioning Authority (CA) directs and coordinates all commissioning activities and provides Prefunctional Checklists and Functional Test Procedures for Contractor's use.
- D. The entire HVAC system is to be commissioned, including commissioning activities for the following specific items:
 - 1. Major and minor equipment items.
 - 2. Other equipment and systems explicitly identified elsewhere in Contract Documents as requiring commissioning.
- E. All documents and the management of the construction process will be done through the use of Procore.
- F. The Prefunctional Checklist and Functional Test requirements specified in this section are in addition to, not a substitute for, inspection or testing specified in other sections.

1.02 RELATED REQUIREMENTS

- A. Section 019113 - General Commissioning Requirements: Commissioning requirements that apply to all types of work.
- B. Section 230593 - Testing, Adjusting, and Balancing for HVAC.

1.03 REFERENCE STANDARDS

- A. ASHRAE Guideline 1.1 - HVAC&R Technical Requirements for the Commissioning Process; 2007, with Errata (2012).

1.04 SUBMITTALS

- A. Updated Submittals: Keep the Commissioning Authority informed of all changes to control system documentation made during programming and setup; revise and

resubmit when substantial changes are made.

- B. Draft Prefunctional Checklists and Functional Test Procedures for Control System: Detailed written plan indicating the procedures to be followed to test, checkout and adjust the control system prior to full system Functional Testing; include at least the following for each type of equipment controlled:
1. System name.
 2. List of devices.
 3. Step-by-step procedures for testing each controller after installation, including:
 - a. Process of verifying proper hardware and wiring installation.
 - b. Process of downloading programs to local controllers and verifying that they are addressed correctly.
 - c. Process of performing operational checks of each controlled component.
 - d. Plan and process for calibrating valve and damper actuators and all sensors.
 - e. Description of the expected field adjustments for transmitters, controllers and control actuators should control responses fall outside of expected values.
 4. Copy of proposed log and field checkout sheets to be used to document the process; include space for initial and final read values during calibration of each point and space to specifically indicate when a sensor or controller has “passed” and is operating within the contract parameters.
 5. Description of the instrumentation required for testing.
 6. Indicate what tests on what systems should be completed prior to TAB using the control system for TAB work. Coordinate with the Commissioning Authority and TAB contractor for this determination.
- C. Startup Reports, Prefunctional Checklists, and Trend Logs: Submit for approval of Commissioning Authority.
- D. HVAC Control System O&M Manual Requirements. In addition to documentation specified elsewhere, compile and organize at minimum the following data on the control system:
1. Specific step-by-step instructions on how to perform and apply all functions, features, modes, etc. mentioned in the controls training sections of this specification and other features of this system. Provide an index and clear table of contents. Include the detailed technical manual for programming and customizing control loops and algorithms.

2. Full as-built set of control drawings.
3. Full as-built sequence of operations for each piece of equipment.
4. Full points list; in addition to the information on the original points list submittal, include a listing of all rooms with the following information for each room:
 - a. Floor.
 - b. Room number.
 - c. Room name.
 - d. Air handler unit ID.
 - e. Reference drawing number.
 - f. Air terminal unit tag ID.
 - g. Heating and/or cooling valve tag ID.
 - h. Minimum air flow rate.
 - i. Maximum air flow rate.
5. Full print out of all schedules and set points after testing and acceptance of the system.
6. Full as-built print out of software program.
7. Electronic copy on disk of the entire program for this facility.
8. Marking of all system sensors and thermostats on the as-built floor plan and HVAC drawings with their control system designations.
9. Maintenance instructions, including sensor calibration requirements and methods by sensor type, etc.
10. Control equipment component submittals, parts lists, etc.
11. Warranty requirements.
12. Copies of all checkout tests and calibrations performed by the Contractor (not commissioning tests).
13. Organize and subdivide the manual with permanently labeled tabs for each of the following data in the given order:
 - a. Sequences of operation.
 - b. Control drawings.

- c. Points lists.
 - d. Controller and/or module data.
 - e. Thermostats and timers.
 - f. Sensors and DP switches.
 - g. Valves and valve actuators.
 - h. Dampers and damper actuators.
 - i. Program setups (software program printouts).
- E. Project Record Documents: See Section 017800 for additional requirements.
- 1. Submit updated version of control system documentation, for inclusion with operation and maintenance data.
 - 2. Show actual locations of all static and differential pressure sensors (air, water and building pressure) and air-flow stations on project record drawings.
- F. Draft Training Plan: In addition to requirements specified in Section 017900, include:
- 1. Follow the recommendations of ASHRAE Guideline 1.1.
 - 2. Control system manufacturer's recommended training.
 - 3. Demonstration and instruction on function and overrides of any local packaged controls not controlled by the HVAC control system.
- G. Training Manuals: See Section 017900 for additional requirements.
- 1. Provide three extra copies of the controls training manuals in a separate manual from the O&M manuals.

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required functional performance testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.

- C. Proprietary test equipment and software required by any equipment manufacturer for program-ming and/or start-up, whether specified or not, shall be provided by the manufacturer of the equipment. The Manufacturer shall provide the test equipment, demonstrate its use, and assist in the commissioning process as needed. Proprietary test equipment (and software) shall become the property of the Using Agency upon completion of the commissioning process.
- D. Data logging equipment and software required to test equipment will be provided by the CxA, but shall not become the property of the Using Agency.
- E. All testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Specifications. If not otherwise noted, the following minimum requirements apply: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.5F and a resolution of + or - 0.1F. Pressure sensors shall have an accuracy of + or - 2.0% of the value range being measured (not full range of meter) and have been calibrated within the last year.

PART 3 EXECUTION

3.01 GENERAL DOCUMENTATION REQUIREMENTS

- A. With assistance from the installing contractors, the CxA will prepare Pre-Functional Checklists for all commissioned components, equipment, and systems
- B. Red-lined Drawings:
 - 1. The contractor will verify all equipment, systems, instrumentation, wiring and components are shown correctly on red-lined drawings.
 - 2. Preliminary red-lined drawings must be made available to the Commissioning Team for use prior to the start of Functional Performance Testing.
 - 3. Changes, as a result of Functional Testing, must be incorporated into the final as-built drawings, which will be created from the red-lined drawings.
 - 4. The contracted party, as defined in the Contract Documents will create the as-built drawings.
- C. Operation and Maintenance Data:
 - 1. Contractor will provide a copy of O&M literature within 45 days of each submittal acceptance for use during the commissioning process for all commissioned equipment and systems.
 - 2. The CxA will review the O&M literature once for conformance to project requirements.

3. The CxA will receive a copy of the final approved O&M literature once corrections have been made by the Contractor.

D. Demonstration and Training:

1. Contractor will provide demonstration and training as required by the specifications.
2. A complete training plan and schedule must be submitted by the contractor to the CxA four weeks (4) prior to any training.
3. A training agenda for each training session must be submitted to the CxA one (1) week prior the training session.
4. The CxA shall be notified at least 72 hours in advance of scheduled tests so that testing may be observed by the CxA and Using Agency's representative. A copy of the test record shall be provided to the CxA, Using Agency, and Architect.
5. Engage a Factory-authorized service representative to train Using Agency's maintenance personnel to adjust, operate, and maintain specific equipment.
6. Train Using Agency's maintenance personnel on procedures and schedules for starting and stopping, trouble shooting, servicing, and maintaining equipment.
7. Review data in O&M Manuals.

E. Systems manual requirements:

1. The Systems Manual is intended to be a usable information resource containing all of the information related to the systems, assemblies, and Commissioning Process in one place with indexes and cross references.
2. The CM shall include final approved versions of the following information for the Systems Manual:
 - a. As-Built System Schematics
 - b. Verified Record Drawings
 - c. Test Results (not otherwise included in Cx Record)
 - d. Periodic Maintenance Information for computer maintenance management system
 - e. Recommendations for recalibration frequency of sensors and actuators
 - f. A list of contractors, subcontractors, suppliers, architects, and engineers involved in the project along with their contact information

- g. Training Records, Information on training provided, attendees list, and any on-going training
- 3. This information shall be organized and arranged by building system, such as chilled water, heating hot water, etc.
- 4. Information should be provided in an electronic version to the extent possible. Legible, scanned images are acceptable for non-electronic documentation to facilitate this deliverable.

3.02 CONTRACTOR'S RESPONSIBILITIES

- A. Division 23 Contractors. The commissioning responsibilities applicable to each of the contractors of Division 23 are as follows (all references apply to commissioned equipment only):
 - B. Perform commissioning tests at the direction of the CxA.
 - C. Attend construction phase controls coordination meetings.
 - D. Attend testing, adjusting, and balancing review and coordination meetings.
 - E. Participate in HVAC&R systems, assemblies, equipment, and component maintenance orientation and inspection as directed by the CxA.
 - F. Provide information requested by the CxA for final commissioning documentation.
 - G. Include requirements for submittal data, operation and maintenance data, and training in each purchase order or sub-contract written.
 - H. Prepare preliminary schedule for HVAC&R system orientations and inspections, operation and maintenance manual submissions, training sessions, pipe and duct system testing, flushing and cleaning, equipment start-up, testing and balancing and task completion for Using Agency. Distribute preliminary schedule to commissioning team members.
 - I. Update schedule as required throughout the construction period.
 - J. During the startup and initial checkout process, execute the related portions of the prefunctional checklists for all commissioned equipment.
 - K. Assist the CxA in all verification and functional performance tests.
 - L. Provide measuring instruments and logging devices to record test data, and provide data acquisition equipment to record data for the complete range of testing for the required test period.
 - M. Gather operation and maintenance literature on all equipment, and assemble in binders as required by the specifications. Submit to CxA (45) days after submittal

acceptance.

- N. Coordinate with the CxA to provide (48) hour advance notice so that the witnessing of equipment and system start-up and testing can begin.
- O. Notify the CxA a minimum of (2) weeks in advance of the time for start of the testing and balancing work. Attend the initial testing and balancing meeting for review of the official testing and balancing procedures.
- P. Participate in, and schedule vendors and contractors to participate in the training sessions.
- Q. Provide written notification to the CM/GC and CxA Authority that the following work has been completed in accordance with the contract documents, and that the equipment, systems, and sub-system are operating as required.
 - 1. HVAC&R equipment including all fans, air handling units, ductwork, dampers, terminals, and all other equipment furnished under this Division.
 - 2. Fire stopping in the fire rated construction, including fire and smoke damper installation, caulking, gasketing and sealing of smoke barriers.
 - 3. Fire detection and smoke detection devices furnished under other divisions of the specification.
- R. The equipment supplier shall document the performance of his equipment.
- S. Provide a complete set of red-lined drawings to the CxA prior to the start of Functional Performance Testing.
- T. Heating and Ventilating Contractors
 - 1. Attend initial commissioning coordination meeting scheduled by the Commissioning Authority.
 - 2. Submit the site specific testing and balancing plan to the CxA and AE for review and acceptance.
 - 3. Attend the testing and balancing review meeting scheduled by the CxA. Be prepared to discuss the procedures that shall be followed in testing, adjusting, and balancing the HVAC&R system.
 - 4. At the completion of the testing and balancing work, and the submittal of the final testing and balancing report, notify the HVAC&R contractor and the CM/GC.
 - 5. At the completion of testing and balancing work, and the submittal of the final testing and balancing report, notify the HVAC&R Contractor and the CM/GC.

6. Participate in verification of the testing and balancing report, which will consist of repeating measurements contained in the testing and balancing reports. Assist in diagnostic purposes when directed.
- U. Provide training of the Using Agency's operating staff using expert qualified personnel, as specified.
- V. Equipment Suppliers
1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Using Agency, to keep warranties in force.
 2. Assist in equipment testing per agreements with contractors.
 3. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
- W. Refer to Division 01 Section 019113 "General Commissioning Requirements" for additional contractor responsibilities.

3.03 USING AGENCY'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 "General Commissioning Requirements" for Using Agency's Responsibilities.

3.04 DESIGN PROFESSIONAL'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 "General Commissioning Requirements" for Design Professional's Responsibilities.

3.05 CXA'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 "General Commissioning Requirements" for CxA's Responsibilities.

3.06 PREPARATION

- A. Cooperate with the Commissioning Authority in development of the Prefunctional Checklists and Functional Test Procedures.
- B. Furnish additional information requested by the Commissioning Authority.
- C. Prepare a preliminary schedule for HVAC pipe and duct system testing, flushing and cleaning, equipment start-up and testing, adjusting, and balancing start and completion for use by the Commissioning Authority; update the schedule as appropriate.
- D. Notify the Commissioning Authority when pipe and duct system testing, flushing, cleaning, startup of each piece of equipment and testing, adjusting, and balancing will occur; when commissioning activities not yet performed or not yet scheduled will delay

construction notify ahead of time and be proactive in seeing that the Commissioning Authority has the scheduling information needed to efficiently execute the commissioning process.

- E. Put all HVAC equipment and systems into operation and continue operation during each working day of testing, adjusting, and balancing and commissioning, as required.
 - 1. Include cost of sheaves and belts that may be required for testing, adjusting, and balancing.
- F. Provide test holes in ducts and plenums where directed to allow air measurements and air balancing; close with an approved plug.
- G. Provide temperature and pressure taps in accordance with Contract Documents.
 - 1. Provide a pressure/temperature plug at each water sensor that is an input point to the control system.
- H. Certify in writing to the CxA that HVAC&R systems, subsystems, and equipment have been installed, calibrated, and started and are operating according to the Contract Documents.
- I. Certify in writing to the CxA that HVAC&R instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents, and that pretest set points have been recorded.
- J. Certify in writing that testing, adjusting, and balancing procedures have been completed and that testing, adjusting, and balancing reports have been submitted, discrepancies corrected, and corrective work approved.
- K. Place systems, subsystems, and equipment into operating mode to be tested (e.g., normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).
- L. Inspect and verify the position of each device and interlock identified on checklists.
- M. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.
- N. Testing Instrumentation: Install measuring instruments and logging devices to record test data as directed by the CxA.

3.07 INSPECTING AND TESTING - GENERAL

- A. Submit startup plans, startup reports, and Prefunctional Checklists for each item of equipment or other assembly to be commissioned.

- B. Provide technicians, instrumentation, and tools to perform commissioning test at the direction of the CxA.
- C. Scope of HVAC&R testing shall include entire HVAC&R installation, from central equipment for heat generation and refrigeration through distribution systems to each conditioned space. Testing shall include measuring capacities and effectiveness of operational and control functions.
- D. Test all operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and verify proper response of building automation system controllers and sensors.
- E. The CxA along with the HVAC&R contractor, testing and balancing Subcontractor, and HVAC&R Instrumentation and Control Subcontractor shall prepare detailed testing plans, procedures, and checklists for HVAC&R systems, subsystems, and equipment.
- F. Tests will be performed using design conditions whenever possible.
- G. Simulated conditions may need to be imposed using an artificial load when it is not practical to test under design conditions. Before simulating conditions, calibrate testing instruments. Provide equipment to simulate loads. Set simulated conditions as directed by the CxA and document simulated conditions and methods of simulation. After tests, return settings to normal operating conditions.
- H. The CxA may direct that set points be altered when simulating conditions is not practical.
- I. The CxA may direct that sensor values be altered with a signal generator when design or simulating conditions and altering set points are not practical.
- J. If tests cannot be completed because of a deficiency outside the scope of the HVAC&R system, document the deficiency and report it to the Using Agency. After deficiencies are resolved, reschedule tests.
- K. If the testing plan indicates specific seasonal testing, complete appropriate initial performance tests and documentation and schedule seasonal tests.
- L. Perform the Functional Tests directed by the Commissioning Authority for each item of equipment or other assembly to be commissioned.
- M. Provide two-way radios for use during the testing.
- N. Valve/Damper Stroke Setup and Check:
 - 1. For all valve/damper actuator positions checked, verify the actual position against the control system readout.
 - 2. Set pump/fan to normal operating mode.

3. Command valve/damper closed; visually verify that valve/damper is closed and adjust output zero signal as required.
 4. Command valve/damper open; verify position is full open and adjust output signal as required.
 5. Command valve/damper to a few intermediate positions.
 6. If actual valve/damper position does not reasonably correspond, replace actuator or add pilot positioner (for pneumatics).
- O. Isolation Valve or System Valve Leak Check: For valves not by coils.
1. With full pressure in the system, command valve closed.
 2. Use an ultra-sonic flow meter to detect flow or leakage.
- P. Deficiencies: Correct deficiencies and re-inspect or re-test, as applicable, at no extra cost to Owner.

3.08 TAB COORDINATION

- A. TAB: Testing, adjusting, and balancing of HVAC.
- B. Coordinate commissioning schedule with TAB schedule.
- C. Notify the CxA at least ten (10) days in advance of testing and balancing Work, and provide access for the CxA to witness testing and balancing Work.
- D. Review the TAB plan to determine the capabilities of the control system toward completing TAB.
- E. Provide all necessary unique instruments and instruct the TAB technicians in their use; such as handheld control system interface for setting terminal unit boxes, etc.
- F. For equipment with pre-packaged controls, it is required for a certified manufacturers technician to work with the TAB technician on-site to properly balance the equipment and associated systems.
- G. Have all required Prefunctional Checklists, calibrations, startup and component Functional Tests of the system completed and approved by the Commissioning Authority prior to starting TAB.
- H. Provide a qualified control system technician to operate the controls to assist the TAB technicians or provide sufficient training for the TAB technicians to operate the system without assistance.
- I. Provide technicians, instrumentation, and tools to verify testing and balancing of HVAC&R systems at the direction of the CxA.

1. The CxA will notify testing and balancing subcontractor ten (10) days in advance of the date of field verification. Notice will not include data points to be verified.
2. The testing and balancing subcontractor shall use the same instruments (by model and serial number) that were used when original data were collected.
3. Failure of an item includes, other than sound, a deviation of more than 10 percent. Failure of more than 10 percent of selected items shall result in rejection of final testing, adjusting, and balancing report. For sound pressure readings, a deviation of 3 dB shall result in rejection of final testing. Variations in background noise must be considered.
4. Remedy the deficiency and notify the CxA so verification of failed portions can be performed.

3.09 CONTROL SYSTEM FUNCTIONAL TESTING

- A. Prefunctional Checklists for control system components will require a signed and dated certification that all system programming is complete as required to accomplish the requirements of Contract Documents and the detailed Sequences of Operation documentation submittal.
- B. Do not start Functional Testing until all controlled components have themselves been successfully Functionally Tested in accordance with Contract Documents.
- C. Using a skilled technician who is familiar with this building, execute the Functional Testing of the control system as required by the Commissioning Authority.
- D. A certified technician provided by the manufacturer of the equipment being tested must be present during functional testing
- E. Functional Testing of the control system constitutes demonstration and trend logging of control points monitored by the control system.
 1. The scope of trend logging is partially specified; trend log up to 50 percent more points than specified at no extra cost to Owner.
 2. Perform all trend logging specified in Prefunctional Checklists and Functional Test procedures.
- F. Functionally Test integral or stand-alone controls in conjunction with the Functional Tests of the equipment they are attached to, including any interlocks with other equipment or systems; further testing during control system Functional Test is not required unless specifically indicated below.
- G. Demonstrate the following to the Commissioning Authority during testing of controlled equipment; coordinate with commissioning of equipment.

1. Setpoint changing features and functions.
2. Sensor calibrations.

H. Demonstrate to the Commissioning Authority:

1. That all specified functions and features are set up, debugged and fully operable.
2. That scheduling features are fully functional and setup, including holidays.
3. That all graphic screens and value readouts are completed.
4. Correct date and time setting in central computer.
5. That field panels read the same time as the central computer; sample 10 percent of field panels; if any of those fail, sample another 10 percent; if any of those fail test all remaining units at no extra cost to Owner.
6. Functionality of field panels using local operator keypads and local ports (plug-ins) using portable computer/keypad; demonstrate 100 percent of panels and 10 percent of ports; if any ports fail, sample another 10 percent; if any of those fail, test all remaining units at no extra cost to Owner.
7. Power failure and battery backup and power-up restart functions.
8. Global commands features.
9. Security and access codes.
10. Occupant over-rides (manual, telephone, key, keypad, etc.).
11. O&M schedules and alarms.
12. Occupancy sensors and controls.
13. Fire alarm interlocks and response.
14. That points that are monitored only, having no control function, are reporting properly to the control system.
15. All control strategies and sequences not tested during controlled equipment testing.
16. Trend logging and graphing features that are specified.
17. Other integrated tests specified in Contract Documents
18. That control system features that are included but not specified to be setup are actually installed.

- I. Perform and submit trend logging on the following using the control system, for minimum period of 5 days including one weekend, if the control points are monitored by the control system:
 - 1. Duty cycling, if specified.
 - 2. Demand limiting, including over-ride of limiting.
 - 3. Sequential staging ON of equipment; optionally demonstrate manually.
 - 4. Optimum start-stop functions.
 - 5. Miscellaneous equipment current or status for duty cycling and demand limiting.
 - 6. Equipment or building kW or current for demand limiting.
 - 7. Equipment optimum start/stop functions.

- J. If the control system, integral control components, or related equipment do not respond to changing conditions and parameters appropriately as expected, as specified and according to acceptable operating practice, under any of the conditions, sequences, or modes tested, correct all systems, equipment, components, and software required at no additional cost to Owner.

3.10 HVAC&R SYSTEMS, SUBSYSTEMS, AND EQUIPMENT TESTING PROCEDURES

- A. Equipment Testing and Acceptance Procedures: Testing requirements are specified in individual Division 23 sections. Provide submittals, test data, inspector record, and certifications to the CxA.

- B. HVAC&R Instrumentation and Control System Testing: Field testing plans and testing requirements are specified in Division 23 Sections "Instrumentation and Control for HVAC" and "Sequence of Operations for HVAC Controls." Assist the CxA with preparation of testing plans.

- C. Pipe system cleaning, flushing, hydrostatic tests, and chemical treatment: Test requirements are specified in Division 23 piping Sections. HVAC&R Contractor shall prepare a pipe system cleaning, flushing, and hydrostatic testing plan. Provide cleaning, flushing, testing, and treating plan and final reports to the CxA. Plan shall include the following:
 - 1. Sequence of testing and testing procedures for each section of pipe to be tested, identified by pipe zone or sector identification marker. Markers shall be keyed to Drawings for each pipe sector, showing the physical location of each designated pipe test section. Drawings keyed to pipe zones or sectors shall be formatted to allow each section of piping to be physically located and identified when referred to in pipe system cleaning, flushing, hydrostatic testing, and chemical treatment plan.

- a. Description of equipment for flushing operations.
 - b. Minimum flushing water velocity.
 - c. Tracking checklist for managing and ensuring that all pipe sections have been cleaned, flushed, hydrostatically tested, and chemically treated.
- D. Refrigeration System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of chillers, cooling towers, refrigerant compressors and condensers, heat pumps, and other refrigeration systems. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested.
- E. HVAC&R Distribution System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of air, steam, and hydronic distribution systems; special exhaust; and other distribution systems, including HVAC&R terminal equipment and unitary equipment.
- F. Vibration and Sound Tests: Provide technicians, instrumentation, tools, and equipment to test performance of vibration isolation and seismic controls.
- G. The work included in the commissioning process involves a complete and thorough evaluation of the operation and performance of all components, systems and sub-systems. The following equipment and systems shall be evaluated:
1. Automatic temperature controls integrated with the electrical systems
 2. Coordination and functionality with the Building Automation System/Building Management Controls
 3. Air Cooled Condensing Units
 4. Air Handling Units
 5. Air Terminal Units
 6. Building Automation System
 7. Chemical Water Treatment
 8. Chilled Water System
 9. Computer Room AC Units
 10. Ductwork
 11. Equipment Vibration & Sound Control
 12. Exhaust Fans

13. Finned Tube Radiation
14. Fire and Smoke Dampers
15. Glycol Make-up System
16. Hot Water System
17. Piping
18. Pumps
19. Terminal Heating and Cooling Units
20. Testing, Adjusting and Balancing
21. Unit Heaters
22. VFDs

3.11 OPERATION AND MAINTENANCE MANUALS

- A. Add design intent documentation furnished by Engineer to manuals prior to submission to Owner.
- B. Submit manuals related to items that were commissioned to Commissioning Authority for review; make changes recommended by Commissioning Authority.
- C. Commissioning Authority will add commissioning records to manuals after submission to Owner.

3.12 DEMONSTRATION AND TRAINING

- A. Demonstrate operation and maintenance of HVAC system to Owner' personnel; if during any demonstration, the system fails to perform in accordance with the information included in the O&M manual, stop demonstration, repair or adjust, and repeat demonstration. Demonstrations may be combined with training sessions if appropriate.
- B. These demonstrations are in addition to, and not a substitute for, Prefunctional Checklists and demonstrations to the Commissioning Authority during Functional Testing.
- C. Provide classroom and hands-on training of Owner's designated personnel on operation and maintenance of the HVAC system, control system, and all equipment items indicated to be commissioned. All training shall be recorded and a copy is to be provided to the commissioning and design team to be included in the final commissioning plan. Unless otherwise stated in the specifications the following is the minimum durations of training.

- D. Provide classroom and hands-on training of Owner's designated personnel on operation and maintenance of the HVAC system, control system, and all equipment items indicated to be commissioned.
- E. TAB Review: Instruct Owner's personnel for minimum 4 hours, after completion of TAB, on the following:
 - 1. Review final TAB report, explaining the layout and meanings of each data type.
 - 2. Discuss any outstanding deficient items in control, ducting or design that may affect the proper delivery of air or water.
 - 3. Identify and discuss any terminal units, duct runs, diffusers, coils, fans and pumps that are close to or are not meeting their design capacity.
 - 4. Discuss any temporary settings and steps to finalize them for any areas that are not finished.
 - 5. Other salient information that may be useful for facility operations, relative to TAB.
- F. Provide the services of manufacturer representatives to assist instructors where necessary.
- G. Provide the services of the HVAC controls instructor at other training sessions, when requested, to discuss the interaction of the controls system as it relates to the equipment being discussed.
- H. Training shall include:
 - 1. Use of the printed installation, operation and maintenance instruction material included in the O&M manuals.
 - 2. A review of the written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and spare parts inventory suggestions. The training shall include start-up, operation in all modes possible, shut-down, seasonal changeover and any emergency procedures.
 - 3. Discussion of relevant health and safety issues and concerns.
 - 4. Discussion of warranties and guarantees.
 - 5. Common troubleshooting problems and solutions.
 - 6. Explanatory information included in the O&M manuals and the location of all plans and manuals in the facility.
 - 7. Discussion of any peculiarities of equipment installation or operation.

8. The format and training agenda in The HVAC Commissioning Process, ASHRAE Guideline 1-2007, is recommended.
 9. Hands-on training shall include start-up, operation in all modes possible, including manual, shut-down and any emergency procedures and preventative maintenance for all pieces of equipment.
 10. The mechanical contractor shall fully explain and demonstrate the operation, function and overrides of any local packaged controls, not controlled by the central control system.
 11. Training shall occur after functional testing is complete, unless approved otherwise by the Using Agency.
- I. Controls. The contractor shall have the following training responsibilities:
1. Provide the CxA and AE with a training plan four weeks before the planned training.
 2. The controls contractor shall provide designated Using Agency personnel training on the control system in this facility. The intent is to clearly and completely instruct the Using Agency on all the capabilities of the control system.
 3. Training manuals. The standard operating manual for the system and any special training manuals will be provided for each trainee, with three extra copies left for the O&M manuals. In addition, copies of the system technical manual will be demonstrated during training and three copies submitted with the O&M manuals. Manuals shall include detailed description of the subject matter for each session. The manuals will cover all control sequences and have a definitions section that fully describes all relevant words used in the manuals and in all software displays. Manuals will be approved by the CxA and AE. Copies of audiovisuals shall be delivered to the Using Agency.
 4. The trainings will be tailored to the needs and skill-level of the trainees.
 5. The trainers will be knowledgeable on the system and its use in buildings. For the on-site sessions, the most qualified trainer(s) will be used. The Using Agency shall approve the instructor prior to scheduling the training.
 6. During any demonstration, should the system fail to perform in accordance with the requirements of the O&M manual or sequence of operations, the system will be repaired or adjusted as necessary and the demonstration repeated.
 7. The controls contractor shall attend sessions other than the controls training, as requested, to discuss the interaction of the controls system as it relates to the equipment being discussed.
 8. There shall be three (3) training sessions:

- a. Training I. Control System. The first training shall consist of 8 hours of actual training. This training may be held on-site or in the supplier's facility. If held off-site, the training may occur prior to final completion of the system installation. Upon completion, each student, using appropriate documentation, should be able to perform elementary operations and describe general hardware architecture and functionality of the system.
- b. Training II. Building Systems. The second session shall be held on-site for a period of 8 hours of actual hands-on training after the completion of system commissioning. The session shall include instruction on:
 - 1) Specific hardware configuration of installed systems in this building and specific instruction for operating the installed system, including HVAC systems, lighting controls and any interface with security and communication systems.
 - 2) Security levels, alarms, system start-up, shut-down, power outage and restart routines, changing set points and alarms and other typical changed parameters, overrides, freeze protection, manual operation of equipment, optional control strategies that can be considered, energy savings strategies and set points that if changed will adversely affect energy consumption, energy accounting, procedures for obtaining vendor assistance, etc.
 - 3) All trending and monitoring features (values, change of state, totalization, etc.), including setting up, executing, downloading, viewing both tabular and graphically and printing trends. Trainees will actually set-up trends in the presence of the trainer.
 - 4) Every screen shall be completely discussed, allowing time for questions.
 - 5) Use of keypad or plug-in laptop computer at the zone level.
 - 6) Use of remote access to the system via phone lines or networks.
 - 7) Setting up and changing an air terminal unit controller.
 - 8) Graphics generation
 - 9) Point database entry and modifications
 - 10) Understanding DDC field panel operating programming (when applicable)
- c. Training III. The third training will be conducted on-site six months after occupancy and consist of 8 hours of training. The session will be structured to address specific topics that trainees need to discuss and to answer questions concerning operation of the system.

- J. The Contractor shall have the following training responsibilities:
1. Shall meet for 4 hours with facility staff after completion of TAB and instruct them on the following:
 - a. Go over the final TAB report, explaining the layout and meanings of each data type.
 - b. Discuss any outstanding deficient items in control, ducting or design that may affect the proper delivery of air or water.
 - c. Identify and discuss any terminal units, duct runs, diffusers, coils, fans and pumps that are close to or are not meeting their design capacity.
 - d. Discuss any temporary settings and steps to finalize them for any areas that are not finished.
 - e. Other salient information that may be useful for facility operations, relative to TAB.

END OF SECTION

SECTION 260800
COMMISSIONING OF ELECTRICAL

PART 1 GENERAL

1.01 SUMMARY

- A. See Section 019113 - General Commissioning Requirements for overall objectives; comply with the requirements of Section 019113.
- B. This section covers the Contractor's responsibilities for commissioning; each subcontractor or installer responsible for the installation of a particular system or equipment item to be commissioned is responsible for the commissioning activities relating to that system or equipment item.
- C. The Commissioning Authority (CA) directs and coordinates all commissioning activities and provides Prefunctional Checklists and Functional Test Procedures for Contractor's use.
- D. The entire Electrical system is to be commissioned, including commissioning activities for the following specific items:
 - 1. Lighting Control Systems
 - 2. Fire alarm system associated with mechanical systems
- E. All documents and the management of the construction process will be done through the use of Procore.
- F. The Prefunctional Checklist and Functional Test requirements specified in this section are in addition to, not a substitute for, inspection or testing specified in other sections.

1.02 RELATED REQUIREMENTS

- A. Section 019113 - General Commissioning Requirements: Commissioning requirements that apply to all types of work.

1.03 REFERENCE STANDARDS

- A. ASHRAE Guideline 1.1 - HVAC&R Technical Requirements for the Commissioning Process; 2007, with Errata (2012).

1.04 SUBMITTALS

- A. Updated Submittals: Keep the Commissioning Authority informed of all changes to control system documentation made during programming and setup; revise and resubmit when substantial changes are made.

- B. Startup Reports, Prefunctional Checklists, and Trend Logs: Submit for approval of Commissioning Authority.
- C. Project Record Documents: See Section 017800 for additional requirements.
 - 1. Submit updated version of control system documentation, for inclusion with operation and maintenance data.
 - 2. Show actual locations of all static and differential pressure sensors (air, water and building pressure) and air-flow stations on project record drawings.
- D. Draft Training Plan: In addition to requirements specified in Section 017900, include:
 - 1. Follow the recommendations of ASHRAE Guideline 1.1.
 - 2. Control system manufacturer's recommended training.
 - 3. Demonstration and instruction on function and overrides of any local packaged controls not controlled by the Electrical system.
- E. Training Manuals: See Section 017900 for additional requirements.
 - 1. Provide three extra copies of the controls training manuals in a separate manual from the O&M manuals.

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required functional performance testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.
- C. Proprietary test equipment and software required by any equipment manufacturer for program-ming and/or start-up, whether specified or not, shall be provided by the manufacturer of the equipment. The Manufacturer shall provide the test equipment, demonstrate its use, and assist in the commissioning process as needed. Proprietary test equipment (and software) shall be-come the property of the Using Agency upon completion of the commissioning process.
- D. Data logging equipment and software required to test equipment will be provided by the CxA, but shall not become the property of the Using Agency.

- E. All testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Specifications. If not otherwise noted, the following minimum requirements apply: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.5F and a resolution of + or - 0.1F. Pressure sensors shall have an accuracy of + or - 2.0% of the value range being measured (not full range of meter) and have been calibrated within the last year.

PART 3 EXECUTION

3.01 GENERAL DOCUMENTATION REQUIREMENTS

- A. With assistance from the installing contractors, the CxA will prepare Pre-Functional Checklists for all commissioned components, equipment, and systems
- B. Red-lined Drawings:
 - 1. The contractor will verify all equipment, systems, instrumentation, wiring and components are shown correctly on red-lined drawings.
 - 2. Preliminary red-lined drawings must be made available to the Commissioning Team for use prior to the start of Functional Performance Testing.
 - 3. Changes, as a result of Functional Testing, must be incorporated into the final as-built drawings, which will be created from the red-lined drawings.
 - 4. The contracted party, as defined in the Contract Documents will create the as-built drawings.
- C. Operation and Maintenance Data:
 - 1. Contractor will provide a copy of O&M literature within 45 days of each submittal acceptance for use during the commissioning process for all commissioned equipment and systems.
 - 2. The CxA will review the O&M literature once for conformance to project requirements.
 - 3. The CxA will receive a copy of the final approved O&M literature once corrections have been made by the Contractor.
- D. Demonstration and Training:
 - 1. Contractor will provide demonstration and training as required by the specifications.
 - 2. A complete training plan and schedule must be submitted by the contractor to the CxA four weeks (4) prior to any training.

3. A training agenda for each training session must be submitted to the CxA one (1) week prior the training session.
4. The CxA shall be notified at least 72 hours in advance of scheduled tests so that testing may be observed by the CxA and Using Agency's representative. A copy of the test record shall be provided to the CxA, Using Agency, and Architect.
5. Engage a Factory-authorized service representative to train Using Agency's maintenance personnel to adjust, operate, and maintain specific equipment.
6. Train Using Agency's maintenance personnel on procedures and schedules for starting and stopping, trouble shooting, servicing, and maintaining equipment.
7. Review data in O&M Manuals.

E. Systems manual requirements:

1. The Systems Manual is intended to be a usable information resource containing all of the information related to the systems, assemblies, and Commissioning Process in one place with indexes and cross references.
2. The CM shall include final approved versions of the following information for the Systems Manual:
 - a. As-Built System Schematics
 - b. Verified Record Drawings
 - c. Test Results (not otherwise included in Cx Record)
 - d. Periodic Maintenance Information for computer maintenance management system
 - e. Recommendations for recalibration frequency of sensors and actuators
 - f. A list of contractors, subcontractors, suppliers, architects, and engineers involved in the project along with their contact information
 - g. Training Records, Information on training provided, attendees list, and any on-going training
3. This information shall be organized and arranged by building system, such as fire alarm, chilled water, heating hot water, etc.
4. Information should be provided in an electronic version to the extent possible. Legible, scanned images are acceptable for non-electronic documentation to facilitate this deliverable.

3.02 CONTRACTOR'S RESPONSIBILITIES

- A. Division 26 Contractors. The commissioning responsibilities applicable to each of the contractors of Division 26 are as follows (all references apply to commissioned equipment only):
- B. Perform commissioning tests at the direction of the CxA.
- C. Attend construction phase controls coordination meetings.
- D. Attend testing, adjusting, and balancing review and coordination meetings.
- E. Participate in Electrical systems, assemblies, equipment, and component maintenance orientation and inspection as directed by the CxA.
- F. Provide information requested by the CxA for final commissioning documentation.
- G. Include requirements for submittal data, operation and maintenance data, and training in each purchase order or sub-contract written.
- H. Prepare preliminary schedule for Electrical system orientations and inspections, operation and maintenance manual submissions, training sessions, equipment start-up, testing and task completion for Using Agency. Distribute preliminary schedule to commissioning team members.
- I. Update schedule as required throughout the construction period.
- J. During the startup and initial checkout process, execute the related portions of the prefunctional checklists for all commissioned equipment.
- K. Assist the CxA in all verification and functional performance tests.
- L. Provide measuring instruments and logging devices to record test data, and provide data acquisition equipment to record data for the complete range of testing for the required test period.
- M. Gather operation and maintenance literature on all equipment, and assemble in binders as required by the specifications. Submit to CxA (45) days after submittal acceptance.
- N. Participate in, and schedule vendors and contractors to participate in the training sessions.
- O. Provide written notification to the CM/GC and CxA Authority that the following work has been completed in accordance with the contract documents, and that the equipment, systems, and sub-system are operating as required.
 - 1. Electrical equipment including all equipment furnished under this Division.

2. Fire stopping in the fire rated construction, including fire and smoke damper installation, caulking, gasketing and sealing of smoke barriers.
 3. Fire detection and smoke detection devices furnished under other divisions of the specification.
- P. The equipment supplier shall document the performance of his equipment.
- Q. Provide a complete set of red-lined drawings to the CxA prior to the start of Functional Performance Testing.
- R. Provide training of the Using Agency's operating staff using expert qualified personnel, as specified.
- S. Equipment Suppliers
1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Using Agency, to keep warranties in force.
 2. Assist in equipment testing per agreements with contractors.
 3. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
- T. Refer to Division 01 Section 019113 "General Commissioning Requirements" for additional contractor responsibilities.

3.03 USING AGENCY RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 "General Commissioning Requirements" for Using Agency's Responsibilities.

3.04 DESIGN PROFESSIONAL'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 "General Commissioning Requirements" for Design Professional's Responsibilities.

3.05 CXA'S RESPONSIBILITIES

- A. Refer to Division 01 Section 019113 "General Commissioning Requirements" for CxA's Responsibilities.

3.06 PREPARATION

- A. Cooperate with the Commissioning Authority in development of the Prefunctional Checklists and Functional Test Procedures.
- B. Furnish additional information requested by the Commissioning Authority.

- C. Prepare a preliminary schedule for Electrical system testing, equipment start-up and testing, adjusting, and completion for use by the Commissioning Authority; update the schedule as appropriate.
- D. Put all Electrical equipment and systems into operation and continue operation during each working day of testing, adjusting, and balancing and commissioning, as required.
- E. Certify in writing to the CxA that Electrical systems, subsystems, and equipment have been installed, calibrated, and started and are operating according to the Contract Documents.
- F. Certify in writing to the CxA that Electrical instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents, and that pretest set points have been recorded.
- G. Place systems, subsystems, and equipment into operating mode to be tested (e.g., normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).
- H. Inspect and verify the position of each device and interlock identified on checklists.
- I. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.
- J. Testing Instrumentation: Install measuring instruments and logging devices to record test data as directed by the CxA.

3.07 INSPECTING AND TESTING - GENERAL

- A. Submit startup plans, startup reports, and Prefunctional Checklists for each item of equipment or other assembly to be commissioned.
- B. Provide technicians, instrumentation, and tools to perform commissioning test at the direction of the CxA.
- C. Test all operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and verify proper response of building automation system controllers and sensors.
- D. Tests will be performed using design conditions whenever possible.
- E. Simulated conditions may need to be imposed using an artificial load when it is not practical to test under design conditions. Before simulating conditions, calibrate testing instruments. Provide equipment to simulate loads. Set simulated conditions as directed by the CxA and document simulated conditions and methods of simulation. After tests, return settings to normal operating conditions.

- F. The CxA may direct that set points be altered when simulating conditions is not practical.
- G. The CxA may direct that sensor values be altered with a signal generator when design or simulating conditions and altering set points are not practical.
- H. If tests cannot be completed because of a deficiency outside the scope of the Electrical system, document the deficiency and report it to the Using Agency. After deficiencies are resolved, reschedule tests.
- I. If the testing plan indicates specific seasonal testing, complete appropriate initial performance tests and documentation and schedule seasonal tests.
- J. Perform the Functional Tests directed by the Commissioning Authority for each item of equipment or other assembly to be commissioned.
- K. Provide two-way radios for use during the testing.
- L. Deficiencies: Correct deficiencies and re-inspect or re-test, as applicable, at no extra cost to Owner.

3.08 ELECTRICAL SYSTEMS, SUBSYSTEMS, AND EQUIPMENT TESTING PROCEDURES

- A. Equipment Testing and Acceptance Procedures: Testing requirements are specified in individual Division 26 sections. Provide submittals, test data, inspector record, infrared camera and certifications to the CA.
- B. Emergency Generator Testing and Acceptance Procedures: Provide technicians, load banks, infrared cameras, instrumentation, tools and equipment to test performance of designated systems and devices at the direction of the CxA. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested.
- C. Fire Detection and Alarm System Testing: Provide technicians, instrumentation, tools and equipment to test performance of designated systems and devices at the direction of the CxA. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested.
- D. Electrical Distribution System Testing: Provide technicians, load banks, infrared cameras, instrumentation, tools and equipment to test performance of designated systems and devices at the direction of the CxA. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested
- E. Vibration and Sound Tests: Provide technicians, instrumentation, tools, and equipment to test performance of vibration isolation and seismic controls.

- F. The work included in the commissioning process involves a complete and thorough evaluation of the operation and performance of all components, systems and sub-systems. The following equipment and systems shall be evaluated:
 - 1. Fire Alarm System affected by HVAC systems, ie. CO detectors, Duct Smoke Detectors and Fan Stop Relays
 - 2. Lighting Controls

3.09 OPERATION AND MAINTENANCE MANUALS

- A. Add design intent documentation furnished by Engineer to manuals prior to submission to Owner.
- B. Submit manuals related to items that were commissioned to Commissioning Authority for review; make changes recommended by Commissioning Authority.
- C. Commissioning Authority will add commissioning records to manuals after submission to Owner.

3.10 DEMONSTRATION AND TRAINING

- A. Demonstrate operation and maintenance of Electrical system to Owner' personnel; if during any demonstration, the system fails to perform in accordance with the information included in the O&M manual, stop demonstration, repair or adjust, and repeat demonstration. Demonstrations may be combined with training sessions if appropriate.
- B. These demonstrations are in addition to, and not a substitute for, Prefunctional Checklists and demonstrations to the Commissioning Authority during Functional Testing.
- C. Provide classroom and hands-on training of Owner's designated personnel on operation and maintenance of the Electrical system, control system, and all equipment items indicated to be commissioned.
- D. Provide classroom and hands-on training of Owner's designated personnel on operation and maintenance of the Electrical system, control system, and all equipment items indicated to be commissioned. All Training is required to be recorded and a copy shall be provided to the commissioning and design team for review and inclusion into the commissioning plan.
- E. Provide the services of manufacturer representatives to assist instructors where necessary.
- F. Training shall include:

1. Use of the printed installation, operation and maintenance instruction material included in the O&M manuals.
2. A review of the written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and spare parts inventory suggestions. The training shall include start-up, operation in all modes possible, shut-down, seasonal changeover and any emergency procedures.
3. Discussion of relevant health and safety issues and concerns.
4. Discussion of warranties and guarantees.
5. Common troubleshooting problems and solutions.
6. Explanatory information included in the O&M manuals and the location of all plans and manuals in the facility.
7. Discussion of any peculiarities of equipment installation or operation.
8. The format and training agenda in The HVAC Commissioning Process, ASHRAE Guideline 1-2007, is recommended.
9. Hands-on training shall include start-up, operation in all modes possible, including manual, shut-down and any emergency procedures and preventative maintenance for all pieces of equipment.
10. The Electrical contractor shall fully explain and demonstrate the operation, function and overrides of any local packaged controls, not controlled by the central control system.
11. Training shall occur after functional testing is complete, unless approved otherwise by the Using Agency.

END OF SECTION