

PROJECT MANUAL

FOR

PENINSULA HOUSING AUTHORITY

EKLUND at GALES

Permit Set – Volume I of II

July 10, 2026



Prepared for:
Peninsula Housing Authority
727 E 8th St
Port Angeles, WA 8362

Prepared By:
Rice Fergus Miller, Inc.
275 5th Street, Ste. 100
Bremerton, WA 98337



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SECTION 000101
PROJECT TITLE PAGE

PROJECT MANUAL

FOR

EKLUND AT GALES

PORT ANGELES, WASHINGTON

PENINSULA HOUSING AUTHORITY

CONSTRUCTION DOCUMENT PHASE

PORT ANGELES, WASHINGTON98362

DATE: JULY 1, 2026

PREPARED BY:

RICE FERGUS MILLER

ARCHITECT'S PROJECT NUMBER: 2023093.02.

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SECTION 000103
PROJECT DIRECTORY

PART 1 GENERAL

1.01 OWNER

- A. PENINSULA HOUSING AUTHORITY, 727 E 8th ST, PORT ANGELES, WA 98362
 - 1. CONTACT: SARAH MARTINEZ, 360.452.7631 EXT 101, smartinez@peninsulapha.org
 - 2. PROJECT LOCATION: 2372 E 7th Ave, PORT ANGLES, WA 98362.

1.02 ARCHITECT

- A. RICE FERGUS MILLER, 275 5TH ST, SUITE 100, BREMERTON, WA 98337
 - 1. ARCHITECT OF RECORD: DEAN KELLY, 512.632.0185, DKelly@rfmarch.com
 - 2. PROJECT MANAGER: LORIE LIMSON COOK, 253.988.3702, LLimsonCook@rfmarch.com

1.03 CIVIL ENGINEER

- A. COUGHLIN PORTER LUNDEEN, 801 SECOND AVE, STE 900, SEATTLE, WA 98104
 - 1. BART BALKO, 206.399.6857, BartB@cplinc.com

1.04 LANDSCAPE ARCHITECT

- A. LYON LANDSCAPE ARCHITECTS, 2111 S C ST, TACOMA, WA 98402
 - 1. MOGHAN LYON, 253.209.4053, moghan@lyonla.com

1.05 STRUCTURAL ENGINEER

- A. ATLAS DESIGN GROUP, 35314 SE CENTER ST, SNOQUALMIE, WA 98065
 - 1. CHRIS PADIN, 425.400.9239, CHRIS.PADIN@ADG-INC.COM

1.06 MECHANICAL, PLUMBING, AND ELECTRICAL ENGINEER

- A. IMEG, 1725 WESTLAKE AVE N, STE 300, SEATTLE, WA 98109
 - 1. PROJECT MANAGER: STEVEN HUFF, 206.788-4579. Steven.D.Huff@imegcorp.com

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ADVERTISEMENT TO BID

FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

- A. Peninsula Housing Authority
- B. 727 E 8th Street
- C. Port Angeles, WA 98362
- D. Sarah Martinez, Executive Director
- E. 360-452-7631 ext. 101 or smartinez@peninsulapha.org
- F. Annie O'Rourke, Development Director
- G. 360-452-7631 ext. 301 or arourke@peninsulapha.org

1.02 PROJECT:

- A. Name: Eklund at Gales
- B. Type: New Construction
- C. Location: Corner of Gales Street and E 7th Avenue.
- D. Address: 2372 E 7th Avenue, Port Angeles, WA 98362.

1.03 RELEASE DATE: August 3, 2026

1.04 TO: POTENTIAL BIDDERS

- A. Peninsula Housing Authority will accept sealed bids from Qualified General Contractors for the construction of a 24-unit apartment building and associated site improvements known as Eklund at Gales. The construction value of the project is estimated to be approximately \$7,482,567 excluding sales tax. The Peninsula Housing Authority is a non-taxable entity.
- B. Sealed bids will be accepted at the 727 E 8th Street office of the Peninsula Housing Authority until **2:00pm, August 31, 2026** at which time they will be opened and read aloud. Sealed bids must be submitted on the forms provided. **Bids received after the day and hour stated above will not be accepted.**

1.05 AVAILABILITY OF BIDDING DOCUMENTS:

- A. Bid documents for the project will be available after 5 pm on Monday August 3, 2026.
- B. Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to www.bxwa.com and clicking on "Posted Projects", "Public Works", and "Peninsula Housing Authority", and "Projects Bidding". This online plan room provides Bidders with fully usable online documents with the ability to: download, view, print, order full/partial plan sets from numerous reprographic sources, and a free online digitizer/take-off tool. It is recommended that Bidders "Register" to receive automatic e-mail notification of future addenda and to place themselves on the "Self-Registered Bidders List". Bidders that do not register will not be automatically notified of addenda and will need to periodically check the on-line plan room for addenda issued on this project. Contact Builders Exchange of Washington at (425) 258-1303 should you require assistance with access or registration. The content available through bxwa.com is protected by copyright and other intellectual property laws. Access to project documents is intended for use by bidders (general contractors/prime bidders, subcontractors and suppliers), agency personnel and agency's consultants, as well as for personal, noncommercial, use by the public. You may display or print the content available for these uses only. "Harvesting" (downloading, copying, and transmitting) of any project information and/or project documents for purposes of reselling and/or redistributing information by any other party is not allowed.

1.06 PROJECT ARCHITECT:

- A. Architect: Rice Fergus Miller
- B. Project Manager: Scott Waggoner
- C. Address: 275 5th St, Suite 100, Bremerton, WA 98337
- D. Phone: 360-362-0944

1.07 SPECIAL CONSIDERATIONS

- A. There will be a pre-bid briefing followed by a site walk at 1:00 pm on Wednesday August 12, 2026 at the offices of the Owner. All interested General Contractors are strongly encouraged to notify the Project Owner, via email of their intent to bid the project by 5 pm Friday August 14, 2026.
- B. All questions must be submitted, via email, to the Project Owner by 5 PM on Monday, August 17, 2026.
- C. Addendum in response to General Contractor questions will be issued by 5 PM Friday August 21, 2026.
- D. Bidders may also view bid documents including addendums at the offices of Peninsula Housing Authority, 727 E 8th Street, Port Angeles, WA 98362 by appointment.

1.08 FUNDING SOURCE

- A. The project is funded primarily by the Washington State Department of Commerce, Housing Trust Fund and Clallam County Affordable Housing Sales and Use Tax Fund. The funding sources require the project pay Washington State Prevailing wage rates.
<https://secure.lni.wa.gov/wagelookup/rates/journey-level-rates>

1.09 BID BOND

- A. A Bid Deposit is required for this Bid Submittal: All bid proposals must be on the form provided and must be accompanied by a bid proposal deposit in cash, certified check, cashier's check or surety bond in an amount equal to five percent (5%) of the amount of the bid proposal. Should the successful bidder fail to enter into such contract and furnish satisfactory performance bond within the time stated in the specifications, the bid proposal deposit shall be forfeited.

1.10 CONSTRUCTION SCHEDULE:

- A. A Notice of Award expected by September 4, 2026 and Substantial Completion no later than December 1, 2027.

1.11 APPRENTICESHIP

- A. 15% apprentice labor hours of the total hours are a requirement of the Construction Contract subject to a verified Good Faith Effort and the completion of Apprenticeship Utilization documentation. Apprentice hours apply to construction hours on site, not in factory. Bidders may contact the Department of Labor and Industries, Apprenticeship section, to obtain information on available apprenticeship programs.

END OF SECTION

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 SEE HUD 5369 INSTRUCTIONS TO BIDDERS, AS MODIFIED; AND HUD 5369A REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF BIDDERS, AS MODIFIED, FOLLOWING THIS DOCUMENT. THIS PROJECT IS NOT FEDERALLY FUNDED. IN THE EVENT OF CONFLICT BETWEEN THE INSTRUCTIONS TO BIDDERS SET FORTH BELOW AND THE INSTRUCTIONS TO BIDDERS IN HUD 5369, THIS DOCUMENT SHALL PREVAIL.

1.02 RELATED DOCUMENTS

- A. Section 00 11 13 - Advertisement for Bids.
- B. Section 00 31 00 - Available Project Information.
- C. Section 00 41 00 - Bid Form.
- D. Section 00 43 01 - Bid Form Supplements Cover Sheet.
- E. Section 00 45 19 - Non-Collusion Affidavit.
- F. Section 00 45 50 - Bidder Responsibility Criteria.
- G. Section 00 72 00 - General Conditions.
- H. Section 00 73 43 - Wage Rate Requirements.

INVITATION

2.01 BID SUBMISSION

- A. Bids signed and under seal, executed, and dated will be received at the office of the Owner at 727 E 8th Street, WA 98362 before 2:00 p.m. local standard time on August 31, 2026.
- B. Offers submitted after the above time shall be returned to the bidder unopened.
- C. Submit required Supplements To Bid Forms identified in Section 00 22 00 within 48 hours after closing time for receiving bids.
- D. Offers will be opened publicly immediately after the time for receipt of bids.

2.02 INTENT

- A. The intent of this Bid request is to obtain an offer to perform the work described in this project manual and construction documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

- A. Work of this proposed Contract comprises the new construction of infrastructure, utilities and buildings and all related work unless noted otherwise.
- B. Location: SW corner of Gales Street and E 7th Avenue.
- C. Address: 2372 E 7th Street Port Angeles

2.04 CONTRACT TIME

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

2.05 APPRENTICE UTILIZATION

- A. 15% apprentice labor hours of the total hours are a requirement of the Construction Contract subject to a verified Good Faith Effort and the completion of Department of Commerce Apprenticeship Utilization documentation. Apprentice hours apply to construction hours on site, not in factory. Bidders may contact the Department of Labor and Industries, Apprenticeship section, to obtain information on available apprenticeship programs.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 DEFINITIONS

- A. **Bid Documents:** Contract Documents supplemented with Invitation To Bid, Instructions to Bidders, Information Available to Bidders, Bid Form Supplements To Bid Forms and

Appendices identified.

- B. **Bid, Offer, or Bidding:** Act of submitting an offer under seal.
- C. **Bid Amount:** Monetary sum identified by the Bidder in the Bid Form.

3.02 PROCUREMENT OF DOCUMENTS

- A. Availability of Documents: Complete sets of procurement documents may be obtained:
 - 1. From Builder's Exchange of Washington: www.bxwa.com
 - a. Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to www.bxwa.com and clicking on "Posted Projects", "Public Works", and "Peninsula Housing Authority", and "Projects Bidding". This online plan room provides Bidders with fully usable online documents with the ability to: download, view, print, order full/partial plan sets from numerous reprographic sources, and a free online digitizer/take-off tool. It is recommended that Bidders "Register" to receive automatic e-mail notification of future addenda and to place themselves on the "Self-Registered Bidders List". Bidders that do not register will not be automatically notified of addenda and will need to periodically check the on-line plan room for addenda issued on this project. Contact Builders Exchange of Washington at (425) 258-1303 should you require assistance with access or registration. The content available through bxwa.com is protected by copyright and other intellectual property laws. Access to project documents is intended for use by bidders (general contractors/prime bidders, subcontractors and suppliers), agency personnel and agency's consultants, as well as for personal, noncommercial, use by the public. You may display or print the content available for these uses only. "Harvesting" (downloading, copying, and transmitting) of any project information and/or project documents for purposes of reselling and/or redistributing information by any other party is not allowed.
 - 2. Bidders may also view bid documents including addenda at the offices of Peninsula Housing Authority, 727 E 8th St., Port Angeles, WA. No copies of the documents will be sold or reproduced by the Housing Authority.
 - 3. Bidders may also view and download bid documents including addenda on the Peninsula Housing Authority's website at www.peninsulapha.org/employment-rfp-rfq/.

3.03 CONTRACT DOCUMENTS IDENTIFICATION

- A. The Contract Documents are identified as Project Number 2026-PHA-015 as prepared by RFM Architects and with contents as identified in the Table of Contents.

3.04 AVAILABILITY

- A. Bid Documents are made available only for the purpose of obtaining bids for this project. Their use does not grant a license for other purposes.

3.05 EXAMINATION

- A. Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to www.bxwa.com and clicking on "Posted Projects", "Public Works", and "Peninsula Housing Authority".
- B. Bidders may also view bid documents including addenda at the offices of Peninsula Housing Authority, 727 E 8th St., Port Angeles, WA. No copies of the documents will be sold or reproduced by the Housing Authority.
- C. Bid documents will be available on the Owner's website www.peninsulapha.org/employment-rfp-rfq/ under the ITB tab.
- D. Upon receipt of Bid Documents, verify that documents are complete. Notify Architect should the documents be incomplete.
- E. Immediately notify Owner upon finding discrepancies or omissions in the Bid Documents.

3.06 INQUIRIES/ADDENDA

- A. Direct questions to Annie O'Rourke, Development Director at the Peninsula Housing Authority, email aorourke@peninsulapha.org. Note in the subject line: "Eklund at Gales". All questions will be answered in writing as Addenda for all Bidders. Verbal answers will not be

provided.

- B. Addenda may be issued throughout the bidding period. All Addenda become part of the Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.
- D. Clarifications requested by bidders must be submitted via email by 5 pm on August 17, 2026. The reply will be in the form of an Addendum, issued by 5 pm on August 21, 2026, a copy of which will be forwarded to known bidders and uploaded to Builders Exchange of Washington, Inc. at <http://www.bxwa.com>.

3.07 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. Where the Bid Documents stipulate a particular product, substitutions will be considered.
- B. When a request to substitute a product is made, Architect may approve the substitution and will issue an Addendum to known bidders.
- C. The submission shall provide sufficient information to determine that it is equal or better in quality than specified products.
- D. Provide complete information about required revisions to other work to accommodate each proposed substitution.
- E. Provide products as specified unless substitutions are submitted in this manner and accepted.
- F. Refer to 01 60 00 for substitution procedures.

SITE ASSESSMENT

4.01 SITE EXAMINATION

- A. A visit to the project site has been arranged for bidders on August 12, 2026 immediately following the pre-bid conference.

4.02 PREBID CONFERENCE

- A. A pre-bid conference has been scheduled for 1:00 p.m. on August 12, 2026 at the Peninsula Housing Authority located at 727 E 8th Street, Port Angeles, WA 98362.
- B. All general contractor bidders and suppliers are invited.
- C. Architect, Owner and Owner's Representative will be in attendance.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS -SEE SECTION 00 22 00 SUPPLEMENTAL INSTRUCTIONS

5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS

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

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Submit one copy of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name and Owner's name on the outside to Peninsula Housing Authority 727 E 8th Street Port Angeles, WA 98362.
- C. Double Envelope: Insert the closed and sealed Bid Form envelope plus requested bid bond, qualification forms in a large opaque envelope and label this envelope as noted above.

6.02 BID INELIGIBILITY

- A. Bid Forms, Appendices, and enclosures that are improperly prepared may, at the discretion of Owner, be declared unacceptable.

BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

- A. Bids shall be accompanied by a security deposit as follows:
 - 1. Bid Bond of a sum no less than 5 percent per Section 00 43 53.
 - 2. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
 - 3. The Bid Bond will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the selected bidder.
 - 4. Include the cost of Bid Bond in the Bid Amount.
 - 5. If no contract is awarded, all security deposits will be returned.

7.02 CONSENT OF SURETY

- A. Submit with the Bid Bond.

7.03 PERFORMANCE ASSURANCE

- A. Include the cost of performance assurance bonds in the Bid Amount and identify the cost on the Bid Form.

7.04 INSURANCE

- A. Refer to Section 00 62 16 - Evidence of Insurance.
- B. Provide an executed endorsement on a standard Endorsement Form provided by the insurance company stating their intention to provide insurance to the bidder in accordance with the insurance requirements of the Contract Documents.

7.05 BID FORM REQUIREMENTS

- A. Complete all requested information in the Bid Form and Appendices.

7.06 SALES AND USE TAXES

- A. The Peninsula Housing Authority is **not** subject to sales tax.

7.07 FEES FOR CHANGES IN THE WORK

- A. Include in the Bid Form, the overhead and profit fees on own Work and Work by subcontractors, applicable for Changes in the Work, whether additions to or deductions from the Work on which the Bid Amount is based.

7.08 BID FORM SIGNATURE

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

7.09 ADDITIONAL BID INFORMATION

- A. See Section 00 22 00 for supplemental documents and information required throughout the bidding and award process. Additional information will be required at the following times:
 - 1. At the time of bid submission.
 - 2. 48 hours after bid submission.
 - 3. Within a week of Notice of Award
 - 4. Following the award of Contract and prior to the start of Work.

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of ninety (90) days after the bid closing date.

8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. After acceptance by Owner, Owner will issue to the successful bidder, a written Bid Acceptance.

END OF INSTRUCTIONS TO BIDDERS

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**U.S. Department of Housing and
Urban Development**
Office of Public and Indian Housing

**Instructions to Bidders for Contracts
Public and Indian Housing Programs**

Instructions to Bidders for Contracts

Public and Indian Housing Programs

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1. Bid Preparation and Submission

(a) Bidders are expected to examine the specifications, drawings, all instructions, and, if applicable, the construction site (~~see also the contract clause entitled Site Investigation and Conditions Affecting the Work of the General Conditions of the Contract for Construction~~). Failure to do so will be at the bidders' risk.

(b) ~~All bids must be submitted on the forms provided by the Public Housing Agency/Indian Housing Authority (PHA/IHA).~~ Bidders shall furnish all the information required by the solicitation. Bids must be signed and the bidder's name typed or printed on the bid sheet and each continuation sheet which requires the entry of information by the bidder. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority. (Bidders should retain a copy of their bid for their records.)

(c) Bidders must submit as part of their bid a completed form HUD-5369-A, "Representations, Certifications, and Other Statements of Bidders."

(d) All bid documents shall be sealed in an envelope which shall be clearly marked with the words "Bid Documents," the Invitation for Bids (IFB) number, any project or other identifying number, the bidder's name, and the date and time for receipt of bids.

(e) If this solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "No Bid" in the space provided for any item on which no price is submitted.

(f) Unless expressly authorized elsewhere in this solicitation, alternate bids will not be considered.

(g) Unless expressly authorized elsewhere in this solicitation, bids submitted by telegraph or facsimile (fax) machines will not be considered.

(h) ~~If the proposed contract is for a Mutual Help project (as described in 24 CFR Part 905, Subpart E) that involves Mutual Help contributions of work, material, or equipment, supplemental information regarding the bid advertisement is provided as an attachment to this solicitation.~~

2. Explanations and Interpretations to Prospective Bidders

(a) Any prospective bidder desiring an explanation or interpretation of the solicitation, specifications, drawings, etc., must request it at least 7 days before the scheduled time for bid opening. Requests may be oral or written. Oral requests must be confirmed in writing. The only oral clarifications that will be provided will be those clearly related to solicitation procedures, i.e., not substantive technical information. No other oral explanation or interpretation will be provided. Any information given a prospective bidder concerning this solicitation will be furnished promptly to all other prospective bidders as a written amendment to the solicitation, if that information is necessary in submitting bids, or if the lack of it would be prejudicial to other prospective bidders.

(b) Any information obtained by, or provided to, a bidder other than by formal amendment to the solicitation shall not constitute a change to the solicitation.

3. Amendments to Invitations for Bids

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date on the bid form, or (3) by letter, telegram, or facsimile, if those methods are authorized in the solicitation. The PHA/IHA must receive acknowledgement by the time and at the place specified for receipt of bids. Bids which fail to acknowledge the bidder's receipt of any amendment will result in the rejection of the bid if the amendment(s) contained information which substantively changed the PHA's/IHA's requirements.

(c) Amendments will be on file in the offices of the PHA/IHA and the Architect at least 7 days before bid opening.

4. Responsibility of Prospective Contractor

(a) The PHA/IHA will award contracts only to responsible prospective contractors who have the ability to perform successfully under the terms and conditions of the proposed contract. In determining the responsibility of a bidder, the PHA/IHA will consider such matters as the bidder's:

- (1) Integrity;
- (2) Compliance with public policy;
- (3) Record of past performance; and
- (4) Financial and technical resources (including construction and technical equipment).

(b) Before a bid is considered for award, the bidder may be requested by the PHA/IHA to submit a statement or other documentation regarding any of the items in paragraph (a) above. Failure by the bidder to provide such additional information shall render the bidder nonresponsible and ineligible for award.

5. Late Submissions, Modifications, and Withdrawal of Bids

(a) Any bid received at the place designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) Was sent by mail, or if authorized by the solicitation, was sent by telegram or via facsimile, and it is determined by the PHA/IHA that the late receipt was due solely to mishandling by the PHA/IHA after receipt at the PHA/IHA; or

(3) Was sent by U.S. Postal Service Express Mail Next Day Service - Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of proposals. The term "working days" excludes weekends and observed holidays.

(b) Any modification or withdrawal of a bid is subject to the same conditions as in paragraph (a) of this provision.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the bid, modification, or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the PHA/IHA is the time/date stamp of PHA/IHA on the proposal wrapper or other documentary evidence of receipt maintained by the PHA/IHA.

(e) The only acceptable evidence to establish the date of mailing of a late bid, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph (c) of this provision, excluding postmarks of the Canadian Postal Service. Therefore, bidders should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and Failure by a bidder to acknowledge receipt of the envelope or wrapper.

(f) Notwithstanding paragraph (a) of this provision, a late modification of an otherwise successful bid that makes its terms more favorable to the PHA/IHA will be considered at any time it is received and may be accepted.

(g) Bids may be withdrawn by written notice, or if authorized by this solicitation, by telegram (including mailgram) or facsimile machine transmission received at any time before the exact time set for opening of bids; provided that written confirmation of telegraphic or facsimile withdrawals over the signature of the bidder is mailed and postmarked prior to the specified bid opening time. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

6. Bid Opening

All bids received by the date and time of receipt specified in the solicitation will be publicly opened and read. The time and place of opening will be as specified in the solicitation. Bidders and other interested persons may be present.

7. Service of Protest

(a) Definitions. As used in this provision:

"Interested party" means an actual or prospective bidder whose direct economic interest would be affected by the award of the contract.

"Protest" means a written objection by an interested party to this solicitation or to a proposed or actual award of a contract pursuant to this solicitation.

(b) Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgement from —

Annie O'Rourke
Director of Acquisition & Development
Peninsula Housing Authority
727 E 8th Street
Port Angeles, WA 98362

[Contracting Officer designate the official or location where a protest may be served on the Contracting Officer]

(c) All protests shall be resolved in accordance with the PHA's/IHA's protest policy and procedures, copies of which are maintained at the PHA/IHA.

8. Contract Award

(a) The PHA/IHA will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the PHA/IHA considering only price and any price-related factors specified in the solicitation.

(b) If the apparent low bid received in response to this solicitation exceeds the PHA's/IHA's available funding for the proposed contract work, the PHA/IHA may either accept separately priced items (see 8(e) below) or use the following procedure to determine contract award. The PHA/IHA shall apply in turn to each bid (proceeding in order from the apparent low bid to the high bid) each of the separately priced bid deductible items, if any, in their priority order set forth in this solicitation. If upon the application of the first deductible item to all initial bids, a new low bid is within the PHA's/IHA's available funding, then award shall be made to that bidder. If no bid is within the available funding amount, then the PHA/IHA shall apply the second deductible item. The PHA/IHA shall continue this process until an evaluated low bid, if any, is within the PHA's/IHA's available funding. If upon the application of all deductibles, no bid is within the PHA's/IHA's available funding, or if the solicitation does not request separately priced deductibles, the PHA/IHA shall follow its written policy and procedures in making any award under this solicitation.

(c) In the case of tie low bids, award shall be made in accordance with the PHA's/IHA's written policy and procedures.

(d) The PHA/IHA may reject any and all bids, accept other than the lowest bid (e.g., the apparent low bid is unreasonably low), and waive informalities or minor irregularities in bids received, in accordance with the PHA's/IHA's written policy and procedures.

(e) Unless precluded elsewhere in the solicitation, the PHA/IHA may accept any item or combination of items bid.

(f) The PHA/IHA may reject any bid as nonresponsive if it is materially unbalanced as to the prices for the various items of work to be performed. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(g) A written award shall be furnished to the successful bidder within the period for acceptance specified in the bid and shall result in a binding contract without further action by either party.

9. Bid Guarantee (applicable to construction and equipment contracts exceeding \$25,000)

All bids must be accompanied by a negotiable bid guarantee which shall not be less than five percent (5%) of the amount of the bid. The bid guarantee may be a certified check, bank draft, U.S. Government Bonds at par value, or a bid bond secured by a surety company acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. In the case where the work under the contract will be performed on an Indian reservation area, the bid guarantee may also be an irrevocable Letter of Credit (see provision 10, Assurance of Completion, below). Certified checks and bank drafts must be made payable to the order of the PHA/IHA. The bid guarantee shall insure the execution of the contract and the furnishing of a method of assurance of completion by the successful bidder as required by the solicitation. Failure to submit a bid guarantee with the bid shall result in the rejection of the bid. Bid guarantees submitted by unsuccessful bidders will be returned as soon as practicable after bid opening.

10. Assurance of Completion

(a) Unless otherwise provided in State law, the successful bidder shall furnish an assurance of completion prior to the execution of any contract under this solicitation. This assurance may be [Contracting Officer check applicable items] —

☒ (1) a performance and payment bond in a penal sum of 100 percent of the contract price; or, as may be required or permitted by State law;

☐ (2) separate performance and payment bonds, each for 50 percent or more of the contract price;

☐ (3) a 20 percent cash escrow;

☐ (4) a 25 percent irrevocable letter of credit; or,

☐ (5) an irrevocable letter of credit for 10 percent of the total contract price with a monitoring and disbursements agreement with the IHA (applicable only to contracts awarded by an IHA under the Indian Housing Program).

~~(b) Bonds must be obtained from guarantee or surety companies acceptable to the U.S. Government and authorized to do business in the state where the work is to be performed. Individual sureties will not be considered. U.S. Treasury Circular Number 570, published annually in the Federal Register, lists companies approved to act as sureties on bonds securing Government contracts, the maximum underwriting limits on each contract bonded, and the States in which the company is licensed to do business. Use of companies listed in this circular is mandatory. Copies of the circular may be downloaded on the U.S. Department of Treasury website <http://www.fms.treas.gov/c570/index.html>, or ordered for a minimum fee by contacting the Government Printing Office at (202) 512-2168.~~

~~(c) Each bond shall clearly state the rate of premium and the total amount of premium charged. The current power of attorney for the person who signs for the surety company must be attached to the bond. The effective date of the power of attorney shall not precede the date of the bond. The effective date of the bond shall be on or after the execution date of the contract.~~

~~(d) Failure by the successful bidder to obtain the required assurance of completion within the time specified, or within such extended period as the PHA/IHA may grant based upon reasons determined adequate by the PHA/IHA, shall render the bidder ineligible for award. The PHA/IHA may then either award the contract to the next lowest responsible bidder or solicit new bids. The PHA/IHA may retain the ineligible bidder's bid guarantee.~~

11. Preconstruction Conference (applicable to construction contracts)

After award of a contract under this solicitation and prior to the start of work, the successful bidder will be required to attend a preconstruction conference with representatives of the PHA/IHA and its architect/engineer, and other interested parties convened by the PHA/IHA. The conference will serve to acquaint the participants with the general plan of the construction operation and all other requirements of the contract ~~(e.g., Equal Employment Opportunity, Labor Standards)~~. The PHA/IHA will provide the successful bidder with the date, time, and place of the conference.

12. Indian Preference Requirements (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

~~(a) HUD has determined that the contract awarded under this solicitation is subject to the requirements of section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)). Section 7(b) requires that any contract or subcontract entered into for the benefit of Indians shall require that, to the greatest extent feasible~~

~~(1) Preferences and opportunities for training and employment (other than core crew positions; see paragraph (h) below) in connection with the administration of such contracts or subcontracts be given to qualified "Indians." The Act defines "Indians" to mean persons who are members of an Indian tribe and defines "Indian tribe" to mean any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; and,~~

~~(2) Preference in the award of contracts or subcontracts in connection with the administration of contracts be given to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452). That Act defines "economic enterprise" to mean any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, except that the Indian ownership must constitute not less than 51 percent of the enterprise; "Indian organization" to mean the governing body of any Indian tribe or entity established or recognized by such governing body; "Indian" to mean any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act; and Indian "tribe" to mean any Indian tribe, band, group, pueblo, or community including Native villages and Native groups (including~~

~~corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.~~

~~(b) (1) The successful Contractor under this solicitation shall comply with the requirements of this provision in awarding all subcontracts under the contract and in providing training and employment opportunities.~~

~~(2) A finding by the IHA that the contractor, either (i) awarded a subcontract without using the procedure required by the IHA, (ii) falsely represented that subcontracts would be awarded to Indian enterprises or organizations; or, (iii) failed to comply with the contractor's employment and training preference bid statement shall be grounds for termination of the contract or for the assessment of penalties or other remedies.~~

~~(c) If specified elsewhere in this solicitation, the IHA may restrict the solicitation to qualified Indian-owned enterprises and Indian organizations. If two or more (or a greater number as specified elsewhere in the solicitation) qualified Indian-owned enterprises or organizations submit responsive bids, award shall be made to the qualified enterprise or organization with the lowest responsive bid. If fewer than the minimum required number of qualified Indian-owned enterprises or organizations submit responsive bids, the IHA shall reject all bids and readvertise the solicitation in accordance with paragraph (d) below.~~

~~(d) If the IHA prefers not to restrict the solicitation as described in paragraph (c) above, or if after having restricted a solicitation an insufficient number of qualified Indian enterprises or organizations submit bids, the IHA may advertise for bids from non-Indian as well as Indian-owned enterprises and Indian organizations. Award shall be made to the qualified Indian enterprise or organization with the lowest responsive bid if that bid is—~~

~~(1) Within the maximum HUD approved budget amount established for the specific project or activity for which bids are being solicited; and~~

~~(2) No more than the percentage specified in 24 CFR 905.175(c) higher than the total bid price of the lowest responsive bid from any qualified bidder. If no responsive bid by a qualified Indian-owned economic enterprise or organization is within the stated range of the total bid price of the lowest responsive bid from any qualified enterprise, award shall be made to the bidder with the lowest bid.~~

~~(e) Bidders seeking to qualify for preference in contracting or subcontracting shall submit proof of Indian ownership with their bids. Proof of Indian ownership shall include but not be limited to:~~

~~(1) Certification by a tribe or other evidence that the bidder is an Indian. The IHA shall accept the certification of a tribe that an individual is a member.~~

~~(2) Evidence such as stock ownership, structure, management, control, financing and salary or profit sharing arrangements of the enterprise.~~

~~(f) (1) All bidders must submit with their bids a statement describing how they will provide Indian preference in the award of subcontracts. The specific requirements of that statement and the factors to be used by the IHA in determining the statement's adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement shall be rejected as nonresponsive. The IHA may require that comparable statements be provided by subcontractors to the successful Contractor, and may require the Contractor to reject any bid or proposal by a subcontractor that fails to include the statement.~~

~~(2) Bidders and prospective subcontractors shall submit a certification (supported by credible evidence) to the IHA in any instance where the bidder or subcontractor believes it is infeasible to provide Indian preference in subcontracting. The acceptance or rejection by the IHA of the certification shall be final. Rejection shall disqualify the bid from further consideration.~~

~~(g) All bidders must submit with their bids a statement detailing their employment and training opportunities and their plans to provide preference to Indians in implementing the contract; and the number or percentage of Indians anticipated to be employed and trained. Comparable statements from all proposed subcontractors must be submitted. The criteria to be used by the IHA in determining the statement(s)'s adequacy are included as an attachment to this solicitation. Any bid that fails to include the required statement(s), or that includes a statement that does not meet minimum standards required by the IHA shall be rejected as nonresponsive.~~

~~(h) Core crew employees. A core crew employee is an individual who is a bona fide employee of the contractor at the time the bid is submitted; or an individual who was not employed by the bidder at the time the bid was submitted, but who is regularly employed by the bidder in a supervisory or other key skilled position when work is available. Bidders shall submit with their bids a list of all core crew employees.~~

~~(i) Preference in contracting, subcontracting, employment, and training shall apply not only on-site, on the reservation, or within the IHA's jurisdiction, but also to contracts with firms that operate outside these areas (e.g., employment in modular or manufactured housing construction facilities).~~

~~(j) Bidders should contact the IHA to determine if any additional local preference requirements are applicable to this solicitation.~~

~~(k) The IHA [] does [] does not [Contracting Officer check applicable box] maintain lists of Indian-owned economic enterprises and Indian organizations by specialty (e.g., plumbing, electrical, foundations), which are available to bidders to assist them in meeting their responsibility to provide preference in connection with the administration of contracts and subcontracts.~~

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SECTION 00 22 00
SUPPLEMENTARY INSTRUCTIONS

PART 1 - GENERAL

1.01 REQUIRED INFORMATION

- A. Submit the following documents and information **concurrent** with bid submission:
 - 1. Bid Form
 - 2. Form of Bid Bond - see attached Form AIA A310 as reference.
 - 3. Completed HUD 5369-A - Section 00 45 46
 - 4. Form of Non-Collusion Affidavit - Section 00 45 19.
 - 5. Proposed Subcontractor List - Form A
 - 6. Bonding Capacity – A letter from proposed surety stating capacity to meet bonding requirements of contract.
- B. Submit the following documents and information **48 hours after** bid submission:
 - 1. Proof of Insurance
 - 2. Business Identifiers (EIN, UBI, UEI #, WA State Contractor License #)
 - 3. Bidder Responsibility Criteria Documentation– Mandatory and Supplemental
 - 4. Proposed Subcontractor List - Form B
- C. Submit the following documents and information within a calendar week of notice of award
 - 1. Construction agreement form per Section 00 52 00 Agreement Form.
 - 2. Statement of Values.
 - 3. Construction Schedule.
 - 4. A current W-9.
- D. Submit the following documents and information after award of Contract and before Work begins:
 - 1. Statement of Intent to pay prevailing wages.
 - 2. Performance and Payment Bond.

END OF SECTION

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SECTION 00 31 00
AVAILABLE PROJECT INFORMATION

PART1 GENERAL

1.01 EXISTING CONDITIONS

- A. Site and Utility Survey: Entitled As-Built, dated 04/28/2023.
 - 1. This As-Built identifies grade elevations prepared primarily for the use of the Civil Engineer in establishing grades and identifying recently installed utilities.
- B. Geotechnical Report: Entitled Soils Investigation, Eklund at Gales Project, dated June 9, 2026.
 - 1. The recommendations described shall not be construed as a requirement of this Contract, unless specifically referenced in the Contract Documents.
 - 2. This report, by its nature, cannot reveal all conditions that exist on the site. Should subsurface conditions be found to vary substantially from this report, changes in the design and construction of foundations will be made, with resulting credits or expenditures to the Contract Price accruing to Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PERMITS

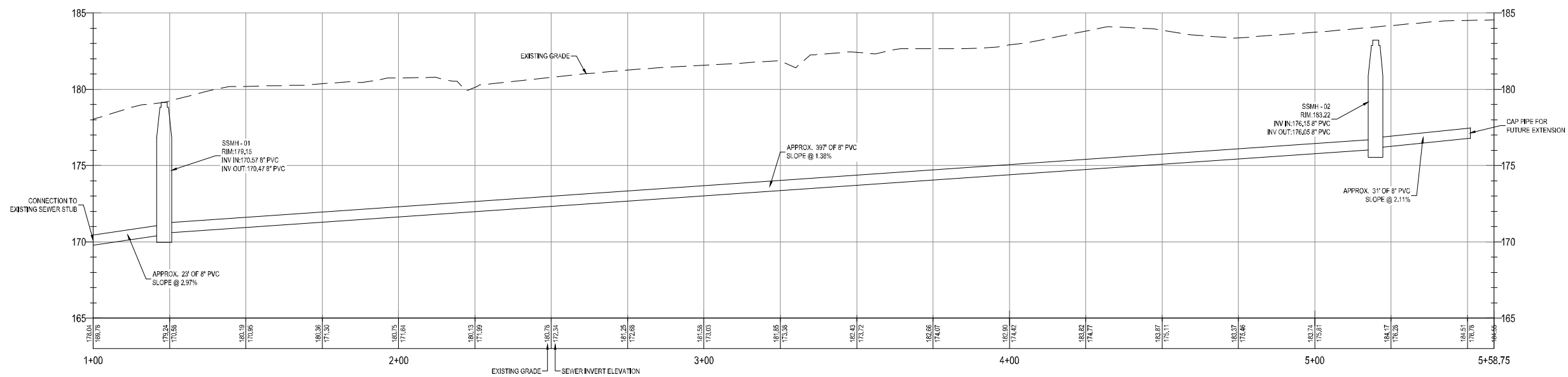
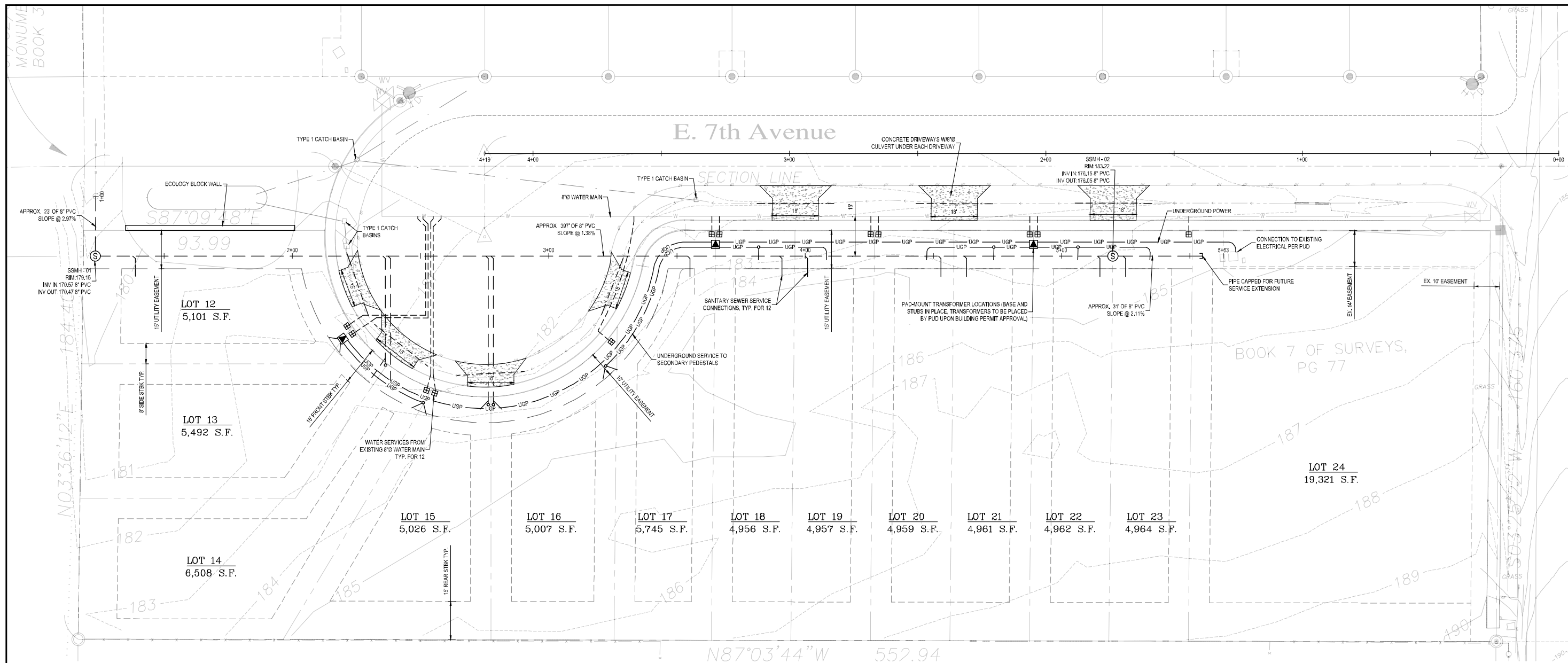
- A. The following permits will be paid for and provided by the Owner:
 - 1. Building, Plumbing, and Mechanical Permits
 - 2. Stormwater Permit
- B. The following permits will be paid for and obtained by the Contractor:
 - 1. Electrical Permit
 - 2. Any other permits required for construction but not specifically noted here shall also be obtained and paid for by the Contractor.

3.02 CONSTRUCTION LOGISTICS

- A. Construction will take place adjacent to existing homes nearby. Contractor shall take care to avoid disturbing neighbors unnecessarily.
- B. Staging shall occur within the project area of work. No staging shall occur outside the construction bounds.
- C. Parking shall occur within the project area of work. No parking shall occur outside the construction bounds.
- D. Security of the construction site is the Contractor's responsibility and shall be maintained at all times.

END OF SECTION

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SEWER PROFILE
SCALE: 20
VERT. EXAGGERATION: 5.0

AS-BUILT NOTES

SEWER RIM ELEVATIONS AND INVERTS PROVIDED BY
ROB JOHNSTON, PLS OF JOHNSTON LAND SURVEYING.
ALL OTHER UTILITY LOCATIONS BASED ON REVIEW OF
PROJECT PLANS AND FIELD CONFIRMATION BY THIS
OFFICE.

7TH AVENUE ALIGNMENT AND STATIONING PROVIDED FOR IDENTIFYING SANITARY SEWER FACILITIES TO BE CONVEYED TO THE CITY OF PORT ANGELES (SEE CONVEYANCE OF PUBLIC UTILITIES SUBMITTED TO THE CITY OF PORT ANGELES WITH THIS AS-BUILT).

ZENOVIĆ & ASSOCIATES
INCORPORATED
301 E. 6TH STREET, SUITE 1
PORT ANGELES, WA 98362
PHONE: (360) 417-2501
FAX: (360) 417-2514
EMAIL: ZENOVC@ZENOVC.NET

[illegible]

TITLE: RESIDENTIAL SUBDIVISION FOR PENINSULA HOUSING AUTHORITY, EAST 7TH & NORTH GALES STREET, PORT ANGELES, WA -
PARCEL NO. 06-30-12-08-0110

AS-BUILT

PENINSULA HOUSING AUTHORITY
2603 S. FRANCIS STREET
PORT ANGELES, WA. 98362

SCALE: 1"=20'

FILE: 22324-AB

JOB NO: 22324

DATE: April 28, 2023

SET: AS-BUILT



SHEET

1

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To: Annie O'Rourke / Peninsula Housing Authority
From: Seth Rodman, P.E.
Date: June 9, 2026
Re: Lot 24 Eklund Heights – Soils Investigation

Annie,

As requested, our office has performed an inspection of the site including two test pits to determine soils types and appropriate design bearing capacities and stormwater infiltration rates. Per the NRCS soil survey, the site soils onsite are primarily mapped as Hoypus Gravelly Sandy Loam. These soils consist of gravelly sandy loam over very gravelly sands. They are classified as "somewhat excessively drained" and have a depth to water table or restrictive feature of greater than 80 inches. The mapped soil types are generally consistent with the soils found in the two onsite test pits.

The soils to the north of the subject parcel are mapped as Cassolary Fine Sandy Loam. These soils consist of fine sandy loam soils to depth. They are classified as moderately well drained with a depth to water table of 36-48 inches. These soils were not observed in the test pits.

Test pits were dug using a track mounted excavator and were extended to a depth of 5.5 feet. Test pit #1 was dug at the north end of the site just to the east of the existing driveway entrance. Test pit #2 was dug in the southwest corner of the site just to the west of the existing stockpile on the site. Visual soil logs for the two pits are as follows:

Test Pit #1

0-12" Topsoil (sandy loam with organics)
12-66" Gravelly & Silty Medium Sand
No seeps, standing water or moisture was observed
Some small clay inclusions
Roots to 36"

Test Pit #2

0-12" Topsoil (sandy loam with organics)
12-28" Gravelly & Silty Medium Sand
28-66" Cobbly Medium-Coarse Sand
No seeps, standing water or moisture was observed
Roots to 36"

A soil sample was taken from Test Pit #1 at a depth of approximately 4 feet. The sieve analysis results confirmed that the sampled soil should be classified per the USCS as silty sand. This is a class 4 material per IBC table 1806.2 and a bearing capacity of 2,000 psf is appropriate.

A grain size analysis per Volume V-5.4 of the *2019 Stormwater Management Manual for Western Washington* (ECY) was performed and a long-term design infiltration of 6.9 inches per hour was calculated. This is considered a conservative rate as the soils in the unsampled pit were generally coarser and cleaner (fewer fines).

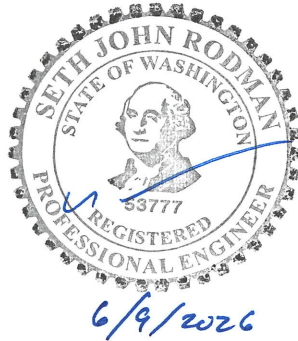
Attached with this letter is the NRCS soils survey mapping, the sieve analysis of the soil sample and the grain size analysis.

Please let me know if there are any questions.

Thank you,

Seth Rodman, P.E.
Senior Design Engineer

JN: 26156



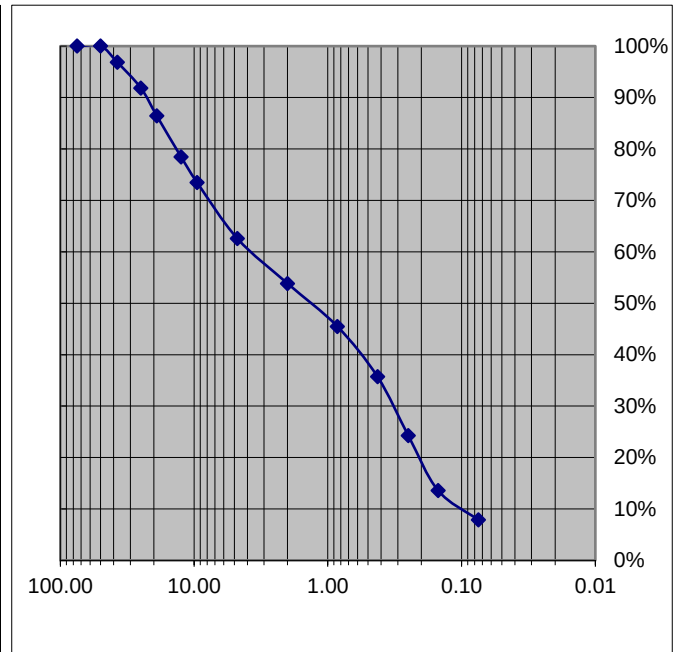


DATE: 5/27/2026
 CLIENT: Zenovic & Associates
 ADDRESS: 301 East 6th St. Suite 1, PA WA
 EMAIL: seth@zenovic.net
 PROJECT: PHA 7th and Gales
 MATERIAL SOURCE: 7th and Gales
 TESTED BY: Sean Wright
 SAMPLE ID: 5075-29

ASTM D6913 Standard test method for Particle-size Distribution of Soils using sieve analysis

ASTM D2487 Unified Soil Classification System D10/ D30/ D60 Determination

DIA -MM	Sieve Size	Wt. (grams)	% Retained	% Passing
75.000	3"	0.0	0.0%	100.0%
50.000	2"	0.0	0.0%	100.0%
37.500	1 1/2"	304.1	3.1%	96.9%
25.000	1"	484.6	5.0%	91.9%
19.000	3/4"	524.5	5.4%	86.4%
12.500	1/2"	773.1	8.0%	78.4%
9.500	3/8"	479.1	4.9%	73.5%
4.750	No. 4	1056.3	10.9%	62.6%
2.000	No. 10	846.9	8.7%	53.8%
0.850	No. 20	807.0	8.3%	45.5%
0.425	No. 40	948.2	9.8%	35.7%
0.250	No. 60	1109.5	11.5%	24.2%
0.150	No. 100	1030.4	10.6%	13.6%
0.075	No. 200	555.7	5.7%	7.9%
	Pan	760.9	7.9%	



D10	D30	D60		
0.1	0.32	3.80		
End Weight:		8919.4	Cu:	38.00
Start Weight:		9680.3	Cc:	0.27

REMARKS:

Material sampled by Zenovic and Associates. Material was tested using ASTM C 136 Procedure A.

INFILTRATION RATE CALCULATION - GRAIN SIZE ANALYSIS

ZENOVIC & ASSOCIATES

PROJECT: Eklund - Lot 24
LOCATION: Corner of Gales and E. 7th Street, Port Angeles
PARCEL NO: 06-30-12-70-0070

301 EAST 6TH STREET, SUITE 1
 PORT ANGELES, WA 98362
DATE: 6/9/2026
JOB NO. 26156
AUTHOR: SJR

Location TP #1

D10	0.1
D60	3.8
D90	22
%Fines	0.079

K_{sat}initial (cm/s) 0.017

CF _v	0.8
CF _t	0.4
CF _m	0.9

K_{sat}design (cm/s) 0.0049

K_{sat}design (in/hr) 6.9

Location

D10	
D60	
D90	
%Fines	

K_{sat}initial (cm/s)

CF _v	0.8
CF _t	0.4
CF _m	0.9

K_{sat}design (cm/s) 0.0000

K_{sat}design (in/hr) 0.0

Location

D10	
D60	
D90	
%Fines	

K_{sat}initial (cm/s)

CF _v	0.8
CF _t	0.4
CF _m	0.9

K_{sat}design (cm/s) 0.0000

K_{sat}design (in/hr) 0.0

$$\log_{10}(K_{sat}) = -1.57 + 1.90D_{10} + 0.015D_{60} - 0.013D_{90} - 2.08f_{fines}$$

$$\text{Total Correction Factor, } CF_T = CF_v \times CF_t \times CF_m$$

$$K_{sat \text{ design}} = K_{sat \text{ initial}} \times CF_T$$

Table 3.3.1
Correction Factors to be Used With In-Situ Saturated Hydraulic Conductivity Measurements to Estimate Design Rates.

Issue	Partial Correction Factor
Site variability and number of locations tested	CF _v = 0.33 to 1.0
Test Method Large-scale PIT Small-scale PIT Other small-scale (e.g. Double ring, falling head) Grain Size Method	CF _t = 0.75 = 0.50 = 0.40 = 0.40
Degree of influent control to prevent siltation and bio-buildup	CF _m = 0.9



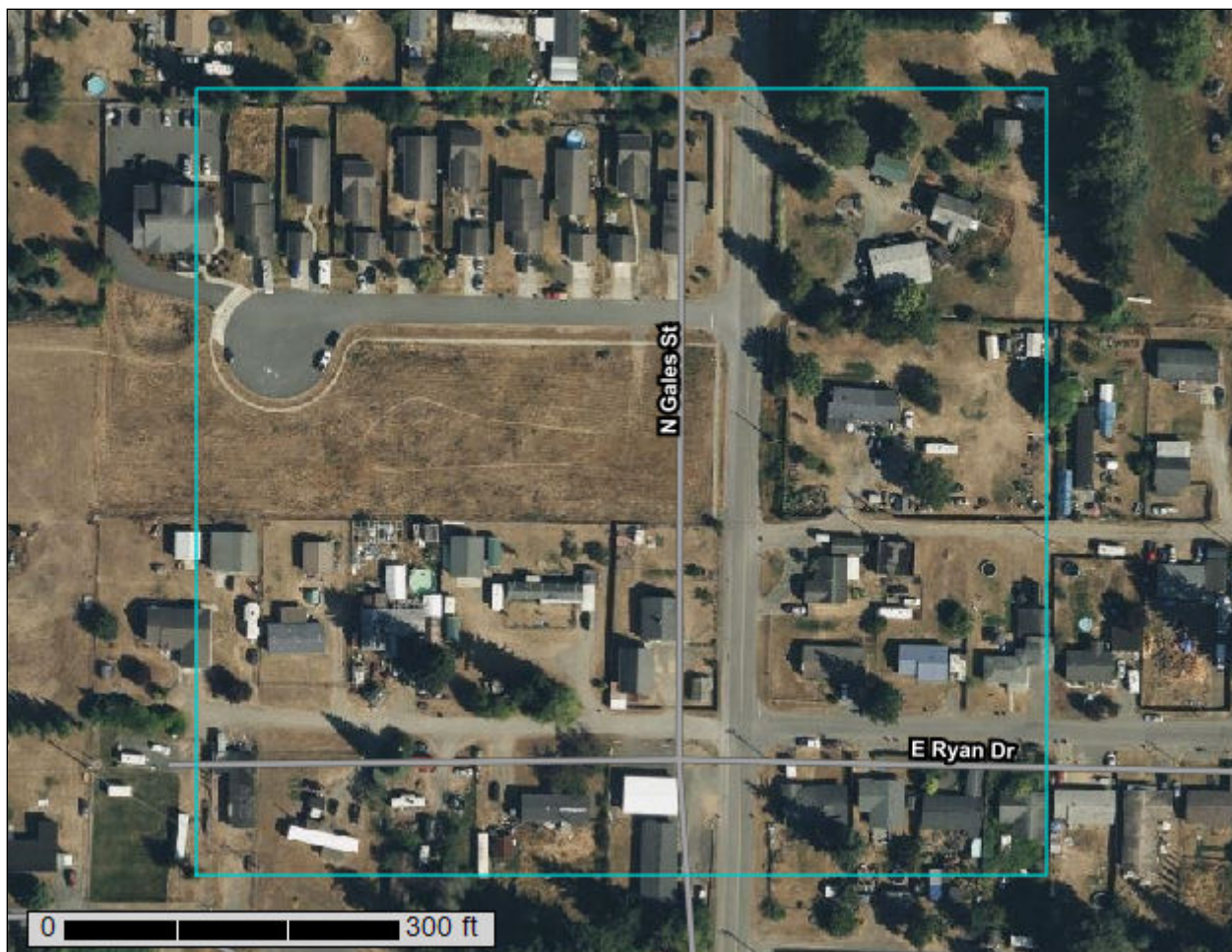
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Clallam County Area, Washington**



October 28, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clallam County Area, Washington
Survey Area Data: Version 23, Aug 28, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 8, 2022—Aug 29, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
9	Cassolary fine sandy loam, 0 to 8 percent slopes	3.0	24.1%
23	Hoypus gravelly sandy loam, 0 to 15 percent slopes	9.4	75.9%
Totals for Area of Interest		12.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Clallam County Area, Washington

9—Cassolary fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2ghy
Elevation: 50 to 500 feet
Mean annual precipitation: 16 to 30 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 160 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cassolary and similar soils: 85 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cassolary

Setting

Landform: Hillslopes
Parent material: Glacial drift and glaciomarine deposits

Typical profile

H1 - 0 to 8 inches: ashy fine sandy loam
H2 - 8 to 22 inches: very fine sandy loam
H3 - 22 to 60 inches: stratified fine sandy loam to silty clay loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 36 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Soils with Few Limitations (G002XN502WA)
Other vegetative classification: Soils with Few Limitations (G002XN502WA)
Hydric soil rating: No

Minor Components

Puget, undrained

Percent of map unit: 6 percent
Landform: Terraces
Other vegetative classification: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

Agnew

Percent of map unit: 6 percent

Landform: Alluvial cones

Other vegetative classification: Soils with Few Limitations (G002XN502WA)

Hydric soil rating: No

23—Hoypus gravelly sandy loam, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2gfr

Elevation: 50 to 1,000 feet

Mean annual precipitation: 24 inches

Mean annual air temperature: 48 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hoypus and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hoypus

Setting

Landform: Outwash terraces

Parent material: Glacial outwash

Typical profile

H1 - 0 to 3 inches: gravelly sandy loam

H2 - 3 to 10 inches: gravelly sandy loam

H3 - 10 to 31 inches: very gravelly loamy sand

H4 - 31 to 45 inches: very gravelly sand

H5 - 45 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: A

Ecological site: F002XA001WA - Puget Lowlands Dry Forest

Forage suitability group: Droughty Soils (G002XN402WA)

Custom Soil Resource Report

Other vegetative classification: Droughty Soils (G002XN402WA)
Hydric soil rating: No

SECTION 00 41 00

BID FORM

1.01 TO:

- A. Peninsula Housing Authority
 - 1. 727 E 8th Street
 - 2. Port Angeles, WA 98362

1.02 FOR:

- A. Eklund at Gales

1.03 DATE: _____ (BIDDER TO ENTER DATE)

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

- A. Bidder's Full Name _____
- B. Address _____
- C. City, State, Zip _____

1.05 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the lump sum listed in this bid form of:

- B. Offer: _____

_____ Dollars

(\$ _____) in lawful money of the United States of America.

- C. Sales Tax Percentage: 0%
- D. Sales Tax Amount: Zero dollars(\$0.00) in lawful money of the United States of America.
- E. Total Offer

Amount: _____

_____ dollars

(\$ _____) in lawful money of the United States of America.

- F. We have included the required Bid Bond as required by the Instruction to Bidders.
- G. We understand that 15% apprentice labor hours of the total hours are a requirement of the Construction Contract and subject to a verified Good Faith Effort with the completion of Apprenticeship Utilization documentation. Apprentice hours apply to construction hours on site, not in factory.

1.06 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for ninety (90) days from the bid closing date.
- B. If this bid is accepted by Owner:
 - 1. Execute the Agreement within a calendar week of receipt of Notice of Award.
 - 2. Furnish the required bonds before Work begins.
 - 3. Commence work no later than October 30, 2026.

- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the Bid Bond shall be forfeited as damages to Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.
- D. In the event our bid is not accepted within the time stated above, the Bid Bond may be released in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.07 CONTRACT TIME

- A. If this Bid is accepted, we will Complete the Work no later than December 1, 2027. If the bid is accepted by Owner, we will provide a detailed Construction Schedule in accordance with the Contract Documents.

1.08 REPRESENTATIONS AND CERTIFICATIONS

A. Mandatory Bidder Responsibility Criteria

By signing the Bid Form, the Bidder represents and certifies that it satisfies each of the Mandatory Bidder Responsibility Criteria stated in Section 1.01 of 00 45 50, Bidder Responsibility Criteria.

B. Compliance with Wage Payment Statutes

By signing the Bid Form, the Bidder represents and certifies that, within the three-year period immediately preceding the bid submittal deadline for this project, the Bidder has not been determined to be a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment.

C. Termination for Cause

By signing the Bid Form, the Bidder represents and certifies that the Bidder has not had any contract terminated for cause by a government agency during the five (5) year period immediately preceding the bid submittal deadline for this project.

D. Liquidated Damages

By signing the Bid Form, the Bidder represents and certifies that the Bidder has not been assessed liquidated damages related to the performance of a contract during the five (5) year period immediately preceding the bid submittal deadline for this project.

E. Litigation

By signing the Bid Form, the Bidder represents and certifies that that the Bidder has not been a plaintiff or defendant in any lawsuits in Washington State superior or district court in the Port Angeles, Clallam County, Puget Sound region (defined as King, Kitsap, Pierce, Snohomish and Thurston Counties) or federal district court for Western Washington in the last five (5) years involving performance or payment issues relating to a contract which were resolved adversely to the Bidder through judgment or settlement.

F. Delinquent State Taxes

By signing the Bid Form, the Bidder represents and certifies that it does not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

G. Public Bidding Crimes

By signing the Bid Form, the Bidder represents and certifies that the Bidder has not been convicted of a crime involving bidding on a public works contract.

1.09 ADDENDA

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

1. Addendum # _____ Dated _____

2. Addendum # _____ Dated _____

3. Addendum # _____ Dated _____
4. Addendum# _____ Dated _____
5. Addendum # _____ Dated _____
6. Addendum # _____ Dated _____

1.10 BID FORM SUPPLEMENTS

- A. Provide the bid form supplements as outlined in Section 00 22 00, paragraph 1.01-A. The bid form supplements shall be accompanied by Section 00 43 01 - Bid Form Supplements Cover Sheet.
- B. We agree to submit the following Supplements to Bid Forms within 48 hours after submission of this bid as required by Section 00 22 00, paragraph 1.01-B.

1.11 1.10 BID FORM SIGNATURE(S)

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

G. (Seal)

- H. _____
- I. (Authorized signing officer, Title)
- J. _____
- K. (Street Address)
- L. _____
- M. (City, State, Zip)
- N. _____
- O. (Phone)
- P. _____
- Q. (Contractor License Number)
- R. _____
- S. (Federal ID Number)

END OF BID FORM

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SECTION 00 43 01
BID FORM SUPPLEMENTS COVER SHEET

PARTICULARS

1.01 TO:_____

1.02 PROJECT:_____

1.03 DATE:_____

1.04 SUBMITTED BY: (BIDDER TO INSERT FULL NAME AND ADDRESS)

A. Name:

B. Address:

C. City/State/Zip:

D. Phone:

E. In accordance with Document 00 21 13 Instructions to Bidders and Document 00 41 00 - Bid Form, we include the Supplements To Bid Form listed below. The information provided shall be considered an integral part of the Bid Form.

1.05 SUPPLEMENTS TO BID FORM

A. Form AIA A310 Bid Bond

B. HUD 5369-A Bidder Certifications

C. Form of Non-Collusion Affidavit

D. Subcontractors List Form A

E. Bonding Capacity letter

1.06 SIGNATURE(\$)

1.07 THE CORPORATE SEAL OF

A. _____

B. (Bidder please print the full name of your Proprietorship, Partnership, or Corporation)

1.08 WAS HEREUNTO AFFIXED IN THE PRESENCE OF:

A. _____

B. (Authorized signing officer Title)

1.09 (SEAL)

A. _____

B. (Authorized signing officer Title)

1.10 (SEAL)

END OF SUPPLEMENTS TO BID FORM

This page intentionally left blank

Project Name: _____ Project No.: _____

Contractor Name: _____

SUBCONTRACTOR LIST FORM A
For HVAC, Plumbing, and Electrical

***Within One Hour of the Bid Submittal Time,
Email this FORM A as an attachment to: aorourke@peninsulapha.org***

Subject line on email shall include: Project No., Project Name, Contractor Name, Form A

In compliance with the contract documents, the following subcontractor list is submitted:

SUBCONTRACTOR LISTING – RCW 39.30.060

If the base bid and the sum of the additive alternates is one million dollars or more, the Bidder shall provide names of the subcontractors with whom the Bidder will **directly** subcontract for performance of the following work. If the Bidder intends to perform the work, the Bidder must enter its name for that category of work.

The Bidder shall not list more than one subcontractor for each category of work identified UNLESS subcontractors vary with bid alternates, in which case the Bidder must indicate which subcontractor will be used for which alternate. Substitutions are prohibited except as outlined in RCW 39.30.060.

Failure of the Bidder to submit the NAMES of such subcontractors or to name itself to perform such work may render the Bidder's bid nonresponsive and, therefore, VOID.

Bidders who name themselves to perform the work are expected to perform the work and the Peninsula Housing Authority reserves the right to reject substitution of the bidder with a subcontractor unless the bidder demonstrates a change in circumstances from the time of bid submission that is outside of the control of the bidder.

Category of Work	Firm Name
1. HVAC, Base Bid	
a. HVAC, Alternate Bid	
2. Plumbing, Base Bid	
a. Plumbing, Alternate Bid	
3. Electrical, Base Bid	
a. Electrical, Alternate Bid	

Bidder may attach a separate sheet for additional alternate bid subcontractors.

Submitted By: _____
Print Name and Title of Authorized Person

This page intentionally left blank

Project Name: _____

Project No.: _____

Contractor Name: _____

SUBCONTRACTOR LIST FORM B

For Structural Steel Installation and Rebar Installation

*Within 48 Hours of the Bid Submittal Time,
Email this FORM B as an attachment to: aorourke@peninsulapha.org.*

In compliance with the contract documents, the following subcontractor list is submitted:

SUBCONTRACTOR LISTING – RCW 39.30.060

If the base bid and the sum of the additive alternates is one million dollars or more, the Bidder shall provide names of the subcontractors with whom the Bidder will **directly** subcontract for performance of the following work. If the Bidder intends to perform the work, the Bidder must enter its name for that category of work.

The Bidder shall not list more than one subcontractor for each category of work identified UNLESS subcontractors vary with bid alternates, in which case the Bidder must indicate which subcontractor will be used for which alternate. Substitutions are prohibited except as outlined in RCW 39.30.060.

Failure of the Bidder to submit the NAMES of such subcontractors or to name itself to perform such work may render the Bidder's bid nonresponsive and, therefore, VOID.

Bidders who name themselves to perform the work are expected to perform the work and the Peninsula Housing Authority reserves the right to reject substitution of the bidder with a subcontractor unless the bidder demonstrates a change in circumstances from the time of bid submission that is outside of the control of the bidder.

Category of Work	Firm Name
1. Structural Steel Installation, Base Bid	
a. Structural Steel Installation, Alternate Bid	
2. Rebar Installation, Base Bid	
a. Rebar Installation, Alternate Bid	

Bidder may attach a separate sheet for additional alternate bid subcontractors.

Submitted By: _____

Print Name and Title of Authorized Person

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AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

BOND AMOUNT: \$

PROJECT:

(Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes 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 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.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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common law bond.

Signed and sealed this [] day of [], []

[]
(Witness)

[]
(Witness)

[]
(Contractor as Principal)

[]
(Title)

[]
(Surety)

[]
(Title)

(Seal)

(Seal)

SECTION 00 45 19
NON-COLLUSION AFFIDAVIT

NON-COLLUSION AFFIDAVIT

STATE OF WASHINGTON)

)

COUNTY OF _____)

_____, being first duly sworn, on his/her oath says that the bid herewith submitted is a genuine and not a sham or collusive bid, or made in the interest or on behalf of any person not therein named: and he/she further says that the said bidder has not directly or indirectly induced or solicited any bidder on the above work or supplies to be put in a sham bid, or any other person or corporation to refrain from bidding; and that said bidder has not in any manner sought by collusion to secure to his/her self any advantage over any other bidder or bidders.

Name and Title of Bidder's Representative: _____

Signature of Contractor's Representative: _____

Subscribed and sworn to before me this _____ day of _____, 20____

Notary in and for the State of _____

Residing at _____

City

Notary Public Signature

END OF SECTION

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**U.S. Department of Housing
and Urban Development**
Office of Public and Indian Housing

**Representations, Certifications,
and Other Statements of Bidders**
Public and Indian Housing Programs

Representations, Certifications, and Other Statements of Bidders

Public and Indian Housing Programs

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1. Certificate of Independent Price Determination

(a) The bidder certifies that--

(1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to (i) those prices, (ii) the intention to submit a bid, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a competitive proposal solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory--

(1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

[insert full name of person(s) in the bidder's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the bidder's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the bidder deletes or modifies subparagraph (a)2 above, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

[] [Contracting Officer check if following paragraph is applicable]

(d) Non-collusive affidavit. (applicable to contracts for construction and equipment exceeding \$50,000)

(1) Each bidder shall execute, ~~in the form provided by the PHA/IHA,~~ an affidavit to the effect that he/she has not colluded with any other person, firm or corporation in regard to any bid submitted in response to this solicitation. If the successful bidder did not submit the affidavit with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the affidavit by that date may render the bid nonresponsive. No contract award will be made without a properly executed affidavit.

(2) A fully executed "Non-collusive Affidavit" [] is, [] is not included with the bid.

2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

"Bona fide employee" means a person, employed by a bidder and subject to the bidder's supervision and control as to time, place, and manner of performance, who neither exerts, nor proposes to exert improper influence to solicit or obtain contracts nor holds out as being able to obtain any contract(s) through improper influence.

"Improper influence" means any influence that induces or tends to induce a PHA/IHA employee or officer to give consideration or to act regarding a PHA/IHA contract on any basis other than the merits of the matter.

(b) The bidder represents and certifies as part of its bid that, except for full-time bona fide employees working solely for the bidder, the bidder:

(1) [] has, [] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [] has, [] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(c) If the answer to either (a)(1) or (a)(2) above is affirmative, the bidder shall make an immediate and full written disclosure to the PHA/IHA Contracting Officer.

(d) Any misrepresentation by the bidder shall give the PHA/IHA the right to (1) terminate the contract; (2) at its discretion, deduct from contract payments the amount of any commission, percentage, brokerage, or other contingent fee; or (3) take other remedy pursuant to the contract.

3. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (applicable to contracts exceeding \$100,000)

~~(a) The definitions and prohibitions contained in Section 1352 of title 31, United States Code, are hereby incorporated by reference in paragraph (b) of this certification.~~

(b) The bidder, by signing its bid, hereby certifies to the best of his or her knowledge and belief as of December 23, 1989 that:

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of a contract resulting from this solicitation;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the bidder shall complete and submit, with its bid, OMB standard form LLL, "Disclosure of Lobbying Activities;" and

(3) He or she will include the language of this certification in all subcontracts at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

~~(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.~~

~~(d) Indian tribes (except those chartered by States) and Indian organizations as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) are exempt from the requirements of this provision.~~

4. Organizational Conflicts of Interest Certification

The bidder certifies that to the best of its knowledge and belief and except as otherwise disclosed, he or she does not have any organizational conflict of interest which is defined as a situation in which the nature of work to be performed under this proposed contract and the bidder's organizational, financial, contractual, or other interests may, without some restriction on future activities:

- (a) Result in an unfair competitive advantage to the bidder; or,
(b) Impair the bidder's objectivity in performing the contract work.
- ☐ In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

5. Bidder's Certification of Eligibility

(a) By the submission of this bid, the bidder certifies that to the best of its knowledge and belief, neither it, nor any person or firm which has an interest in the bidder's firm, nor any of the bidder's subcontractors, is ineligible to:

(1) Be awarded contracts by any agency of the United States Government, HUD, or the State in which this contract is to be performed; or,

(2) Participate in HUD programs pursuant to 24 CFR Part 24.

(b) The certification in paragraph (a) above is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly rendered an erroneous certification, the contract may be terminated for default, and the bidder may be debarred or suspended from participation in HUD programs and other Federal contract programs.

6. Minimum Bid Acceptance Period

(a) "Acceptance period," as used in this provision, means the number of calendar days available to the PHA/IHA for awarding a contract from the date specified in this solicitation for receipt of bids.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The PHA/IHA requires a minimum acceptance period of [Contracting Officer insert time period] calendar days.

(d) In the space provided immediately below, bidders may specify a longer acceptance period than the PHA's/IHA's minimum requirement. The bidder allows the following acceptance period: calendar days.

(e) A bid allowing less than the PHA's/IHA's minimum acceptance period will be rejected.

(f) The bidder agrees to execute all that it has undertaken to do, in compliance with its bid, if that bid is accepted in writing within (1) the acceptance period stated in paragraph (c) above or (2) any longer acceptance period stated in paragraph (d) above.

7. Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it --

(a) ☐ is, ☐ is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) ☐ is, ☐ is not a women-owned business enterprise. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) ☐ is, ☐ is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

☐ Black Americans	☐ Asian Pacific Americans
☐ Hispanic Americans	☐ Asian Indian Americans
☐ Native Americans	☐ Hasidic Jewish Americans

8. Indian-Owned Economic Enterprise and Indian Organization Representation (applicable only if this solicitation is for a contract to be performed on a project for an Indian Housing Authority)

~~The bidder represents and certifies that it:~~

~~(a) ☐ is, ☐ is not an Indian-owned economic enterprise. "Economic enterprise," as used in this provision, means any commercial, industrial, or business activity established or organized for the purpose of profit, which is at least 51 percent Indian owned. "Indian," as used in this provision, means any person who is a member of any tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs and any "Native" as defined in the Alaska Native Claims Settlement Act.~~

~~(b) ☐ is, ☐ is not an Indian organization. "Indian organization," as used in this provision, means the governing body of any Indian tribe or entity established or recognized by such governing body. Indian "tribe" means any Indian tribe, band, group, pueblo, or~~

~~community including Native villages and Native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs.~~

9. Certification of Eligibility Under the Davis-Bacon Act (applicable to construction contracts exceeding \$2,000)

(a) By the submission of this bid, the bidder certifies that neither it nor any person or firm who has an interest in the bidder's firm is a person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of the contract resulting from this solicitation shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

~~(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.~~

10. Certification of Nonsegregated Facilities (applicable to contracts exceeding \$10,000)

~~(a) The bidder's attention is called to the clause entitled **Equal Employment Opportunity** of the General Conditions of the Contract for Construction.~~

(b) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(c) By the submission of this bid, the bidder certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in the contract.

(d) The bidder further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) prior to entering into subcontracts which exceed \$10,000 and are not exempt from the requirements of the Equal Employment Opportunity clause, it will:

- (1) Obtain identical certifications from the proposed subcontractors;
- (2) Retain the certifications in its files; and
- (3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

~~A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause of the prime contract. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).~~

~~**Note:** The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.~~

11. Clean Air and Water Certification (applicable to contracts exceeding \$100,000)

The bidder certifies that:

(a) Any facility to be used in the performance of this contract [] is, [] is not listed on the Environmental Protection Agency List of Violating Facilities:

(b) The bidder will immediately notify the PHA/IHA Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the bidder proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and,

(c) The bidder will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

12. Previous Participation Certificate (applicable to construction and equipment contracts exceeding \$50,000)

~~(a) The bidder shall complete and submit with his/her bid the Form HUD-2530, "Previous Participation Certificate." If the successful bidder does not submit the certificate with his/her bid, he/she must submit it within three (3) working days of bid opening. Failure to submit the certificate by that date may render the bid nonresponsive. No contract award will be made without a properly executed certificate.~~

~~(b) A fully executed "Previous Participation Certificate" [] is, [] is not included with the bid.~~

13. Bidder's Signature

The bidder hereby certifies that the information contained in these certifications and representations is accurate, complete, and current.

(Signature and Date)

(Typed or Printed Name)

(Title)

(Company Name)

(Company Address)

SECTION 00 45 50
BIDDER RESPONSIBILITY CRITERIA

PART 1 GENERAL

1.01 MANDATORY BIDDER RESPONSIBILITY CRITERIA

- A. It is the intent of **Peninsula Housing Authority** (the Owner) to award a contract to the lowest responsive, responsible bidder. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder shall be required by the Owner to submit documentation demonstrating compliance with the criteria. The bidder must:
1. Have a current certificate of registration as a contractor in compliance with RCW 18.27, and, to the extent applicable, a plumbing contractor license in compliance with chapter 18.106 RCW, an elevator contractor license in compliance with chapter 70.87 RCW, or an electrical contractor license in compliance with chapter 19.28 RCW, as required under the provisions of those chapters, which must be in effect at the time of bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 4. Have a Washington Employment Security Department number, as required in Title 50 RCW;
 5. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 6. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3);
 7. Not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the bid solicitation;
 8. Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW. The bidder must designate a person or persons to be trained on these requirements. The training must have been provided by the Department of Labor and Industries (L&I) or by a training provider whose curriculum is approved by the department. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt;
 9. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW; and
 10. At the time of bid submittal, not be subject to a revocation of a minor work permit under RCW 49.12.390(4).
- B. On the Bid Form, the Bidder shall represent and certify that it satisfies each of the mandatory responsibility criteria identified herein.

1.02 SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

In addition to the mandatory bidder responsibility criteria referenced above, the bidder must also meet the following relevant supplemental bidder responsibility criteria applicable to the project and, as evidence that the bidder meets the supplemental bidder responsibility criteria. Bidders must submit the required documentation to the owner within forty eight (48) hours of the bid opening:

A. BUSINESS STATUS

1. Criterion: The Bidder shall not be "inactive" or "not in good standing" with the Washington State Secretary of State's Office, the Department of Revenue, the Department of Labor & Industries or the Federal Government.
2. Documentation: The Bidder shall provide documented information from the Washington

State Secretary of State's Office, the Department of Revenue or the Department of Labor & Industries providing the date of incorporation or formation, the state of incorporation or formation, that the Bidder is active and in good standing in the State of Washington, State of Washington tax reporting number, and the name and address of the registered agent, general partner or managing member.

B. SUBCONTRACTOR CONTRACTS

1. Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.
2. Documentation: The Bidder shall submit a copy of its standard subcontract form for review by the Owner, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

C. CLAIMS AGAINST RETAINAGE AND BONDS

1. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for similar projects during the previous five (5) years that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances acceptable to the owner.
2. Documentation: The Bidder shall submit a list of the projects completed within the previous five (5) years and include for each project the following information:

The owner and contact information for the owner;

- a. A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- b. A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.
- c. The Owner may contact previous owners to validate the information provided by the Bidder.

D. TERMINATION FOR CAUSE

1. Criterion: The Bidder shall not have had any contract terminated for cause during the five (5) year period immediately preceding the bid submittal deadline for this project, unless there are extenuating circumstances acceptable to the Owner.
2. Documentation: On the Bid Form, the Bidder shall represent and certify that the Bidder has not had any contract terminated for cause by a government agency during the five (5) year period immediately preceding the bid submittal deadline for this project. The Owner may also use independent sources of information that may be available to demonstrate whether the Bidder is in compliance with this criterion.

E. LIQUIDATED DAMAGES

1. Criterion: The Bidder shall not have been assessed liquidated damages related to the performance of a contract during the five (5) year period immediately preceding the bid submittal deadline for this project, unless there are extenuating circumstances acceptable to the Owner.
2. Documentation: On the Bid Form, the Bidder shall represent and certify that the Bidder has not been assessed liquidated damages related to the performance of a contract during the five (5) year period immediately preceding the bid submittal deadline for this project. The Owner may also use independent sources of information that may be available to demonstrate whether the Bidder is in compliance with this criterion.

F. LITIGATION

1. Criterion: The Bidder shall not have been a party as a plaintiff or defendant in any lawsuits in Washington State superior or district court in the Port Angeles, Clallam County, Puget

Sound region (defined as King, Kitsap, Pierce, Snohomish and Thurston Counties) or federal district court for Western Washington in the last five (5) years involving performance or payment issues relating to a contract which were resolved adversely to the Bidder through judgment or settlement, unless there are extenuating circumstances acceptable to the Owner.

2. Documentation: On the Bid Form, the Bidder shall represent and certify that the Bidder has not been a plaintiff or defendant in any lawsuits in Washington State superior or district court in the Port Angeles, Clallam County, Puget Sound region (defined as King, Kitsap, Pierce, Snohomish and Thurston Counties) or federal district court for Western Washington in the last five (5) years involving performance or payment issues relating to a contract which were resolved adversely to the Bidder through judgment or settlement. The Owner may also use independent sources of information that may be available to demonstrate whether the Bidder is in compliance with this criterion.

G. DELINQUENT STATE TAXES

1. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
2. Documentation: On the Bid Form, the Bidder shall represent and certify that it is in compliance with the above criterion.

H. FEDERAL DEBARMENT

1. Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.
2. Documentation: The Bidder shall not be listed as a current debarred or suspended bidder on the System for Award Management (SAM) website:
<<http://www.sam.gov>>.

I. PUBLIC BIDDING CRIMES

1. Criterion: The Bidder shall not have been convicted of a crime involving bidding on a public works contract.
2. Documentation: On the Bid Form, the Bidder shall represent and certify that the Bidder has not been convicted of a crime involving bidding on a public works contract. The Owner may also use independent sources of information that may be available to demonstrate whether the Bidder is in compliance with this criterion.

J. APPRENTICESHIP

1. Criterion: The Bidder shall have complied with apprenticeship utilization goals on projects with such requirements, that were completed by the Bidder within three years of the bid submittal date for this project, unless there are extenuating circumstances acceptable to the Owner.
2. Documentation: For each project with an apprenticeship utilization goal that was completed by the Bidder within three years of the bid submittal date for this project, the Bidder shall submit the following:
 - a. A list of such projects.
 - b. The owner and contact information for the owner's representative.
 - c. The apprenticeship utilization percentage goal for the project.
 - d. The actual percentage of utilization by the Bidder.
 - e. An explanation of any extenuating circumstances that contributed to the Bidder not meeting the goals.
 - f. The Owner may contact previous owners to validate the information provided by the Bidder, and shall consider whether the goals were mandatory or voluntary, and the validity of any explanation of extenuating circumstances.

K. PREVAILING WAGES

1. Criterion: The Bidder shall not have a record of prevailing wage complaints filed against it within five years of the bid submittal date that demonstrates a pattern of failing to pay workers prevailing wages, unless there are extenuating circumstances acceptable to the Owner.
2. Documentation: The Bidder shall submit a list of prevailing wage complaints filed against it within five years of the bid submittal date along with an explanation of each complaint and

how it was resolved. The Owner shall evaluate these explanations and the resolution of each complaint to determine whether the complaints demonstrate a pattern of failing to pay its workers prevailing wages as required. The Owner may also evaluate complaints filed within the time period specified that were not reported by the Bidder.

1.03 SUBCONTRACTOR RESPONSIBILITY:

- A. The successful Bidder shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the successful Bidder shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.
- B. At the time of subcontract execution, the successful Bidder shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
 - 1. Have a current certificate of registration in compliance with RCW 18.27, which must have been in effect at the time of subcontract bid submittal;
 - 2. Have a current Washington Unified Business Identifier (UBI) number;
 - 3. If applicable, have:
 - a. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in RCW 51;
 - b. A Washington Employment Security Department number, as required in RCW 50;
 - c. A Washington Department of Revenue state excise tax registration number, as required in RCW ;
 - d. An electrical contractor license, if required by RCW 19.28;
 - e. If bidding on a project subject to the apprenticeship utilization requirements, not have been found out of compliance by the Washington State Apprentice and Training Council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under Chapter 49.04 RCW for the one-year period immediately preceding the date of the bid solicitation.
 - f. Until December 31, 2013, not have violated the "Off-site Prefabrication" reporting requirements required by RCW 39.04.370 more than one time as determined by the Department of Labor and Industries.

1.04 REFERENCES: THE OWNER MAY CONDUCT REFERENCE CHECKS FOR THE APPARENT LOW AND SECOND LOW BIDDER WHOSE BIDS ARE UNDER CONSIDERATION FOR AWARD. IN THE EVENT THAT INFORMATION OBTAINED FROM THE REFERENCE CHECKS:

- A. Reveals that the bidder does not meet the Supplemental Bidder Responsibility Criteria; or
- B. Indicates concerns about the bidder's performance on projects identified as meeting the Supplemental Bidder Responsibility Criteria, which may include, but not be limited to the quality of construction, the bidder's management of subcontractors, timeliness of required submittals, and safety record on the project; or
- C. Indicates other concerns about the bidder's ability to successfully perform the work, the Owner shall have the right to determine that the bidder is not a responsible bidder. Prior to making such a determination that a bidder is not responsible based on information received through reference checks, the Owner may discuss with the bidder the information obtained from the references and provide the bidder with the opportunity to offer explanations that may help inform whether the Owner declares the bidder not responsible.
- D. In conducting reference checks, the Owner may include itself as a reference if the bidder has performed work for the Owner, even if the bidder did not identify the Owner as a reference.
- E. If the Owner determines the bidder is not a responsible bidder, subject to following the requirements of the appeal process (see below), the Owner may award the contract to the next lowest bidder who meets the Supplemental Bidder Responsibility Criteria and whose reference checks validate the ability of the bidder to successfully perform the work.

1.05 FAILURE TO SUBMIT DOCUMENTATION: IF A BIDDER FAILS TO SUBMIT THE DOCUMENTATION REQUIRED BY THE BIDDING DOCUMENTS TO DEMONSTRATE COMPLIANCE WITH THE MANDATORY AND SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA WITHIN THE TIME PERIOD SPECIFIED IN THE BIDDING DOCUMENTS, THE OWNER MAY:

- A. Find the bidder not responsible, or
- B. Find the bidder responsible based upon any available information that demonstrates that the bidder meets the Mandatory and Supplemental Bidder Responsibility Criteria.

1.06 PROCEDURE TO REQUEST MODIFICATION OF SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

- A. During the bidding period, but not less than five (5) business days before the bid submittal deadline, a potential bidder may request that the Owner modify the supplemental bidder responsibility criteria. The Owner shall evaluate any such requests, and if a decision is made by the Owner in its sole discretion to modify the criteria, such modification shall be communicated to all bidders and plan holders via the issuance of an addendum to the bidding documents. If the Owner determines not to modify the supplemental criteria, the Owner shall notify the requesting bidder of its decision in writing.

1.07 APPEAL OF DETERMINATION THAT BIDDER DOES NOT MEET RESPONSIBILITY CRITERIA

- A. If the Owner determines that a bidder does not meet the bidder responsibility criteria set forth in this section and is therefore not a responsible bidder, the Owner shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees with this determination, it may appeal the determination within 24 hours of receipt of the Owner's determination by presenting additional information in writing to the Owner. The Owner will consider the additional information before issuing its final determination in writing. If the final determination affirms that the bidder is not responsible, the Owner will not execute a contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received written notice of the final determination. For the purposes of this subsection, the date of the Owner's transmission of the Owner's determination(s) by facsimile or electronic mail to the bidder at the facsimile number or e-mail address provided by the bidder in its bid shall constitute the date of receipt by the bidder of the written notices provided herein.

1.08 SUBSTANTIAL COMPLIANCE

- A. A bidder that substantially complies with these bidder requirements/criteria shall be deemed a responsible bidder.

END OF SECTION

SECTION 00 50 00
CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 AGREEMENT AND CONDITIONS OF THE CONTRACT

- A. See Section 00 52 00 for the Agreement form AIA A101, as modified, to be executed.
- B. See Section 00 72 00 for the General Conditions, AIA A201 as modified.

1.02 FORMS

- A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in the Contract Documents.
- B. Bond Forms:
 - 1. Bid Bond: AIA A310.
 - 2. Performance and Payment Bond Form.
- C. Post-Award Certificates and Other Forms:
 - 1. Schedule of Values Form: AIA G702.
 - 2. Application for Payment Form: AIA G703.
- D. Clarification and Modification Forms:
 - 1. Supplemental Instruction Form: AIA G710.
 - 2. Construction Change Directive Form: AIA G714.
 - 3. Change Order Form: AIA G701.
- E. Closeout Forms:
 - 1. Certificate of Substantial Completion Form: AIA G704.

1.03 REFERENCE STANDARDS

- A. AIA A101 - Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum; 2017.
- B. AIA A201 - General Conditions of the Contract for Construction; 2017.
- C. AIA G701 - Change Order; 2007.
- D. AIA G702 - Application and Certificate for Payment; 1992.
- E. AIA G703 - Continuation Sheet; 1992.
- F. AIA G704 - Certificate of Substantial Completion; 2017.
- G. AIA G710 - Architect's Supplemental Instructions; 2017.
- H. AIA G714 - Construction Change Directive; 2017.

PART2 PRODUCTS-NOTUSED

PART 3 EXECUTION - NOT USED

END OF SECTION

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Peninsula Housing Authority
Serving Clallam and Jefferson Counties
2603 S. Francis Street, Port Angeles WA 98362
(360) 452-7631 • (360) 452-9468 Fax

NOTICE OF AWARD

AGENCY: Peninsula Housing Authority

PROJECT NAME: Eklund at Gales

PROJECT NUMBER: 2026-PHA-015

PROJECT LOCATION: 2372 E 7th Ave Port Angeles, WA 98362

GENERAL CONTRACTOR:

CONTRACT AMOUNT:

BID OPENING DATE: 8/31/2026

AWARD DATE:

APPLICABLE PREVAILING WAGE: WA State Prevailing

MODIFICATIONS:

Thank you for your interest in the **Eklund at Gales** project. Your proposal was the lowest responsive bid therefore the Peninsula Housing Authority is prepared to review and sign contract documents. Please submit the following documents by _____:

- Executed Construction Agreement
- Statement of Values
- A current W-9

A Notice to Proceed will be issued and a preconstruction conference date scheduled when contract formalities are complete.

If you have any questions, please do not hesitate to contact me.

Annie O'Rourke
Peninsula Housing Authority
727 E 8th Street
Port Angeles, WA 98362
(360)452-7631 ext 301

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SECTION 00 52 00
AGREEMENT FORM

PART 1 GENERAL

1.01 FORM OF AGREEMENT

- A. The agreement to be executed is the AIA A101, as modified, with exhibits thereto. A draft copy of the A101 form is attached following this page.

1.02 RELATED REQUIREMENTS

- A. Section 00 73 16 – Exhibit A
- B. Section 00 72 00 – Exhibit B – AIA A201 General Conditions.
- C. Section 00 73 00 – Exhibit B-1
- D. Section 00 65 19.16 – Exhibit G Lien and Claim Waiver and Releases

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF AGREEMENT

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DRAFT AIA® Document A101™ – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

«Peninsula Housing Authority»
«727 E 8th Street»
«Port Angeles, WA 98362 »
« (360) 452-7631»

and the Contractor:
(Name, legal status, address and other information)

« »
« »
« »
« »

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

«Eklund at Gales»
«2372 E 7th Avenue»
«Port Angeles, WA 98362»

The Architect:
(Name, legal status, address and other information)

«Rice Fergus Miller»
«275 5th St, Suite 100»
«Bremerton, WA 98337»
«(360) 362-0944»

The Owner and Contractor agree as follows.

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.

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

The parties should complete A101™-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

§ 2.1 The Contractor shall fully execute the Work described in and inferable from the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

§ 2.2 Standard of Care. The Contractor and its Subcontractors shall be held to a standard of care ("Standard of Care") as evaluated in comparison to contractors and subcontractors of similar experience, qualification and reputation on projects of similar scope, cost and complexity, providing the highest quality of services, in and around the locality, except that, with respect to any design services provided by Contractor and/or its Subcontractors, such services must be consistent with the professional skill and care ordinarily provided by design professionals practicing in the same or similar locality under the same or similar circumstances.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☐ [« »] The date of this Agreement.

☒ [« X »] A date set forth in a notice to proceed issued by the Owner.

☐ [« »] Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

[☐] Not later than () calendar days from the date of commencement of the Work.

[☒] By the following date:

§ 3.3.2 Intentionally deleted.

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

The Project is exempt from Washington State Sales Tax. Contractor will pay sales tax on materials purchased and include said sales tax in their base Contract Sum and not separate as a line item in the Schedule of Values.

Adjustments to the Contract Sum on account of changes in the Work may be determined by any of the methods listed in Article 7 of Exhibit B, AIA Document A201™-2017, General Conditions of the Contract for Construction, as modified.

Notwithstanding any other language in the Contract Documents to the contrary, Contractor's overhead, insurance and profit for changes in the Work shall be marked up as provided below:

.1 Contractor markup on Self-Performed Work. Markup for Contractor, for any Work actually performed by Contractor's own forces, shall not exceed 15%.

.2 Subcontractor markup for Subcontractor Work. Markup for each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, shall not exceed 10%.

.3 Contractor markup for Subcontractor Work. Markup for Contractor, for any Work performed by its Subcontractor(s), shall not exceed 5%.

.4 Subcontractor markup for lower tier Subcontractor Work. Markup for each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, shall not exceed 5%.

.5 Cumulative markup. The total summed markup of Contractor for overhead, insurance, and profit and all Subcontractors of every tier shall not exceed 25%. If such markup would otherwise exceed 25%, Contractor must reduce the markup percentage for the Contractor and of any subcontractors applying markup, other than the subcontractor actually performing the work.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price
Entry lobby light	Five Hundred Dollars (\$500.00)
Bath vanity lights	Ten Thousand Dollars (\$10,000.00)
Monument sign	Ten Thousand Dollars (\$10,000.00)

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

« Owner and Contractor agree that time is of the essence and that if Substantial Completion is not achieved by the date calculated in accordance with Section 3.3.1, the amount of the Owner's actual damages for loss of use of the Project will be difficult, impractical, or impossible to determine. Accordingly, the Owner and Contractor agree that in the event Contractor fails to achieve Substantial Completion by the date calculated in accordance with Section 3.3, Contractor shall pay to the Owner as liquidated damages to compensate the Owner for damages related to the loss of use of the Project of One Thousand One Hundred Dollars per day (\$1,100.00/day) for each day of delay thereafter until Contractor actually achieves Substantial Completion. The parties agree that Owner's actual damages resulting from loss of use are difficult to calculate, and that the liquidated damages represent a reasonable estimate (but not a penalty) of Owner's damages for loss of use. Owner may withhold liquidated damages from any payments otherwise due Contractor. The liquidated damages for loss of use cover only loss of revenue, cost of replacement facilities, and concessions to any buyer or lessee. The liquidated damages for loss of use do not cover (and Owner does not waive) delay damages incurred by Owner for extended overhead or management costs, extra or extended financing costs, extra or extended services by Architect or other design professionals, claims by other contractors, and possibly other types of costs, expenses and damages incurred by Owner. Otherwise, payment of liquidated damages is due within thirty days of demand by Owner.

If a third-party decision maker (court or arbitrator) rules that the liquidated damages provisions herein are unenforceable, Contractor specifically agrees to pay Owner all damages (including any consequential damages) that Owner incurs as result of the delay in achieving Substantial Completion. In such instance, Owner's waiver of consequential damages is voidable by Owner as provided in Section 15.1.7 of Exhibit B.

Nothing in this Section shall preclude Owner from seeking from Contractor reimbursement of actual delay damages resulting from an occurrence covered by Contractor's insurance as more particularly set forth in A201 Section 15.1.7.»

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Owner's representative specified in Section 8.2 below (or such other person as Owner may direct) by the Contractor, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents. Applications for Payment shall be submitted on AIA documents G702 & G703, or such other form(s) as may be agreed upon by

Owner and Contractor, and Contractor shall provide Owner all documents reasonably requested relative to Applications for Payment.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that a complete Application for Payment is received by the Owner not later than the «20th» day of a month, the Owner shall make payment of the amount approved for payment to the Contractor not later than the «20th» day of the «following» month. If an Application for Payment is received by the Owner after the application date fixed above, payment of the amount approved for payment shall be made by the Owner not later than «thirty» («30») days after the Owner receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Owner may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment. With each Application for Payment, the Contractor shall also submit the Lien Waivers and Releases in the forms attached hereto as Exhibit G.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives properly allocable to completed Work or materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

«five percent (5%)»

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

«See Exhibit B-1, § 4.8»

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

« See Exhibit B-1, Art. 4»

§ 5.1.7.3 In its final Application for Payment, Contractor may request release of retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7 and the other retainage provisions of the Contract Documents.

(Insert any other conditions for release of retainage upon Substantial Completion.)

« See Section 9.10.4, A201 - 2017 General Conditions, as modified»

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Section 9.10.3 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 a final Certificate for Payment has been issued by the Architect; and
- .3 all requirements for Final Acceptance of the Project as provided in Exhibit B-1, § 6.4 have been satisfied.

§ 5.2.2 The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:

« Within sixty (60) days of Final Acceptance in accordance with Exhibit B-1, § 6.4 »

§ 5.3 Interest

Payments due and unpaid in accordance with the Contract Documents shall bear interest as specified in Chapter 39.76 RCW. Except as otherwise required by applicable law, Claims by Contractor that are disputed by Owner in good faith are not “due” under this Section unless and until they are adjudged due by a final, non-appealable decision in the dispute resolution process.

§ 5.4 Prevailing Wages

§ 5.4.1 Applicable Prevailing Wage

- [☒] Washington State Prevailing Wage
[☐] Davis-Bacon Act
[☐] HUD-Determined Prevailing Wage
[☐] Higher of State or Federal

§ 5.4.2 Contractor must comply with all applicable prevailing wage requirements. Effective dates and wage rates have been attached to this Contract and enumerated in Section 9.1 as Exhibit C.

§ 5.4.3 If any of the boxes in Section 5.3.1 have been checked, prevailing wage rates shall be posted at the jobsite.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Intentionally deleted.

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

☐ Arbitration pursuant to Section 15.4 of AIA Document A201–2017

☒ Litigation in a court of competent jurisdiction

☐ Other (Specify)

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

«None »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 **Owner's representative / Notice.** The Owner's representative:
(Name, address, email address, and other information)

« _____ »

« Vanir Construction Management, Inc. »

« 707 S Grady Way, Suite 120 »

« Renton, WA 98057 »

A Notice of Claim as provided in Section 15.1.3, A201 – 2017, or of a termination of the Agreement as provided in Article 14, A201 – 2017, shall be provided to the Owner's representative identified above and to the following by registered or certified mail or hand delivery:

Annie O'Rourke
Director of Acquisition & Development
Peninsula Housing Authority
727 E 8th Street
Port Angeles, WA 98362

The Owner may change the Owner's representative and/or the additional person identified above for receipt of Notice of Claims or termination of the Agreement upon five (5) days' written notice to the Contractor.

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User Notes:

(1484420403)

§ 8.3 Contractor's representative / Notice. The Contractor's representative:
(Name, address, email address, and other information)

<< >>
<< >>
<< >>
<< >>
<< >>
<< >>

Notice of Claims as provided in Section 15.1.3, A201 – 2017 shall be provided to the Contractor's representative.

The Contractor may change the Contractor's representative upon five (5) days' written notice to the Owner.

§ 8.4 Key employees.

The following are Key Employees of the Contractor and the number of hours they are expected to contribute to the Project.

Name	Title	Minimum Weekly Hours Committed to Project
_____	Superintendent	40 hours.
_____	Project Manager/Executive	20 hours.

Owner and Contractor agree that retaining the same Key Employees for the duration of the Project is essential to the timely completion of the Work and the prevention of slippage in the Construction Schedule. If any Key Employee ceases to be committed to the Project as required in the Contract Documents, this failure may be grounds for termination of Contractor for default, unless (a) the Key Employee is no longer an employee of Contractor or (b) extraordinary circumstances outside of the Contractor's control excuse this failure (collectively "Good Cause"). Moving a Key Employee to work on another project without Owner's advance written consent is not Good Cause. Owner has the right to determine whether personnel proposed as substitutes of Key Employees are qualified to work on the Project. Contractor will remove from the Project and replace any personnel assigned to the Project by Contractor, if Owner considers such removal necessary.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, as modified, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

<< >>

§ 8.7 Relationship of the Parties

§ 8.7.1 The Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an

adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

§ 8.7.2 The Owner's Reliance on the Contractor and Subcontractors. The Owner and Contractor acknowledge and agree that (1) all Work performed by the Contractor and Subcontractors shall be performed in the interests of the Owner, (2) the Owner will be relying on the Contractor and Subcontractors to perform their obligations consistent with this Section and (3), as a result, the Contractor and Subcontractors at all tiers shall owe a duty to the Owner to meet the Standard of Care required under this Agreement. The Contractor shall incorporate, and shall cause to be incorporated, into all subcontracts with Subcontractors a provision equivalent to this Section.

§ 8.8 Permits.

Owner shall secure and pay for the building, plumbing, and mechanical permits. Contractor shall cooperate to ensure timely submission of all necessary information for purposes of securing these permits.

Contractor shall secure and pay for electrical permits and all 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.

»

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, as modified;
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, as modified;
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction, as modified;
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

« »

- .5 Drawings

Number	Title	Date
See Exhibit K		

- .6 Specifications

Section	Title	Date	Pages
See Exhibit L			

- .7 Addenda, if any:

Number	Date	Pages
See § 9.1.9 below		

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .8 Other Exhibits:

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

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

« »

[« »] The Sustainability Plan:

Title	Date	Pages

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
See § 9.1.9 below			

.9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

«

Exhibit A – AIA A102 Exhibit A - Insurance Requirements and Bonds, as modified

Exhibit B – AIA A201 – General Conditions

Exhibit B-1 – Supplemental Terms and Conditions

Exhibit C – Prevailing Wage Rates

Exhibit D – Intentionally deleted.

Exhibit E – Schedule of Values dated

Exhibit F – Construction Schedule dated

Exhibit G – Lien and Claim Releases

Exhibit H – Intentionally deleted.

Exhibit I - Allowances dated

Exhibit J –Application for Payment

Exhibit K – Enumeration of Drawings dated

Exhibit L – Specifications – Table of Contents dated

Exhibit M - Preliminary Evergreen Sustainable Design Standards (ESDS) Checklist dated

»

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

« »« »

(Printed name and title)

CONTRACTOR (Signature)

« »« »

(Printed name and title)

NOTICE TO PROCEED

Peninsula Housing Authority
727 E 8th Street
Port Angeles, WA 98362

Project No.: 2026-PHA-015
Project Name: Eklund at Gales
Date:
Location: 2372 E 7th Ave Port Angeles

To the Contractor:
For:

Pursuant to the terms of your Contract, dated _____, for Eklund at Gales:

Contractor is hereby notified to commence Work immediately. Substantial Completion is set forth in the Contract as **12/1/2027**. It is the responsibility of the Contractor to meet the schedule as set forth and in accordance with the terms and conditions of the contract. Failure to comply with the schedule may result in the enforcement of liquidated damages as stated in the contract.

Please note carefully and fulfill the requirements of the General Conditions relative to the submittal and approval of Workman's Compensation and Manufacturers' and Contractors' public liability insurance.

You are informed that **Ms. Sarah T Martinez** has been appointed Contracting Officer and is duly authorized to administer your Contract for, and in the name of, the Peninsula Housing Authority.

Under separate cover, there has been forwarded to you one set of Contract Documents, consisting of the Contract, Performance and Payment Bond, Specifications and Drawings.

Please acknowledge receipt of this Notice to Proceed by signing and dating, and return promptly to this office.

Contractor: _____

By: _____

Title: _____

Date: _____

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PERFORMANCE AND PAYMENT BOND

[_____]
Contractor

[_____]
Bond Numbers

KNOW ALL BY THESE PRESENTS: That we, _____ [Contractor], as Principal, and _____ [Surety], as Surety, all corporations legally doing business in the State of Washington, are hereby held and firmly bound and obligated unto the **PENINSULA HOUSING AUTHORITY** jointly and severally, as well as each of our heirs, executors and administrators, successors and assigns, firmly by these presents in the full sum of the Contract Price of \$_____, including any and all adjustments to the Contract Price, for (1) the faithful performance of the Agreement referenced below, and (2) for the payment of all laborers, mechanics, and subcontractors and material suppliers, and all persons who supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work under and related to the Agreement.

WHEREAS, THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT the Principal entered into a certain Agreement with the **PENINSULA HOUSING AUTHORITY** for **Eklund at Gales** incorporating herein by this reference all of said Construction Documents of the Agreement, as now and as hereinafter amended and modified.

NOW, THEREFORE, if the Principal shall faithfully perform all provisions of such Agreement and pay all laborers, mechanics, subcontractors, and material suppliers, of every tier, including all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work, then this obligation is void, but is otherwise to remain in full force and effect.

Provided, however, that the conditions of this obligation shall not apply to any money loaned or advanced to the Principal or to any subcontractor or other person in the performance of any such work.

IT IS FURTHER DECLARED AND AGREED that whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety, at the request of the Owner, shall promptly remedy the default in a manner acceptable to the Owner.

SIGNED this ___ day of _____, 20__

Principal: _____

By: _____

Title: _____

Address: _____

City/Zip: _____

Telephone: _____

Principal: _____

By: _____

Title: _____

Address: _____

City/Zip: _____

Telephone: _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this Performance and Payment Bond.

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©
ATA

Continuation Sheet

AIA Document G702®, Application and Certificate for Payment, or G732™, Application and Certificate for Payment, Construction Manager as Adviser Edition, containing Contractor's signed certification is attached. Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:

APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO:

[illegible]

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Application and Certificate for Payment

TO OWNER:	PROJECT:	APPLICATION NO:	Distribution to:
		PERIOD TO:	OWNER ☐
FROM CONTRACTOR:	VIA ARCHITECT:	CONTRACT FOR:	ARCHITECT ☐
		CONTRACT DATE:	CONTRACTOR ☐
		PROJECT NOS:	FIELD ☐
			OTHER ☐

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703®, Continuation Sheet, is attached.

1. ORIGINAL CONTRACT SUM \$
2. NET CHANGE BY CHANGE ORDERS \$
3. CONTRACT SUM TO DATE (Line 1 ± 2) \$
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$

5. RETAINAGE:

- a. _____ % of Completed Work
(Columns D + E on G703) \$
- b. _____ % of Stored Material
(Column F on G703) \$

Total Retainage (Lines 5a + 5b, or Total in Column I of G703) \$

6. TOTAL EARNED LESS RETAINAGE \$
(Line 4 minus Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT \$
(Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE \$
9. BALANCE TO FINISH, INCLUDING RETAINAGE
(Line 3 minus Line 6) \$

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this month	\$	\$
TOTAL	\$	\$
NET CHANGES by Change Order	\$	

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: _____
By: _____ Date: _____
State of: _____
County of: _____
Subscribed and sworn to before
me this _____ day of _____
Notary Public: _____
My commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$
(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT: _____
By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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Name of Project		Date	
Prime Contractor		Contract No.	Apprenticeship % Req.
Contractor's Representative		Start Date	End Date

[illegible]

[illegible]

Completed By Name/Title

Email

Approved:

Rejected - Resubmit:

Date:

AIA[®] Document G710[™] – 2017

Architect's Supplemental Instructions

PROJECT: *(name and address)*

CONTRACT INFORMATION:

Contract For:

Date:

ASI INFORMATION:

ASI Number:

Date:

OWNER: *(name and address)*

ARCHITECT: *(name and address)*

CONTRACTOR: *(name and address)*

The Contractor shall carry out the Work in accordance with the following supplemental instructions without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgment that there will be no change in the Contract Sum or Contract Time.

(Insert a detailed description of the Architect's supplemental instructions and, if applicable, attach or reference specific exhibits.)

ISSUED BY THE ARCHITECT:

ARCHITECT *(Signature)*

(Printed name, title, and license number if required)

Date

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AIA® Document G714® – 2017

Construction Change Directive

PROJECT: *(name and address)*

CONTRACT INFORMATION:

Contract For:

Date:

CCD INFORMATION:

Directive Number:

Date:

OWNER: *(name and address)*

ARCHITECT: *(name and address)*

CONTRACTOR: *(name and address)*

The Contractor is hereby directed to make the following change(s) in this Contract:
(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits.)

PROPOSED ADJUSTMENTS

1. The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is:
Lump Sum unchanged \$ 0.00

Unit Price of \$ 0.00 per

Cost, as defined below, plus the following fee: 0.00
(Insert a definition of, or method for determining, cost)

As follows:

2. The Contract Time will be unchanged by (0) days.

NOTE: The Owner, Architect and Contractor should execute a Change Order to supersede this Construction Change Directive to the extent they agree upon adjustments to the Contract Sum, Contract Time, or Guaranteed Maximum price for the change(s) described herein.

When signed by the Owner and Architect and received by the Contractor, this document becomes effective IMMEDIATELY as a Construction Change Directive (CCD), and the Contractor shall proceed with the change(s) described above.

Contractor signature indicates agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this CCD.

ARCHITECT (Signature)

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name, title, and license number if required)

(Printed name and title)

(Printed name and title)

Date

Date

Date



AIA® Document G701® – 2017

Change Order

PROJECT: *(Name and address)*

CONTRACT INFORMATION:

Contract For:

Date:

CHANGE ORDER INFORMATION:

Change Order Number:

Date:

OWNER: *(Name and address)*

ARCHITECT: *(Name and address)*

CONTRACTOR: *(Name and address)*

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

The original Contract Sum was

\$ 0.00

The net change by previously authorized Change Orders

\$ 0.00

The Contract Sum prior to this Change Order was

\$ ###0.00

The Contract Sum will be increased by this Change Order in the amount of

\$ 0.00

The new Contract Sum including this Change Order will be

\$ 0.00

The Contract Time will be unchanged by () days.

The new date of Substantial Completion will be

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

ARCHITECT *(Signature)*

CONTRACTOR *(Signature)*

OWNER *(Signature)*

(Printed name, title, and license number if required)

(Printed name and title)

(Printed name and title)

Date

Date

Date

This page intentionally left blank

Certificate of Substantial Completion**PROJECT:** *(name and address)***CONTRACT INFORMATION:**

Contract For:

Date:

CERTIFICATE INFORMATION:

Certificate Number:

Date:

OWNER: *(name and address)***ARCHITECT:** *(name and address)***CONTRACTOR:** *(name and address)*

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate.
(Identify the Work, or portion thereof, that is substantially complete.)

ARCHITECT *(Signature)**(Printed name, title, and license number if required)**Date Of Substantial Completion***WARRANTIES**

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows:
(Identify the list of Work to be completed or corrected.)

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:

(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

CONTRACTOR *(Signature)**(Printed name and title)**Date***OWNER** *(Signature)**(Printed name and title)**Date*



EXHIBIT G

LIEN AND CLAIM WAIVERS AND RELEASES
IN FAVOR OF _____ (Owner)

CONDITIONAL RELEASE	UNCONDITIONAL RELEASE
The undersigned does hereby acknowledge that upon receipt by the undersigned of a check in the sum of \$ _____ and when the check has been properly endorsed and has been paid by the bank upon which it was drawn, this document shall become effective to release any and all rights of lien and claims of lien, and any and all other claims, including, but not limited to, negligence, breach of contract, delay and impact claims, or otherwise, which the undersigned has or may have, whether known or unknown, on the below-referenced Project and against the Owner related thereto ("Claims"). This release covers: <i>(Check appropriate box)</i> ☐ all progress payments or ☐ all progress payments and final payment for labor, services, equipment, materials furnished and/or Claims through _____, 202__ (Date). <u>Exclusion:</u> This release does not include (1) the undersigned's claims for payment of retainage in accordance with applicable law and the Contract Documents or (2) Claims timely and properly submitted in accordance with the Contract Documents and included on the Proposed Change Order Log. In consideration of the payment above, the undersigned agrees to defend and hold harmless the Owner from any claims made by the undersigned and/or its material suppliers, subcontractors, employees, servants, agents or assigns of such persons against the Project. Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned. I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF WASHINGTON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT. Dated this ____ day of _____, 202__ Company Name: _____ SIGNATURE: _____ (Authorized Corporate Officer/Partner/Owner) (Title) _____ Project Name: _____ Project Address: _____	The undersigned does hereby acknowledge that the undersigned has been paid and has received payments in the sum of \$ _____ for, labor, services, equipment or materials furnished to the below-referenced Project and does hereby release any and all rights of lien and claims of lien, and any and all other claims, including, but not limited to, negligence, breach of contract, delay and impact claims, or otherwise, which the undersigned has or may have, whether known or unknown, on the below-referenced Project and against the Owner related thereto ("Claims"). This release covers: <i>(Check appropriate box)</i> ☐ all progress payments or ☐ all progress payments and final payment for labor, services, equipment, materials furnished and/or Claims through _____, 202__ (Date). <u>Exclusion:</u> This release does not include (1) the undersigned's claims for payment of retainage in accordance with applicable law and the Contract Documents or (2) Claims timely and properly submitted in accordance with the Contract Documents and included on the Proposed Change Order Log. In consideration of the payment above, the undersigned agrees to defend and hold harmless the Owner from any claims made by the undersigned and/or its material suppliers, subcontractors, employees, servants, agents or assigns of such persons against the Project. NOTICE: THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE THE CONDITIONAL RELEASE FORM. I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF WASHINGTON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT. Dated this ____ day of _____, 202__ Company Name: _____ SIGNATURE: _____ (Authorized Corporate Officer/Partner/Owner) (Title) _____ Project Name: _____ Project Address: _____

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AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Eklund at Gales
2372 E 7th Avenue
Port Angeles, WA 98362

THE OWNER:

(Name, legal status and address)

Peninsula Housing Authority
727 E 8th Street»
Port Angeles, WA 98362
(360) 452-7631

THE ARCHITECT:

(Name, legal status and address)

Rice Fergus Miller
275 5th St, Suite 100
Bremerton, WA 98337
(360) 362-0944

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- 2 OWNER
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- 5 SUBCONTRACTORS
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- 7 CHANGES IN THE WORK
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- 11 INSURANCE AND BONDS

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes 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 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™–2017, Guide for Supplementary Conditions.

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- 13 MISCELLANEOUS PROVISIONS
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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 A101 – 2017 Agreement between the Owner and Contractor, as modified (hereinafter the “Agreement”) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, reports furnished by the Owner for informational purposes only, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor’s bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. No course of conduct or dealings between Owner and Contractor, no express or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alteration of or addition to the Work shall be the basis of any claim to amend or modify the Contract. 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, except that Owner may have certain third-party beneficiary rights under subcontracts, as expressly provided in Section 5.3 below, and each Subcontractor shall warrant to the Owner that its work will be performed in accordance with the Standard of Care as provided in Section 2.2 of the Agreement and will meet the standards of Section 3.5 of this A201-2017 General Conditions of the Contract for Construction (the “General Conditions”); (3) between the Owner and the Architect or the Architect’s consultants; or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect’s duties.

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect’s consultants, or by the Owner’s other design 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 Intentionally deleted.

§ 1.1.9 Knowledge

The terms “knowledge”, “known”, “knowing”, “recognize”, “infer”, and “discover”, their respective derivatives and similar

terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows, recognizes, infers, or discovers, or which in performing its duties and services hereunder, consistent with the Standard of Care, should have known, recognized, inferred, or discovered.

§ 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. The Work includes all construction and services that prime contractors and subcontractors meeting the Standard of Care would infer from the Contract Documents and inspections of existing conditions as necessary for the proper and timely completion of the Project in accordance with the Contract.

§ 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 Article 7 of Exhibit B-1, "Supplemental Terms and Conditions," shall govern the order of precedence in the event of any conflict among the Contract Documents.

§ 1.2.5 To avoid or to mitigate disruption to the Project, in the event of duplications, inconsistencies, or conflicts among the Contract Documents, the Contractor shall promptly notify the Owner in writing of the duplication, inconsistency, or conflict and obtain and follow the Owner's direction as to its resolution before proceeding with any affected Work, except as specifically directed in writing by the Owner.

§ 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. Owner and Contractor acknowledge that each party and its counsel have had an opportunity to review this Contract and raise any questions regarding clarification or interpretation thereof and agree that no ambiguity will be construed against either party based on a claim that the party drafted the ambiguous language.

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

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

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of

Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

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

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

§ 1.7 Digital Data Use and Transmission

Intentionally deleted.

§ 1.8 Building Information Models Use and Reliance

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

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Evidence of the Owner's Financial Arrangements

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

§ 2.2.2 Intentionally deleted.

§ 2.2.3 Intentionally deleted.

§ 2.2.4 Intentionally deleted.

§ 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 of these General Conditions or Section 8.8 of the Agreement, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

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

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner may furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site, each for reference purposes only. 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. The Contractor shall verify that the information provided is acceptable to the Contractor. Should the Contractor identify that any information provided is not acceptable to the Contractor, the Contractor shall immediately notify the Owner and shall not commence or perform any Work which may be affected by the unacceptable information except as specifically directed in writing by the Owner.

§ 2.3.5 After Owner's receipt of written request by Contractor, 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 reasonably necessary and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

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

§ 2.4 Owner's Right to Stop the Work

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

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or fails or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default, failure, or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default, failure, or neglect. The Owner may, pursuant to Section 9.5.1, deduct payment from any amount otherwise owed, in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15 or will waive its right to dispute any amounts Owner has so incurred.

§ 2.6 Owner Rights Generally

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be cumulative and in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the Owner shall constitute a waiver of any right of or duty owed to the Owner under the Contract Documents, nor shall any such action or failure to act constitute an approval of or acquiescence by the Owner to any breach or non-compliance with the Contract Documents.

ARTICLE 3 CONTRACTOR

§ 3.1 General

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

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

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor believes the Contract Documents are sufficient to have enabled the Contractor to determine the Contract Sum, to enter into the Contract, and to accomplish the Work for an amount not in excess of the Contract Sum and within the Contract Time. The Contractor further represents and warrants that prior to execution of the Contract it has had a reasonable opportunity to visit and examine the Project site and all readily ascertainable conditions affecting the Work; is sufficiently familiar with all of the conditions thereon affecting the same, and the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents; and that any errors, inconsistencies, or omissions discovered have been reported to the Owner. The Contractor may assume that the locations of any hidden utilities, plumbing or electrical runs indicated in the surveys, reports, or Contract Documents are shown in approximate locations only. Failure of the Contractor to fully acquaint itself with field conditions or any provision(s) of the Contract Documents shall not in any way relieve it from the responsibility to perform the Work in accordance with the Contract Documents and within the Contract Sum and Contract Time.

§ 3.2.2 The Contractor may make its own interpretations, evaluations, and conclusions as to the nature of subsurface site conditions, the difficulties of making and maintaining required excavations, and the difficulties of doing other work affected by geotechnical conditions, and shall accept full responsibility for making assumptions that differ from reports provided by the Owner. The Contractor shall be entitled to rely on any reports provided by the Owner that are included in the Contract Documents, provided that the Contractor shall accept full responsibility for, and the Owner disclaims any responsibility or liability for, any errors or omissions in reports that were either (i) discovered by the Contractor or its Subcontractor(s) of any tier and not reported in writing to the Owner or (ii) reasonably discoverable by the Contractor or its Subcontractor(s) of any tier in the exercise of care and diligence in such review of the reports. The Contractor may conduct other investigations and tests it deems appropriate.

Contractor warrants that it has had the opportunity prior to execution of the Agreement to carefully review and compare to its satisfaction the various parts of the Contract Documents including, without limitation, the Drawings and Specifications, and that its review is consistent with the Standard of Care. Based upon such review, Contractor agrees that it shall not be entitled to, and hereby conclusively waives, any right to an adjustment in the Contract Sum or the Contract Time arising from errors, omissions, conflicts, ambiguities, inconsistencies, lack of coordination, or non-compliance with legal requirements, which prior to execution of the Contract were either (i) discovered by Contractor or its Subcontractor(s) of any tier and not reported in writing to the Owner or (ii) reasonably discoverable by the Contractor or its Subcontractor(s) of any tier in the exercise of care and diligence in such review of the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any such 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 3.2.1, 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 3.2.1, 3.2.2, or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for

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

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

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no circumstances shall a section of Work proceed prior to preparatory work having been completed and made satisfactory to receive the related Work. The Contractor shall ensure that each Subcontractor has carefully examined all preparatory work that has been executed to receive its Work and has notified the Contractor (who shall notify the Owner and Architect in writing) of any defects or imperfections in preparatory work that will or may, in any way, affect satisfactory completion of the Work. The lack of such notification shall constitute an acceptance of preparatory work and a waiver of any later Claim or defect with respect thereto.

§ 3.3.4 The Contractor shall perform such detailed examination, inspection and quality surveillance of the Work as will ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents, including the Drawings and Specifications. The Contractor shall coordinate all Work so as to avoid delay or revision. The Contractor shall be responsible for examination, inspection, and quality surveillance of all Work performed by any Subcontractor of any tier. The Contractor shall determine when it is necessary to perform, and shall perform, tests to verify its inspections or to ensure that the Work is being completed in strict accordance with the Contract Documents. The Contractor shall coordinate its Work with that of all others on the Project, including deliveries, storage, installations, and construction utilities.

§ 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. The Owner retains absolute discretion in either approving or rejecting a proposed substitution. By presenting a proposed substitution for Owner's consent, Contractor represents and warrants that the substitute is suitable for its intended purpose, of merchantable quality (if a product or material), satisfies all the performance requirements of the original material, product, or other item that it would replace if approved, and otherwise meets all the requirements of the Contract Documents. All requests for substitutions shall be made in writing and sufficiently in advance of the performance of the subject Work to permit a reasonable time for evaluation and written response by the Owner without delaying the Contract Time. Owner's refusal to accept a substitute shall not be a basis of any Claim by Contractor against Owner. Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Owner's approval of a substitute.

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

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Contractor is responsible for strictly complying with all applicable manufacturer installation recommendations and will take measures to preserve all manufacturer warranties. To the

extent that Contractor provides or performs any professional services, Contractor also warrants that those services will be performed in keeping with sound architectural, engineering, or other applicable professional practices. 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. The Contractor shall assign to the Owner, and shall deliver to the Owner, all manufacturers' warranties prior to Substantial Completion or release of retainage, whichever is earlier. All guarantees or warranties of materials furnished to the Contractor or Subcontractor by any manufacturer or supplier shall be deemed to run for the benefit of the Owner. The Contractor shall and does hereby assign to the Owner the benefits of all warranties and guarantees of all Subcontractors, but such assignment shall not relieve the Contractor of its warranty obligations to the Owner under this Agreement and other Contract Documents. The Contractor shall deliver to the Owner via the Architect three (3) bound volumes of all guarantees and warranties on materials furnished by all manufacturers and suppliers to the Contractor and/or its Subcontractors, with duly executed instruments properly assigning the guarantees and warranties to the Owner. The guarantees and warranties in each bound volume shall be grouped together by trade and properly indexed. The Contractor shall obtain from manufacturers and suppliers guarantees and warranties according to the Contract terms. The documentation must clearly describe proper operational and maintenance activities required to sustain said warranties.

§ 3.5.3 The Contractor represents and warrants the following to the Owner, in addition to any other representations and warranties contained elsewhere in the Contract Documents:

- .1 its Work will strictly comply with the Contract Documents;
- .2 it shall strictly comply with and satisfy every law, statute, ordinance, order, rule, regulation, or requirement of the United States and the state, county, city, and political subdivisions in which the Project is located or which exercises jurisdiction over the Project, and any agency, department, commission, board, bureau or instrumentality of any of them which exercises jurisdiction over the Project applicable to performance of the Work;
- .3 its Work will strictly comply with all applicable building codes and standards including but not limited to International Building Codes, state and local building codes, and established journeyman quality standards;
- .4 it is financially solvent, able to pay its debts as they mature and possesses sufficient working capital to complete the Work and perform its obligations hereunder;
- .5 it will perform the Work in a skillful and workmanlike manner in accordance with the Standard of Care;
- .6 it is able to furnish the tools, materials, supplies, equipment, and labor required to complete the Work and perform its obligations hereunder;
- .7 it is authorized to do business in the state of Washington and properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and over the Work and the site of the Project; and
- .8 its execution of the Agreement and its performance hereunder are within its duly authorized power.

§ 3.5.4 The foregoing warranties are in addition to, and not in lieu of, any and all other responsibilities and obligations imposed upon the Contractor by law with respect to the Contractor's Work. All representations and warranties set forth in this Agreement, including, without limitation, this Section 3.5 shall survive the final completion of the Work or the earlier termination of this Agreement. The Contractor acknowledges that the Owner is relying on these representations and warranties in entering into this Agreement with Contractor.

§ 3.6 Taxes

The Contractor shall pay 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, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

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

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

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection. There shall be no allowances for labor.

§ 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. In order to increase or exceed an allowance, Contractor must first provide 30 days' written notice of the need to increase the allowance, explaining the need for the increase. An allowance may not be transferred or aggregated with other allowances without prior written consent of Owner. The failure to provide timely written notice shall constitute an absolute and complete waiver and release of any right to exceed an allowance.

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

§ 3.9 Superintendent

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

§ 3.9.2 The Contractor warrants that its personnel and each of its Subcontractors will have the proper qualifications, experience, and competency to professionally carry out the Work. Contractor will remove from the Project any personnel or Subcontractor assigned to the Project if Owner considers such removal necessary.

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

§ 3.9.4 The superintendent shall keep a daily journal describing all construction activity, weather conditions, persons entering the job site (including hours worked), manpower lists, problems encountered, deliveries received, problems or conflicts in the field, and other information important to the construction process. The daily journal shall be available at all times to the Owner and Architect, and upon request copied in its entirety and delivered to each. All photos/videos and all other records documenting progress, quality of work, concealed work, etc. shall be available for copy by the Owner and Architect upon request.

§ 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 "Construction Schedule"). The Construction Schedule shall be detailed in critical path method (CPM) format satisfactory to the Owner. 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 Contractor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and promptly advise the Owner of any delays or potential delays. The Construction Schedule cannot be modified without the written approval of the Owner. Schedule progress updates shall be submitted in electronic format if requested by the Owner.

§ 3.10.1.1 In addition to the above requirements, Contractor must comply with all scheduling requirements contained in an exhibit to the Agreement.

§ 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 falls behind for reasons which are solely attributable to the Contractor, the Contractor shall take such steps as may be necessary to improve progress. Such steps may include an increase in the number of construction workers, the number of shifts and/or overtime operations, days of work and/or otherwise, subject to conformance with jurisdictional restrictions, all without increasing the Contract Sum or Contract Time. Contractor recognizes the importance to the Owner of completing the Project on schedule and that time is of the essence. If Contractor falls behind schedule for reasons not solely attributable to Contractor, Contractor must accelerate its forces in a reasonable manner if so directed by Owner in writing, but may submit a Claim in accordance with Article 15 for direct acceleration costs. Any acceleration costs that are not the result of an express written directive from the Owner are at Contractor's own expense. Acceleration costs incurred recovering the schedule from delay are potentially reimbursable only to the extent Contractor is not responsible for current, prior, or concurrent delay.

§ 3.10.4 The Contractor shall promptly notify the Owner and the Architect in writing of any proposed changes in the schedule due to the occurrence of any event which could delay completing the Project within the Contract Time, stating the cause of the delay, the expected duration of the delay, the anticipated effect of the delay on the schedule, and the action being taken to correct the delay. Notification of potential delay does not constitute a change in the Contract Time (which may only be accomplished via a Modification) or Notice of Claim.

§ 3.10.5 The Contractor's refusal to accelerate its work in accordance with Owner's direction is a material breach of this Agreement and a basis for Owner terminating Contractor for cause.

§ 3.10.6 The Contractor's overall schedule shall include sufficient float to accommodate time impacts to critical path activities (e.g., roofing, slab pours) that are cancelled or postponed due to adverse normal weather during the time frame these activities were originally scheduled.

§ 3.11 Documents and Samples at the Site

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

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

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

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

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

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

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

be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

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

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

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

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

§ 3.13 Use of Site

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

§ 3.13.2 The Contractor shall assign space to its Subcontractors for storage of their materials, and storage of all materials shall be confined to those spaces. Should the Owner direct the Contractor at any time to move such materials, because they are interfering with the Work, pose a legitimate safety concern, or are located outside of the confined spaces, the Contractor shall move the same as directed by the Owner upon reasonable notice, which cost shall be borne solely by the Contractor and not the Owner.

§ 3.13.3 Contractor shall protect from damage all existing structures, equipment, improvements, utilities, and vegetation at or near the Project site and on adjacent property. Contractor shall repair at Contractor's expense any damage, including that to the adjacent property, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage within a reasonable period of time, not to exceed thirty (30) days, Owner may have the necessary work performed and charge the cost to Contractor.

§ 3.13.4 No signs shall be erected or maintained on the Project site displaying the name of the Contractor or its Subcontractors without the prior written consent of the Owner.

§ 3.13.5 Construction shall not commence prior to 7:30 a.m. and shall finish by 6 p.m. No work shall be conducted during weekends or holidays, unless authorized in writing by Owner.

§ 3.13.6 Contractor shall provide access to and from the site as required by law and by Owner, and will:

- .1** Keep all exits required by code open during construction period and provide temporary exit signs if exit routes are temporarily altered.

.2 Not obstruct roadways, sidewalks or other public ways without permit.

§ 3.13.7 Contractor will be responsible for the security of its workers, the Work, and all materials and equipment. Except as otherwise expressly stated in the Contract Documents, Owner will have no duty to take security measures at the Project site. All loss or damage (whether by theft, vandalism, fire, flood, or other casualty) to Contractor's or any of the Contractor's property will be borne solely by Contractor, and Contractor releases Owner from any responsibility or liability for such loss or damage. All small tools and construction equipment belonging to Contractor will be clearly identified as such.

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

§ 3.18.1 The parties specifically and expressly agree that, to the fullest extent permitted by law, the Contractor shall indemnify, defend, reimburse, and hold harmless the Owner, the Owner's representative, the Owner's consultants and Separate Contractors, Architect, Architect's consultants, and their respective officers, agents, employees, and volunteers (individually each an "Indemnified Party" and collectively the "Indemnified Parties"), from and against any and all claims; liability, penalties; fines; costs; damages; losses; expenses, including but not limited to attorneys' fees; actions; and causes of action arising out of or resulting from, or alleged to arise out of or to result from either Contractor's breach of any representation, warranty, or covenant in this Agreement, and/or from the performance or non-performance of the Work (hereinafter singularly and collectively referred to as "Indemnity Claims"), but only to the extent directly or indirectly caused by the negligence or willful misconduct of the Contractor, a Subcontractor or supplier of any tier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable. Contractor, at Contractor's sole expense, shall promptly dispose of Indemnity Claims, defend all lawsuits and similar proceedings filed against an Indemnified Party on the account of Indemnity Claims, pay all awards and judgments rendered against an Indemnified Party in connection therewith, and reimburse each Indemnified Party for all reasonable expenses incurred by such Indemnified Party in connection with Indemnity Claims and lawsuits and arbitrations and similar proceedings including, but not limited to, attorneys' fees, expert witness fees, court costs, arbitration costs and all other reasonable costs (not limited to statutory costs). The parties specifically and expressly agree that if Indemnity Claims are caused or alleged to be caused in part by any joint or concurrent negligent act (either active or passive)

or omission by an Indemnified Party, the Contractor shall indemnify, defend, and hold harmless such Indemnified Party, as provided above, from such Indemnity Claims to the extent such Indemnity Claims arise out of or result from the negligence or willful misconduct of the Contractor or its Subcontractors or suppliers of any tier, or anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, or anyone for whose acts the Contractor may be responsible or liable. In no event shall the Contractor be obligated to defend, indemnify, or hold harmless an Indemnified Party from Indemnity Claims which arise out of or result from the sole negligence of such Indemnified Party or its agents, servants, or independent contractors who are directly responsible to such Indemnified Party, excluding the Contractor herein.

§ 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. For the sole purpose of effecting the indemnity, defense and hold harmless obligations hereunder and not for the benefit of the Contractor's employees or any third parties unrelated to an Indemnified Party, the Contractor specifically and expressly waives any immunity that may be granted it under any applicable Workers' Compensation Act, disability benefit acts or other employee benefit acts, including Title 51 RCW.

THE OWNER AND THE CONTRACTOR ACKNOWLEDGE THAT THE ABOVE WAIVER WAS MUTUALLY NEGOTIATED BY THE PARTIES. OWNER'S INITIALS: () CONTRACTOR'S INITIALS: ()

§ 3.18.3 Contractor's duty to defend the Indemnified Parties is separate from and independent of Contractor's duty to indemnify the Indemnified Parties and begins immediately upon tender of a claim to Contractor that allegedly arises out of or is related to Contractor's Work. If any Indemnified Party has incurred any legal fees or other costs in defending such claims, then Contractor agrees immediately to reimburse Indemnified Parties for all such legal fees and defense costs reasonably incurred after such written tender of a claim to Contractor. It is the parties' intention that the Indemnified Parties (or any of them) will be entitled to obtain summary adjudication of Contractor's duty to defend the Indemnified Parties at any stage of any claim, action, or suit within the scope of this Section 3.18.3. Contractor's obligations in Section 3.18 survive termination of the Agreement.

ARTICLE 4 ARCHITECT

§ 4.1 General

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

§ 4.1.2 Intentionally deleted.

§ 4.2 Administration of the Contract

§ 4.2.1 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

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 and consultants retained by Owner shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Intentionally deleted.

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

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

§ 4.2.8 The Architect 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 and 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.

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

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

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

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

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information. Contractor will submit requests for information in a timely, orderly, and coordinated fashion to allow time for Architect to respond and allow for the orderly progression of the Work. Before submitting a request for information,

the Contractor will carefully review the Contract Documents to ensure the information it intends to request hasn't already been provided. Costs incurred reviewing requests for information that are excessive, or which demonstrate Contractor has not carefully reviewed the Contract Documents, will be assessed against Contractor, if Contractor, after receiving written notice from Owner to stop such practice, continues to do so.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

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

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

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

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

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

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

§ 5.2.5 Contractor shall not contract with any Subcontractor listed as debarred or suspended under either federal or state debarment and suspension lists.

§ 5.3 Subcontractual Relations

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

In addition to the foregoing, each agreement between Contractor and a Subcontractor must (without limitation):

- .1 Include a requirement that the Subcontractor procure all insurance coverage (including all additional insured endorsements) required by the Contract Documents, except at commercially prudent limits in light of the scope of services provided by Subcontractor;
- .2 Require Subcontractor to indemnify Contractor and Owner in the same manner that Contractor must indemnify Owner;
- .3 Provide for the removal of unfit personnel as provided under the Contract Documents;
- .4 Include claim notification requirements, allowing Contractor to reject untimely/undocumented claims for additional compensation and time, and allow Contractor to withhold payments based on Subcontractor's breach of its obligations.
- .5 Include default, suspension, and termination for cause and convenience clauses that mirror the respective clauses in the Contract Documents;
- .6 Not include any liability limitation unless approved in advance by Owner in writing; and
- .7 Be presented to Owner for approval as to form, which approval will not be unreasonably withheld, and name Owner an intended beneficiary of (but not a party to) the subcontract, with ability to enforce the subcontract, including all warranties, against Subcontractor; and
- .8 Permit the Owner to conduct an audit as provided in Section 13.6 below.

§ 5.4 Contingent Assignment of Subcontracts

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

- .1 assignment is effective only after termination of the Contract by the Owner 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 only those obligations of the Contractor under the subcontract arising after the date of the assignment and for undisputed payment obligations pending from the payment application immediately preceding the date of assignment. The Owner's assumption of any subcontract does not diminish the Owner's rights under the Contract Documents.

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

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors.

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

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

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

§ 6.2 Mutual Responsibility

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

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

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

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

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

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

§ 7.2 Change Orders

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

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

§ 7.2.2 The Owner and the Contractor agree that the adjustments to the Contract Sum and Contract Time, if any, provided by a Change Order are the total and complete compensation and remedy for a change in the Work. The intention of the parties is that the Contractor will have thought through all anticipated effects and impacts on the Contract Sum and Contract Time

(including any effect or impact of the change; any effects or impacts of prior changes in the Work as a whole; all direct and indirect costs of any kind or nature, including without limitation delay, inefficiency, productivity loss, and impact costs; and all other cost or damages of any kind), and that such will have been accounted for in the Change Order and not be a basis for any later “cumulative” change order. By submitting cost proposals as part of any request to the Owner, the Contractor warrants to the Owner that the Contractor has fully evaluated the costs and determined such to be fair, reasonable, and proper under the Contract Documents before including them in any proposal for adjustment of the Contract Sum. General reservations of rights in a Change Order by Contractor shall be void unless expressly and specifically confirmed by the Owner in writing in the Change Order. The requirements of this section shall not be modified or waived except by a writing signed by an officer of the Owner expressly referring to this Section 7.2.2 and expressly modifying or waiving the requirements of this Section 7.2.2.

§ 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, the Contract Sum and Contract Time being adjusted accordingly. In the event of a dispute regarding whether a directive, requirement, or condition constitutes or creates a change in the Work, the Contractor may not demand a Construction Change Directive or Change Order as a precondition to performing the disputed Work. The Contractor must diligently prosecute such Work and submit a Notice of Claim in accordance with the terms of this Contract if it believes it is entitled to additional compensation or time.

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

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

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

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

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

Direct costs under this Section do not include any supervisory costs unless Contractor and/or its Subcontractors can clearly and convincingly demonstrate such costs would not have been incurred, but for the Construction Change Directive or event giving rise to the disputed Claim. It also does not include any non-verifiable costs, such as without limitation any job site or home office overhead, Contractor consumables, small tools (less than Five Hundred Dollars (\$500) in value), support vehicles, equipment and represented labor which cannot be attributed directly to one (1) piece of equipment or to one (1) item of the Work.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Sum or Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15, and the quantum of any disputed Claim will be calculated as

provided in Section 7.3.4.

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

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

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

§ 7.3.9 If the Contractor does not agree with the Owner's determination of the effect of the Construction Change Directive on the Contract Time or on the Contract Sum, the Contractor shall deliver a Change Order Request in accordance with the requirements of Article 15. If Contractor fails to timely submit a Change Order Request, then it will be deemed to have accepted the terms proposed in the Construction Change Directive.

§ 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 Owner or Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

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

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

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

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

§ 8.2 Progress and Completion

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

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

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

§ 8.3 Delays and Extensions of Time

§ 8.3.1 Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to a Force Majeure Event, as defined in Paragraph 8.3.3 below, provided it gives Owner a Notice of Disputed Claim in accordance with Article 15. Such extension of the Contract Time shall be net of any delays caused by or due to the fault or negligence of the Contractor or those for whom the Contractor is responsible. In the event of any occurrence likely to cause a delay, the Owner, the Contractor and the Architect shall cooperate in a good-faith reasonable effort to minimize and mitigate the delay impact of any such occurrence. Contractor shall not be entitled to any adjustment in the Contract Sum resulting from a Force Majeure Event. Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner (or persons acting for Owner) and provided the Contractor gives a Notice of Claim in accordance with Article 15. Contractor shall not be entitled to any adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused or contributed to by Contractor or anyone for whose acts Contractor is responsible. Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by a Force Majeure Event or otherwise. Contractor is not entitled to any additional compensation or time for any delay that runs concurrent with a delay for which the Contractor is responsible.

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

§ 8.3.3 As used herein, a Force Majeure Event is an event, circumstance or condition that was unexpected and beyond the control of both parties or their respective contractors, subcontractors, or suppliers at any tier below them. Force Majeure Events includes:

- .1 Act of God or the public enemy;
- .2 Acts or omissions of any government entity (including without limitation permit delays not preclude recovery of damages for delay by either party unattributable to the fault of the Owner or Contractor);
- .3 Fire or other provisions of the casualty for which Contractor or its Subcontractors at any tier were not responsible;
- .4 Quarantine or epidemic;
- .5 Strike or defensive lockout;
- .6 Adverse weather for the period of time, which could not have been reasonably anticipated and had an adverse effect on the scheduled construction; and
- .7 Acts of terrorism.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

§ 9.1.2 Intentionally deleted.

§ 9.2 Schedule of Values

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

§ 9.3 Applications for Payment

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

§ 9.3.1.1 Intentionally deleted.

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

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site and incorporated into 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. However, in no event shall payment be made for materials or other goods not consumed or incorporated into the Work.

§ 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 payment has previously been received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Evaluations for Payment

§ 9.4.1 The Owner will, within seven days after receipt of the Contractor's Application for Payment, either (1) approve payment in the full amount of the Application for Payment; or (2) notify the Contractor of such amount as the Owner determines is properly due, the reasons why any other amounts requested are not properly payable and/or due, and the reasons for withholding payment as provided in Section 9.5.1; or (3) withhold all payment and notify the Contractor why the amount requested is not properly payable and/or due, or the reason for withholding payment as provided in Section 9.5.1.

§ 9.4.2 All payments are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion. The issuance of payment will not be a representation that the Owner 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 material suppliers and other data 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 Payment

§ 9.5.1 The Owner may withhold payment, in whole or in part, to the extent reasonably necessary to protect the Owner, if the Work has not progressed to the point indicated in the Application for Payment or the quality of the Work is not in accordance with the Contract Documents. If the Owner is unable to approve payment in the full amount of the Application, the Owner will notify the Contractor as provided in Section 9.4.1. The Owner may also withhold payment or, because of subsequently discovered evidence, may nullify the whole or a part of a payment previously issued, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

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

§ 9.5.2 If the Contractor disputes the Owner's decision regarding an Application for Payment, in whole or in part, the Contractor must submit a Claim in accordance with Article 15.

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

§ 9.5.4 If the Owner withholds 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 Contractor, and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 The Owner shall make payment in the manner and within the time provided in the Contract Documents.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than ten (10) 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 Owner 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 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 (7) days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

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

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

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

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

§ 9.7 Failure of Payment

If the Owner does not approve payment or provide notice of denial or withholding as required by Section 9.4.1, through no fault of the Contractor, or if the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents the amount approved by the Owner for payment, then the Contractor may, upon seven additional days' notice to the Owner, 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, and all requisite governmental approvals have been secured, so that the Owner can occupy or utilize the Work for its intended use.

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

§ 9.8.3 Upon receipt of the Contractor's list, the Owner and Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Owner or Architect. In such case, the Contractor shall then submit a request for another inspection by the Owner and Architect to determine Substantial Completion. The Contractor shall pay the costs of all re-inspections, including without limitation, the Architect's fees, if any, for any re-inspection(s).

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Contractor shall submit a written list of any and all previously submitted but unresolved Claims no later than fourteen (14) days after Substantial Completion. Any Claim not identified (other than for retainage or unpaid base contract work) shall be deemed waived.

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

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Owner and 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 Owner.

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

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

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and 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 notify the Owner in writing 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. The Architect's written notification to the Owner under this Section 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 Owner all information and documentation required by Section 6.4 of Exhibit B-1, Supplemental Terms and Conditions, including without limitation (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

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

§ 9.10.4 The Contractor's request for release of retainage will be included in its final Application for Payment. As a condition precedent to the release of any retainage, the Contractor shall assemble for the Owner bound copies of all operation, maintenance, and warranty data from all manufacturers whose equipment is installed in the Work. Owner may withhold from retainage to be released 150% the anticipated cost of Work that is incomplete or not in accordance with the Contract Documents.

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall be solely and completely responsible for conditions of the project site, including safety of all persons and property, during performance of the Work. The Contractor shall maintain the project site and perform the Work in a manner that meets statutory and common law requirements for the provisions of a safe place to work. This requirement shall apply continuously and not be limited to working hours. Any review by the Owner or Architect of the Contractor's performance shall not be construed to include a review of the adequacy of the Contractor's safety measures in, on or near the site of the Work.

§ 10.1.2 The Contractor shall develop a specific safety program for the Project, which the Contractor shall submit to the Owner and the Architect prior to the commencement of Work. The Contractor shall update the safety program on a monthly basis and provide the updates to the Owner and Architect. The safety program shall specifically address worker and public safety as related to the Project. The Contractor shall implement, monitor, and maintain the safety program in full compliance with all applicable laws. The Contractor shall have on staff a qualified safety officer who shall provide guidance and direction to the Contractor's staff concerning safety-related issues. The safety officer shall inspect the Project at least weekly.

§ 10.1.3 No action or inaction of the Owner or the Architect relating to safety or property protection or a violation thereof will (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or of sole liability for the consequences of said violation; (2) impose any obligation upon the Owner or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's compliance with the requirements of this Article 10; (3) impose any continuing obligation upon the Owner or Architect to ensure the Contractor performs the Work safely; (4) affect the Contractor's sole and complete responsibility for performing the Work safely or the Contractor's responsibility for the safety and welfare of its employees; or (5) affect the Contractor's responsibility for the protection of persons and property.

§ 10.2 Safety of Persons and Property

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

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

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

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

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

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

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

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

§ 10.2.8 Injury or Damage to Person or Property

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

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered

on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

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

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

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

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

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

§ 10.4 Emergencies

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

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

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

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

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

§ 11.2 Owner's Insurance

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

§ 11.2.2 Intentionally deleted.

§ 11.2.3 Intentionally deleted.

§ 11.3 Waivers of Subrogation

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

§ 11.3.2 Intentionally deleted.

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

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 Intentionally deleted.

§ 11.5.2 Intentionally deleted.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

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

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

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

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

§ 12.2.2.3 The one-year period for correction of Work shall be extended by corrective Work performed by the Contractor pursuant to this Section 12.2, but only with respect to the corrective Work performed.

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

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

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

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

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

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither

party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment. Owner's assignee must assume all of the obligations of the Owner under the Contract Documents which are so assigned, and Owner shall be released from all liability arising subsequent to the date of the assignment, with respect to any portion of the Contract assigned to said assignee.

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

§ 13.4 Tests and Inspections

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

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

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

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

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

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

§ 13.5 Interest

Payments to Contractor due and unpaid under the Contract Documents shall bear interest in accordance with Chapter 39.76 RCW. Payments to Owner due and unpaid 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.

§ 13.6 Records

The Contractor and Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and evidence relating or pertaining to costs and/or performance of the Contract to such extent and in such detail as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges and other amounts of whatever nature. The Contractor shall preserve these records for a period of six (6) years following the date of Substantial Completion under the Contract. Within seven (7) days of the Owner's request, both during the Project and for six (6) years following Substantial Completion, the Contractor and Subcontractors of any tier shall make available at their office during normal business hours all records for inspection, audit and reproduction (including electronic reproduction) by the Owner or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract.

§ 13.7 Audit

The audit rights in this Section are in addition to any audit rights available to the Owner provided elsewhere in the Contract Documents. Contractor shall permit the Owner to audit its books to the extent that such audit relates to the Work of this Contract (including without limitation any changed Work), and shall require all Subcontractors to permit Owner to audit their books as such audit relates to such Work for the purposes of determining the correctness and allowability of charges made pursuant to this Contract and to confirm the Work conforms with the Contract Documents. The Contractor shall produce, and shall require Subcontractors to produce, any and all data relating to the Work which the Owner may request for any such purpose. The Contractor shall keep, and shall require all Subcontractors to keep, such full and detailed accounts as may be necessary to reflect its operations with respect to such charges and extras, and the system adopted shall be such as is satisfactory to the Owner. The Owner, its officers, agents, and employees shall be afforded access at all reasonable times to the Contractor's and Subcontractors' books, correspondence, instructions, receipts, vouchers, memoranda and records of all kinds, relating to all Work under this Contract as well as to changes in the Work and extras. All records of the Contractor shall be maintained in accordance with generally accepted accounting procedures, consistently applied. If any inspection by the Owner of the Contractor's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and any other data relating to the Contract Documents reveals an overcharge, the Contractor shall reimburse the Owner upon demand an amount equal to one hundred percent (100%) of such overcharge. The cost of the audit will be paid for by Owner unless the audit reveals an overcharge of more than one percent (1%) of the billing(s) for the matter(s) subject to audit, in which case the Contractor will pay for all costs associated with the audit. The timely production of audit files are critical to the success of this Project.

§ 13.8 Survival

The provisions of this Agreement which are intended to extend beyond its termination including without limitation the duty to defend, the liability, indemnity, warranty, termination, and confidentiality provisions, and the provisions applicable to the enforcement of those provisions and/or the enforcement of rights and obligations incurred hereunder which are not fully discharged prior to the termination of this Agreement, will survive termination to the extent necessary to effect the intent of the parties and/or enforce such rights and obligations.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Suspension and Termination by the Contractor

§ 14.1.1 The Contractor may suspend the Work for the following reasons:

- .1** Because the Owner has not approved payment or notified the Contractor of the reason for denial or withholding as provided in Section 9.4.1; or
- .2** Because the Owner has not made approved payment within the time stated in the Contract Documents.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less. The Contractor may terminate the Contract because the Owner has repeatedly failed to pay approved amounts or notify the Contractor of the reason(s) for denial or withholding of payment as provided in Section 9.4.1, or because the Owner repeatedly has not made payment of approved amounts within the time stated in the Contract Documents; however, as a condition precedent to Contractor's right to terminate under this Section the Contractor must have suspended the Work, as provided by Section 14.1.1, for no less than forty-five (45) days, and provided timely notice of such suspension.

§ 14.1.3 If one of the reasons described in Section 14.1.2 exists, the Contractor may, upon thirty (30) days' notice to the Owner and Architect, which thirty-day period is a cure period for the benefit of the Owner, terminate the Contract and recover

from the Owner payment for Work executed and costs incurred by reason of such termination.

§ 14.1.4 Intentionally deleted.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.
- .5 is adjudged bankrupt or insolvent or makes a general assignment for the benefit of Contractor's creditors, or a trustee or receiver is appointed for Contractor or for any of its property, or files a petition to take advantage of any debtor's act, or to reorganize under bankruptcy or similar law.

§ 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 seven (7) days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

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

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. Contractor acknowledges that in the event of a termination of this Contract by the Owner for cause, Owner may enter into a fixed price, turnkey, cost plus, or other type of contract for the completion of the Project, that such contract may require the replacement contractor to perform all such work on an accelerated basis using multiple shifts and overtime, that such contract may require such contractor to warrant any Work performed by Contractor prior to termination of this Contract, and that, as a result thereof, the cost to complete the Project may greatly exceed the cost hereunder.

§ 14.2.5 A termination for cause by Owner under this Section that is adjudged unlawful or without sufficient cause shall be treated as a termination for convenience.

§ 14.3 Suspension by the Owner for Convenience

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

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1, provided Contractor complies with the Claim notification requirements of Article 15. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract, in whole or in part, for the Owner's convenience and without

cause.

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

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed, as determined by the Contract Documents; costs incurred by reason of the termination, not to exceed Ten Thousand Dollars (\$10,000), including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement. Under no circumstances is Contractor entitled to compensation, including without limitation lost profit, fee, or overhead, for work not performed.

§ 14.4.4 Owner's accrued rights and remedies survive a termination for convenience of this Agreement. If Contractor is in breach of this Agreement and has failed to cure the breach in accordance with the Contract Documents prior to a termination for convenience, then following the termination for convenience, Contractor will remain liable for such breach. In addition, upon receipt of payments provided for in this Section 14.4, Contractor will continue to have an obligation to perform corrective and/or warranty work and to indemnify Owner as provided for in this Agreement.

ARTICLE 15 CHANGE ORDER REQUESTS, 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 (including a Change Order Request, as defined in Section 15.1.3.1 hereof) arising out of or relating to the Contract that is in conflict or remains unresolved following a good faith effort to resolve such dispute or matter in question. Contractor must follow the process set forth in Section 15.1.3 for submitting a Change Order Request as a condition precedent to the right to file a Notice of Claim as set forth in Section 15.1.3.3, the intent being that Contractor is to attempt to first resolve the issue by submitting a Change Order Request and, only if Owner rejects such request may the Contractor proceed to submit a Notice of Claim subject to the provisions of this Article 15. The responsibility to substantiate Change Order Requests or Claims shall rest with the Contractor in the case of a Change Order Request or, in the case of a Claim 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. Owner may withhold and deduct from payment to Contractor costs that Owner incurs to investigate and review a Change Order Request, Claim, or request for information that has no merit and/or includes items that are clearly within the original scope of the Work.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than six (6) years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Change Order Requests and Notice of Claims

§ 15.1.3.1 A "Change Order Request" is a written request for a Change Order. Contractor shall provide any Change Order Request to the Owner within fourteen (14) calendar days of the event giving rise to such Change Order Request or within fourteen (14) calendar days after Contractor first recognized or should have recognized the condition giving rise to the Change Order Request, whichever is later. A Change Order Request must describe the facts giving rise to the Change Order Request and the amount of any request for adjustment of the Contract Sum or Contract Time. Failure to submit a Change Order Request within the applicable period, and/or failure to provide sufficient detail and backup about the Change Order Request, shall constitute an absolute and unconditional waiver, release, and bar of any such Change Order Request and request for adjustment of the Contract Sum or Contract Time for the event or condition giving rise to the Change Order Request.

§ 15.1.3.1.1 The Contractor acknowledges that the Owner may provide each Change Order Request to an inspector for the Washington Community Reinvestment Association (“WCRA”) or other representatives of the Washington State Department of Commerce (“Commerce”) for review, may deny any Change Order Request not approved by WCRA or Commerce, and may condition its approval of any Change Order Request on such criteria, terms, conditions, limitations, and/or obligations as WCRA or Commerce may require.

§ 15.1.3.2 If the Owner rejects a Change Order Request in whole or in part, and the Contractor disputes the Owner’s rejection, then within twenty-one (21) calendar days of the Contractor’s receipt of such notice of rejection, Contractor must submit a Notice of Claim in accordance with Section 15.1.3.1. Failure to do so shall constitute an absolute and unconditional waiver, release, and bar of any such Claim and any request or demand for adjustment of the Contract Sum or Contract Time, or other relief, for the event or condition giving rise to the Claim.

§ 15.1.3.3 For a Claim where a Change Order Request is not applicable, the Contractor must provide a written Notice of Claim within fourteen (14) calendar days of the event giving rise to such Claim or within fourteen (14) calendar days after Contractor first recognized or should have recognized the condition giving rise to the Claim, whichever is later.

§ 15.1.3.4 A Notice of Claim must describe and document the facts giving rise to the Claim, the applicable contractual provision(s) under which the Claim is made, and the methodology for calculating the amount of any request for additional payment or schedule extension. To be effective, a Notice of Claim must be delivered to the Owner’s representative as provided in Section 8.2 of the Agreement. Failure to provide notice for a Claim within the applicable notice period, and/or failure to provide sufficient detail and backup about the Claim, shall constitute an absolute and unconditional waiver, release, and bar of any such Claim and any request or demand for adjustment of the Contract Sum or Contract Time, or other relief, for the event or condition giving rise to the Claim.

§ 15.1.3.5 Within thirty (30) calendar days of the date Contractor properly delivers a Notice of Claim to Owner, the Contractor must provide the Owner with detailed and comprehensive supporting information regarding the Claim, including the following: (1) the date and a complete description of the events giving rise to the Claim; (2) a statement of the nature of all impacts reasonably ascertainable by the Contractor, its Subcontractors, if any, and all others, if any are affected by the Claim event; (3) a detailed breakdown and calculation of the total amount of the adjustment in the Contract Sum (to the extent reasonably ascertainable), if any, sought by the Contractor for itself and others, if any, together with all reasonably available supporting documentation for all costs; and (4) a detailed analysis of the adjustments to the Construction Schedule, if any, sought by Contractor, together with the critical path method (CPM) schedule analysis showing the claimed impact, provided the impacts on the cost and schedule can be reasonably ascertained. If the event giving rise to the Claim is ongoing, the Contractor must update its Notice of Claim with up-to-date information (as required under this Section) every thirty (30) calendar days after the original date of submission of the Notice of Claim. Failure to supplement a Notice of Claim as required by this Section, and/or failure to provide sufficient detail and backup about the Claim, shall constitute an absolute and unconditional waiver, release, and bar of any such Claim and any request or demand for adjustment of the Contract Sum or Contract Time, or other relief, for the event or condition giving rise to the Claim.

§ 15.1.3.6 Potential Change Order (PCO) Log. Each week, the Contractor shall summarize information from each new Change Order Request or Claim on a log (the “PCO Log”). Contractor shall update the PCO Log on a weekly basis, documenting any potential adjustment requested in the Contract Sum or Contract Time, and shall submit the updated PCO Log to the Owner weekly. Owner and Contractor shall review the PCO Log on at least a monthly basis.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Change Order Request or 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 as directed by Owner (including without limitation performance of any construction and services that are the subject of any Change Order Request or Claim) and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 Intentionally deleted.

§ 15.1.5 Change Order Requests and Claims for Additional Cost

If the Contractor wishes to make a Change Order Request or, following the rejection of Change Order Request by Owner, 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 Change Order Request or Claim. Failure to timely provide notice as required by this Section shall constitute an absolute and unconditional waiver, release, and bar of any such Claim and any request or

demand for adjustment of the Contract Sum or Contract Time, or other relief, for the event or condition giving rise to the Claim. However, prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Change Order Requests and Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Change Order Request or, following the rejection of Change Order Request by Owner, a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. Failure to timely provide notice as required by this Section shall constitute an absolute and unconditional waiver, release, and bar of any such Claim and any request or demand for adjustment of the Contract Sum or Contract Time, or other relief, for the event or condition giving rise to the Claim. In the case of a continuing delay, only one Claim is necessary, provided that the Contractor consistently complies with the supplementation requirements of Section 15.1.3.4.

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

§ 15.1.7 Waiver of Claims for Consequential Damages

Subject to the exceptions and limitation below and elsewhere in the Contract Documents, 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, except Owner's termination of Contractor for cause. 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. Notwithstanding the foregoing, Owner is not waiving claims for consequential damages to the extent such damages are (1) covered by the insurance Contractor or its Subcontractors, or both, is required to provide under this Agreement; (2) sought by a third party for which Contractor has an obligation to indemnify Owner; or result from the Contractor's delay to placement in service of the solar facility as required by Section 6.10 of Exhibit B-1, Supplemental Terms and Conditions. In addition, Owner is not waiving claims for extra or extended services by the Architect or other consultants to the extent provided elsewhere in the Contract Documents. Owner's waiver of consequential damages is voidable by Owner as provided in the Agreement.

§ 15.2 Intentionally deleted.

§ 15.2.1 Intentionally deleted.

§ 15.2.2 Intentionally deleted.

§ 15.2.3 Intentionally deleted.

§ 15.2.4 Intentionally deleted.

§ 15.2.5 Intentionally deleted.

§ 15.2.6 Intentionally deleted.

§ 15.2.6.1 Intentionally deleted.

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

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance

with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, 15.1, or elsewhere in the Contract Documents, 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 Intentionally deleted.

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

§ 15.4 Arbitration

§ 15.4.1 Intentionally deleted.

§ 15.4.1.1 Intentionally deleted.

§ 15.4.2 Intentionally deleted.

§ 15.4.3 Intentionally deleted.

§ 15.4.4 Intentionally deleted.

§ 15.4.4.1 Intentionally deleted.

§ 15.4.4.2 Intentionally deleted.

§ 15.4.4.3 Intentionally deleted.

Exhibit B-1

Supplemental Terms and Conditions

These Supplemental Terms and Conditions, Exhibit B-1, are part of the Agreement between the Owner and the Contractor, dated the [] day of [] in the year 2026 (“Agreement”). Capitalized terms not defined herein shall have the meaning ascribed to them in the Agreement.
(In words, indicate day, month and year.)

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

Eklund at Gales
2372 E 7th Avenue
Port Angeles, WA 98362

THE OWNER:
(Name, legal status and address)

Peninsula Housing Authority
727 E 8th Street
Port Angeles, WA 98362
(360) 452-7631

THE CONTRACTOR:
(Name, legal status and address)

TABLE OF ARTICLES

1	Intentionally deleted
2	Intentionally deleted
3	PREVAILING WAGE
4	RETAINAGE
5	PERFORMANCE AND PAYMENT BONDS
6	ADDITIONAL STATE PROVISIONS
7	ORDER OF PRECEDENCE

ARTICLE 1

Intentionally deleted.

ARTICLE 2

Intentionally deleted.

ARTICLE 3 PREVAILING WAGE

§ 3.1 Application of Prevailing Wage

§ 3.1.1 Washington State prevailing wage requirements apply to this Project. Contractor shall comply with all prevailing wage requirements of the Contract Documents and applicable law.

§ 3.2 Washington State Prevailing Wages.

§ 3.2.1 Pursuant to Chapter 39.12 RCW, no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the “prevailing rate of wage” (in effect as of the date that bids are due) as determined by the Industrial Statistician of the Department of Labor and Industries. The schedule of the prevailing wage rates for the locality or localities where this Agreement will be performed is attached to the executed contract and made a part of the Contract Documents by reference as though fully set forth herein. To the extent that there is any discrepancy between the attached schedule of prevailing wage rates and the published rates applicable to the Project under WAC 296-127-011, the applicable published rates shall apply at no increase to the Contract Sum. It is Contractor’s responsibility to ensure that the correct prevailing wage rates be paid. Contractor shall provide each of its subcontractors with a schedule of the applicable prevailing wage rates. Questions relating to prevailing wage data should be addressed to the Industrial Statistician upon request.

Mailing Address:	Department of Labor and Industries Prevailing Wage Office PO Box 44540 Olympia, WA 98504
Telephone:	(360) 902-5335
Facsimile:	(360) 902-5300
Email:	PW1@Lni.wa.gov

§ 3.2.2 As an express condition precedent to processing or approval of an Application for Payment, Contractor and each subcontractor shall provide a Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician in accordance with RCW 39.12.040. The Statement of Intent to Pay Prevailing wages must include Contractor’s registration certificate number, the prevailing rate of wage for each classification of workers entitled to prevailing wages under RCW 39.12.020, and the estimated number of workers in each classification. Each Application for Payment shall include a statement that the prevailing wages have been paid in accordance with the Statement or Statements of Intent to Pay Prevailing Wages on file with Owner.

§ 3.2.2.1 As an express condition precedent to payment for any work performed by the Contractor and Subcontractors whose work is included in an Application for Payment, all certified payroll documentation for the period covered in the Application for Payment must be submitted in accordance with the Contract Documents and applicable law.

§ 3.2.2.2 Upon Final Completion, and as part of the Closeout Administrative Requirements, the Contractor and each Subcontractor shall submit to Owner an Affidavit of Wages Paid approved by the Industrial Statistician in accordance with RCW 39.12.040 as a condition of final payment and release of retainage. If a Subcontractor fails to properly submit an Affidavit of Wages Paid, the Contractor shall file the forms on behalf of the nonresponsive Subcontractor in accordance with RCW 39.12.040 and shall accept responsibility for payment of prevailing wages unpaid by the Subcontractor pursuant to RCW 39.12.020 and 39.12.065.

§ 3.2.3 Pursuant to RCW 39.12.060, in case any dispute arises as to what are the prevailing rates of wages for work of a similar nature, and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the director of the Department of Labor and Industries of the state, and his or her decision thereupon shall be final and conclusive and binding on all parties involved in the dispute.

§ 3.2.4 Contractor shall defend, indemnify, and hold the Owner harmless for all losses, damages, liability, costs, and expenses, including attorneys’ fees, arising from any violation or alleged violation of Chapter 39.12 RCW (“Prevailing Wages on Public Works”) and/or Title 51 RCW (“Industrial Insurance”), including without limitation RCW 51.12.050, by Contractor or any subcontractor or supplier of any tier.

§ 3.2.5 Contractor shall comply with all applicable provisions of Chapter 49.28 RCW (“Hours of Labor”).

§ 3.2.6 Contractor shall comply with all hazard communication requirements of Chapter 49.17 RCW, “Washington Industrial Safety and Health Act;” Chapter 49.70 RCW, “Worker and Community Right to Know Act;” and Chapter 296-901 WAC, and shall not be entitled to any additional Contract Time or compensation arising from its failure or alleged failure to comply with these or related statutes or regulations. Contractor shall provide the Owner copies of and have available at the Project Site a workplace survey or material safety data sheets for all “hazardous” chemicals under the control or use of Contractor or any subcontractor of any tier at the Project Site.

§ 3.2.7 Contractor must ensure the submission of the below-listed information concerning off-site, prefabricated, nonstandard, project specific items produced under the terms of the contract and produced outside Washington. The information must be submitted to the Department of Labor and Industries as required below. The information that must be provided is:

§ 3.2.7.1 The estimated cost of the public works project;

§ 3.2.7.2 The name of the awarding agency and the title of the public works project;

§ 3.2.7.3 The contract value of the off-site, prefabricated, nonstandard, project specific items produced outside Washington, including labor and materials; and

§ 3.2.7.4 The name, address, and federal employer identification number of the contractor that produced the off-site, prefabricated, nonstandard, project specific items.

The required information must be submitted as a part of the Affidavit of Wages Paid form filed with the Department of Labor and Industries under RCW 39.12.040.

ARTICLE 4 RETAINAGE

§ 4.1 Applicability of retainage

§ 4.1.1 The Project shall be subject to the retainage requirements applicable to a public work construction project under Washington law. Contractor shall comply with the retainage requirements of the Contract Documents and applicable law.

§ 4.2 Retainage to be withheld. In accordance with Chapter 60.28 RCW, except as provided in this Article 4, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. Prior to submitting its first Application for Payment, Contractor shall exercise one of the options listed below:

§ 4.2.1 Retainage will be retained by Owner in a fund; or

§ 4.2.2 Retainage will be deposited by Owner in an interest-bearing account in a bank, mutual savings bank or savings and loan association; or

§ 4.2.3 Retainage will be placed in escrow with a bank or trust company; or

§ 4.2.4 If Contractor provides a bond in place of retainage (see Section 4.6 hereof), it shall be in an amount equal to 5% of the Contract Sum plus Change Orders. The retainage bond shall comply with Chapter 60.28 RCW.

§ 4.3 Contractor may withhold retainage from Subcontractors. Contractor or a subcontractor may withhold not more than five percent (5%) of the monies earned by any subcontractor or lower-tier subcontractor as retainage, provided that Contractor or the subcontractor pays interest to the subcontractor or lower-tier subcontractor at the same interest rate it receives from its reserved funds. If requested by Owner, Contractor shall specify the amount of retainage and interest due a subcontractor.

§ 4.4 Release of retainage. Retainage will be withheld and applied by Owner in a manner required by Chapter 60.28 RCW and released in accordance with the Contract Documents and statutory requirements. Release of the retainage will be processed in the ordinary course of business within sixty (60) days following Final Acceptance of the Work by Owner, subject to the provisions of Chapter 39.12 RCW and Chapter 60.28 RCW, provided that no notice of lien

against retainage has been given as provided in Chapter 60.28 RCW, that no claims have been brought to the attention of Owner, that Owner has no claims under this Agreement, and that release of retainage has been duly authorized by the State. The following items must be obtained prior to release of retainage: pursuant to Chapter 60.28 RCW, a certificate from the Department of Revenue; pursuant to Chapter 50.24 RCW, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries including approved affidavits of wages paid for Contractor and each subcontractor.

§ 4.5 Landscaping. For projects including landscaping or landscape maintenance per RCW 60.28.011(3)(a), Contractor may request release and payment of retainage following completion and acceptance of all contract work other than landscaping. Upon such request, release of the retainage (other than a continuing retainage of five percent of the amount earned for landscaping) will be processed in the ordinary course of business within sixty (60) days, provided all applicable requirements of this Section 4 and Chapter 39.12 RCW have been satisfied. Final Completion and Final Acceptance of the Project following completion and acceptance of the landscaping work will require all items listed in Section 6.4 below and as otherwise stated in the Contract Documents.

§ 4.6 Bond in Lieu of Retainage. If expressly indicated elsewhere in the Contract Documents, Contractor may submit a bond in lieu of retainage as provided in this Section. The bond shall be in an amount equal to five percent (5%) of the Contract Sum plus Change Orders and shall comply in all respects with Chapter 60.28 RCW. The surety or sureties must be rated at least B++, FSC(6), or higher by A.M. Best Rating Guide. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective Power of Attorney statement. The bond and any proceeds therefrom are subject to all claims and liens and in the same manner and priority as set forth for retained percentages in Chapter 60.28 RCW. Owner shall release the bonded portion of the retainage held by Owner within thirty (30) days of accepting the bond from Contractor.

§ 4.6.1 In accordance with RCW 60.28.011(6), a subcontractor may request that Contractor submit a bond to Owner for the portion of retainage held by Owner pertaining to the subcontractor at any time prior to final formal acceptance of the project. The bond shall meet the requirements stated in Section 4.6. Within thirty (30) days of receipt of the subcontractor's request, Contractor shall provide a bond meeting these requirements unless there is good cause for refusing to accept it, the bond is not commercially available, or the subcontractor refuses to pay the subcontractor's portion of the bond premium and to provide Contractor with a like bond. Owner and Contractor must release the bonded portion of the retainage within thirty (30) days of accepting the bond. In the event Contractor submits a bond at the request of a subcontractor pursuant to this Section 4.6.1, Contractor may withhold the subcontractor's portion of the bond premium.

§ 4.6.2 If Contractor provides a bond in lieu of retainage, Contractor must accept like bonds from any subcontractors or suppliers. Contractor must release retainage for which such a bond is substituted to the subcontractor or supplier within thirty (30) days of accepting the bond from the subcontractor or supplier.

§ 4.6.3 Contractor shall ensure that every subcontract gives full effect to the provisions of Section 4.6.

§ 4.7 Contractor may request that retainage be reduced to one hundred percent (100%) of the value of the remaining Work on the Project.

ARTICLE 5 PERFORMANCE AND PAYMENT BONDS

§ 5.1 Application of Performance and Payment Bonds

§ 5.1.1 The Project is subject to the performance and payment bond requirements applicable to a public work construction project. Contractor shall procure and provide performance and payment bonds for the Project in accordance with the Contract Documents and applicable law.

§ 5.2 Contractor to Furnish Performance and Payment Bonds. Within ten (10) days following its receipt of a notice of award, and as part of the Contract Sum, Contractor shall secure and furnish duly executed performance and payment bonds using the forms furnished by Owner. The bonds shall be executed by a surety (or sureties) reasonably acceptable to Owner, admitted and licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of A-, FSC (6) or better. Pursuant to Chapter 39.08 RCW, the bonds shall be in an amount equal to the Contract Sum, and shall be conditioned only upon the faithful performance of the Contract by Contractor within the Contract Time and upon the payment by Contractor of

all taxes, fees, and penalties to the State of Washington and all laborers, subcontractors, and suppliers, and others who supply provisions, equipment, or supplies for the performance of the Work covered by this Agreement. The bonds shall be signed by the person or persons legally authorized to bind Contractor.

§ 5.3 Owner may notify surety. If Owner makes or receives a claim against Contractor, Owner may, but is not obligated to, notify Contractor's surety of the nature and amount of the claim. If the claim relates to a possibility of a Contractor's default, Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

ARTICLE 6 ADDITIONAL STATE LAW PROVISIONS

§ 6.1 Application of Additional State Law Provisions

§ 6.1.1 The additional provisions of this Article 6 shall apply to the Agreement to implement and comply with certain requirements of Washington law.

§ 6.2 Project Documents

§ 6.2.1 It is understood and acknowledged that all Project Documents, as described below, prepared by Contractor pursuant to this Agreement become and remain from the first instance of their creation the property of Owner. Contractor hereby expressly waives any claim of ownership of or right to Project Documents to which it might otherwise be entitled, including, without limitation, under any prior agreement or understanding. Notwithstanding the foregoing, Contractor may retain ownership of non-Project Documents, including but not limited to any proprietary support systems of Contractor, which it may use in the development of the Project, including, without limitation, proprietary computer models and programs, but Owner shall be entitled to access and use such proprietary systems. Contractor must include or cause to be included in the contract with each subcontractor, supplier, and consultant a provision acceptable to Owner recognizing Owner's ownership of Project Documents and providing for a waiver of any claim of ownership of Project Documents by such subcontractor, supplier, or consultant.

§ 6.2.2 The records of Contractor for the Project may be subject to the Washington Public Records Act, Chapter 42.56 RCW. Contractor must maintain Project Documents consistent with Owner's record retention and destruction policy. Prior to destruction of any Project Documents that are required to be retained pursuant to this Agreement, Contractor will consult with Owner. Whenever Owner believes that it is required by law to disclose records, other than Project Documents, held by Contractor, Owner will give reasonable notice to Contractor before disclosing records that Contractor has identified as proprietary or confidential and/or which reasonably may be subject to an exemption or exception to the disclosure requirements of the Public Records Act. Owner will consider Contractor's views, but Owner's decision as to disclosure under the Public Records Act will be final and binding. If Contractor receives a request for disclosure of records pertaining to the Project under the Public Records Act, it will immediately refer the request to Owner for determination regarding disclosure of such records.

§ 6.2.3 "Project Documents" include without limitation all records relating to the Project Development Services and the Project prepared in connection with or required of Contractor under the Agreement. A record for purposes of this definition is any writing containing information relating to the Project prepared, owned, possessed, used, or retained by Contractor and/or any subcontractor, supplier, or consultant of any tier for Owner regardless of physical form or characteristics. "Writing" means handwriting, typewriting, printing, emails, text messages, photographing, and every other means of recording or transmitting any form of communication or representation including, but not limited to, letters, words, pictures, sounds, or symbols, or combination thereof, and all papers, maps, magnetic or paper tapes, photographic films and prints, film and video recordings, discs, drums, diskettes, sound recordings, and other documents including existing data compilations from which information may be obtained or translated. Project Documents include but are not limited to records that are:

- .1 Plans and Specifications
- .2 Prints, models, and designs;
- .3 Submittals to the Architect, responses, and related materials;
- .4 Consultant plans, recommendations, reports, and submittals;
- .5 Project memorandums and studies;
- .6 Project Budget, revisions, audits, payment invoices, and accountings;
- .7 Project Schedule, revisions, and submittals;

- .8 Contract Documents for the Project, contracts with the Architect or other consultants or subconsultants, subcontracts, change orders, logs, submittals, responses, and related materials;
- .9 Drawings, including as-built drawings;
- .10 RFPs, RFQs, bids, notices, solicitations, and publications;
- .11 Surveys, tests, analyses, and evaluations;
- .12 Environmental statement(s), reports, reviews, and assessments;
- .13 Site plans, surveys, tests, and engineering data and detail;
- .14 Permits, applications and approvals;
- .15 Written recommendations;
- .16 Insurance certificates, claims, and resolutions;
- .17 Property purchase agreements and related materials;
- .18 Correspondence, submittals, and responses related to the above.

§ 6.3 Unfit Persons

Contractor shall be responsible to the Owner for the acts and omissions of Contractor's officers, employees, consultants, and other agents and affiliated persons; subcontractors and suppliers of any tier, and their officers, employees, consultants, and other agents and affiliated persons; and all other persons performing portions of the Work under a contract with Contractor or a subcontractor. Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. At no change to the Contract Sum or Contract Time, the Owner may provide written notice requiring Contractor to remove from the Work any employee or other person carrying out the Work that the Owner considers objectionable without change in the Contract Sum or Time. Pursuant to Washington law, a person shall be unfit if he or she has pled guilty to or has been convicted of any felony crime involving the physical injury or death of a child (RCW 9A.32 or RCW 9A.36 but not RCW 46.61—motor vehicle violation), the physical neglect of a child (RCW 9A.42), sexual offenses against a minor (RCW 9A.44), sexual exploitation of a child (RCW 9.68A), the sale or purchase of a minor child (RCW 9A.64.030), promoting prostitution of a child (RCW 9A.88), or violation of similar laws of another jurisdiction. Contractor shall not permit any contact between children at the Project site and any such employee. Failure to comply with these requirements is grounds for immediate termination of the Agreement for cause.

§ 6.4 Substantial Completion and Final Acceptance

§ 6.4.1 Final payment shall not become due until Final Completion has been achieved, all Closeout Administrative Requirements (as defined below) have been satisfied, and the Owner has formally accepted the Project ("Final Acceptance"). Pursuant to Chapter 60.28 RCW and Chapter 39.08 RCW, "completion of all contract work" occurs upon the date of Final Acceptance.

§ 6.4.2 To achieve Final Acceptance, the Architect must have issued a final Certificate for Payment, any applicable permits must have been issued, Final Completion must have occurred, the Contractor must have submitted the following to the Owner, and any necessary processing, approval, or acceptance thereof by relevant State agencies must have been secured (the "Closeout Administrative Requirements"):

- .1 an affidavit that all 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 (Affidavit of Payment of Debts and Claims, AIA form G706 or equivalent).
- .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 Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents.
- .4 consent of surety to final payment (AIA form G707 or equivalent), if applicable.
- .5 other data establishing payment or satisfaction of or protection against obligations, such as receipts, 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 (Contractor's Affidavit of Release of Liens, AIA form G706A or equivalent). If a Subcontractor refuses to furnish a release or waiver required by the Owner, Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If such lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

.6 pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from Contractor and from each Subcontractor of any tier certified by the Industrial Statistician of the Washington State Department of Labor and Industries, with the fees paid by Contractor or Subcontractor.

.7 a letter from the Architect indicating that the Work is complete and recommending Final Acceptance of the Project by the Owner.

.8 certification that the materials in the Work are "lead-free" and "asbestos-free."

.9 all warranties, guarantees, manuals, operation instructions, certificates, spare parts, maintenance stock, specified excess material, as-built drawings and other documents or items required by the Contract Documents.

.10 record documents, any final property survey, and paper and electronic operation and maintenance manuals required by the Contract Documents.

.11 all copies of Instruments of Service, except Contractor's record set, have been returned to the Owner or are suitably accounted for to the Owner, and

.12 advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.

§ 6.5 Compliance with Washington Statutes

§ 6.5.1 Contractor shall abide by the provisions of all applicable statutes, regulations, and other laws. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be and are not a complete list.

§ 6.5.1.1 Pursuant to RCW 39.06, "Registration, Licensing of Contractors," Contractor and all subcontractors performing work on the Project shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors," and shall satisfy all State of Washington bonding and insurance requirements. Contractor shall also have a current state unified business identifier (UBI) number; have industrial insurance coverage for Contractor's employees working in Washington as required by Title 51 RCW; have an employment security department number as required by Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors), RCW 39.12.065(3) (prevailing wage violations), or other applicable law; and not have violated RCW 50.12.070(1)(b), RCW 51.16.070(1)(b), or RCW 82.32.070(1) within the last two years.

§ 6.5.1.2 Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Washington Law Against Discrimination."

§ 6.5.1.3 Contractor shall comply with all applicable statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.

§ 6.5.1.4 Pursuant to Chapter 50.24 RCW, "Contributions by Employers," in general and RCW 50.24.130 in particular, Contractor shall pay contributions for wages for personal services performed under this Agreement or arrange for an acceptable bond.

§ 6.5.1.5 Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."

§ 6.5.1.6 All products and materials incorporated into the Project as part of the Work shall be certified as “asbestos-free” and “lead-free” by United States standards, and shall also be free of all hazardous materials or substances. At the completion of the Project, Contractor shall submit certifications of asbestos-free and of lead-free materials certifying that all materials and products incorporated into the Work meet the requirements of this Section, and shall also certify that materials and products incorporated into the Work are free of hazardous materials and substances.

§ 6.5.1.7 Contractor shall comply with all applicable requirements of RCW 39.04.250 and Chapter 39.76 RCW. In accordance with those statutes, Contractor shall pay to each subcontractor amounts paid by Owner to Contractor for the work performed by the subcontractor not later than ten (10) days after the receipt of the payment from Owner. If Contractor withholds payment other than retainage to a subcontractor for any reason, including amounts subject to a good faith dispute, Contractor shall not later than ten (10) days after the receipt of the payment from Owner provide notice to the subcontractor and Owner identifying the reason for the withholding and a clear description of what the subcontractor must do to have the withholding released. Contractor shall ensure that all subcontracts include substantially the same requirements as specified in this Section with respect to payment of lower-tier subcontractors.

§ 6.5.1.8 If Contractor must undertake additional work for the Project due to the enactment of new environmental protection requirements or the amendment of existing environmental protection statutes, ordinances, or rules occurring after submission of its bid, Owner shall issue a Change Order setting forth the additional work that must be undertaken. This shall not invalidate the contract. The cost of the Change Order shall be determined in accordance with RCW 39.04.120. In the event of a dispute pertaining to any additional work and/or Change Order(s) subject to this Section, Contractor shall abide by the dispute resolution procedures of the Agreement.

§ 6.6 Nonresident Contractors

If the Project is subject to RCW 39.04.380, in any bidding process for public works in which a bid is received from a nonresident contractor from a state that provides a percentage bidding preference to its resident contractors bidding on public works contracts, a comparable percentage disadvantage must be applied to the bid of that nonresident contractor. For purposes of this Section 6.6, a “nonresident contractor” is defined as provided in RCW 39.04.380(2)-(3).

§ 6.7 Verification of Subcontractor Responsibility Criteria

Contractor must verify responsibility criteria for each first-tier subcontractor, and a subcontractor of any tier that hires other subcontractors must verify responsibility criteria for each of its subcontractors. Verification shall include that each subcontractor, at the time of subcontract execution, meets the responsibility criteria listed in RCW 39.04.350(1) and possesses a plumbing contractor license, if required by chapter 18.106 RCW; an electrical contractor license, if required by chapter 19.28 RCW; or an elevator contractor license, if required by chapter 70.87 RCW. This verification requirement, as well as the responsibility criteria, must be included in every subcontract of every tier.

§ 6.8 Trenching/Safety

§ 6.8.1 Contractor must comply with pertinent provisions of Chapter 296-155 WAC, “Safety Standards for Construction Work,” including without limitation trench safety requirements.

§ 6.8.2 If trench excavation will exceed a depth of four feet, Contractor must implement and maintain adequate safety systems that meet the requirements of Chapter 49.17 RCW. The costs of trench safety systems shall be included in cost estimates and bid forms as a separate item and shall not be considered as incidental to any other contract item.

§ 6.9 Apprenticeship

§ 6.9.1 No less than fifteen percent (15%) of the labor hours will be performed by apprentices, as defined in RCW 39.04.310.

§ 6.9.2 The Contractor shall submit an Apprentice Utilization Plan to the Owner. The Apprentice Utilization Plan shall demonstrate how and when the Contractor intends to achieve the apprentice utilization requirement. The

Apprentice Utilization Plan shall be in sufficient detail for the Owner to track the Contractor's progress in meeting the utilization requirements. Contractor shall update the Apprentice Utilization Plan and resubmit when requested by the Owner. If the Contractor is unable to demonstrate the ability to meet the apprentice utilization requirement with their initial Apprentice Utilization Plan submission, the Contractor must make good faith efforts to find additional registered apprentices to perform on the contract. If after good faith efforts have been made at every tier and every scope, the Contractor must submit documentation of its good faith efforts to the Owner in accordance with Section 6.9.6 below. If the Owner determines that the Contractor has made, and properly documented, good faith efforts to meet its Apprentice Utilization Plan, the Owner may adjust the apprenticeship labor hours requirement for the Project.

§ 6.9.3 Contractor shall, upon request from Owner, submit to Owner any information relating to the employment of apprentices deemed necessary by Owner, including but not limited to written evidence showing that each apprentice is enrolled in a program approved by the state apprenticeship council.

§ 6.9.4 Contractor shall comply with RCW 39.12.021 pertaining to wage rates for apprentices. Any worker for whom an apprenticeship agreement has not been registered and approved by the state apprenticeship council pursuant to Chapter 49.04 RCW shall be paid at the prevailing hourly rate for journey level workers.

§ 6.9.5 The Contractor and every Subcontractor must report all apprentices and the wages paid as required by the Department of Labor and Industries. The Contractor must submit other information as requested by the Owner to verify compliance with the apprentice utilization requirements of the Contract. The Owner may add, delete, or change the information required by the Contractor, as necessary.

§ 6.9.6 Documentation of the Contractor's good faith efforts to achieve its Apprentice Utilization Plan must include one or more of the following:

1. *Demonstrated Lack of Availability of Apprentices.* Correspondence from State-approved apprenticeship training program(s), with project specific responses confirming there is a lack of availability of apprentices for this Project.
2. *Demonstrated Disproportionate Ratio of Material/Equipment/Products to Labor Hours.* Documentation explaining the bid includes a disproportionate high cost of material/equipment/products to labor hours.
3. *Demonstrated Lack of Necessary Labor Hours.* Correspondence from State-approved apprentice training program(s) confirming there is not enough time in the Project to meet required journey level to apprentice training ratios.
4. *Demonstrated Lack of Available Approved Programs.* Correspondence from State-approved apprentice training program(s) or other documentation confirming there are no programs that train for the scopes included/anticipated on the Project.
5. *Warranty Issues.* If work by an apprentice will compromise or void the warranty provided by a manufacturer or surety, documentation from original equipment manufacturers, or similar, confirming that work performed must only be completed by certified journey-level installers or risk voiding warranty, or similar.
6. *Work Too Technical:* If work performed on the project is too critical or technical to be performed by apprentices, even when working under the supervision of a journey level worker, documentation of the critical or technical aspect of the work or equipment, how few employees are sufficiently skilled to perform or operate the work/equipment, any special training needed to do so, and why it would not be reasonable to provide an apprentice the required training.
7. *Other Effort.* The Contractor may submit other evidence, documentation, or rationale for not being able to achieve the required Apprentice Utilization that are not covered in the other efforts named.

The Owner will review submitted documentation of good faith efforts and issue a determination as to whether the Contractor has made good faith efforts to achieve the Apprentice Utilization Plan. The Owner may request additional information, documentation, evidence or similar in order to approve such efforts. A determination by the Owner is final.

§ 6.9.7 Should the Contractor, and/or subcontractors, achieve fifteen percent (15%) apprentice utilization, a monetary assessment of Five Thousand Dollars (\$5,000.00) will be paid to the Contractor for proportional distribution to all employers of apprentices on the Project.

§ 6.9.8 Failure to comply with requirements for apprentice utilization, without good faith efforts acceptable to the Owner, is a material breach of the Contract for which the Contractor, or its subcontractors, are subject to damages. If the Owner determines that the Contractor, or any of its subcontractors, are noncompliant, a monetary disincentive assessment of Ten Dollars (\$10.00) for every minimum apprentice hour not achieved will be subtracted from monies otherwise owed to the Contractor. In no event will the disincentive assessment exceed Ten Thousand Dollars (\$10,000.00).

§ 6.9.9 Contractor shall ensure that each of its subcontracts requires the subcontractor to comply with the substance of this Section 6.9 and with all applicable requirements of RCW 39.04.320.

§ 6.9.10 The Owner will monitor apprenticeship utilization on the Project within its existing resources. The Owner's representative may verify the registration of each apprentice used on the Project with the Washington State Apprenticeship and Training Council and monitor the apprentice utilization data provided by the Contractor. If the Owner's representative visits the Project site to confirm or monitor apprentice usage, the Contractor will provide access to the site to the Owner's representative, subject to any applicable safety plan requirements.

§ 6.9.11 Contractor will comply with the applicable apprenticeship training standards for each trade/craft classification used on the Project, as set forth by the Washington State Department of Labor and Industries.

§ 6.10 Solar Facility Investment Tax Credit Requirements

§ 6.10.1 The Contractor acknowledges that the Owner intends to apply for and secure a federal investment tax credit ("ITC") for solar facility installation under Section 48E of the Internal Revenue Code, Title 26 U.S.C., and to claim the ITC via Section 6417 Elective Payment (also referred to as Direct Pay). The Contractor represents and warrants that (1) its procurement and installation of all equipment to be included in the solar facility will comply with the Foreign Entity of Concern requirements for the ITC (the "FEOC Requirements"), including the Material Assistance limitations on manufactured products and components under 26 U.S.C. §§ 48E(b)(6), 7701(a)(51), and 7701(a)(52), and detailed in IRS Notice 2026-15; (2) it will timely provide all documentation and certifications, including without limitation manufacturer certifications, required to meet or establish compliance with the FEOC Requirements, including the Material Assistance limitations; and (3) it will otherwise reasonably cooperate with the Owner for the purpose of applying for and securing the ITC and shall not hinder, interfere with, or delay the Owner's application or ability to secure the ITC.

§ 6.10.2 The Contractor shall ensure that the solar facility is placed in service in accordance with applicable law and federal guidance on or before December 1, 2027. Placement in service of the solar facility shall include completion of the installation, securing final inspection approval, closing out all permits, securing permission to operate or similar authorization from the utility, and beginning to deliver electricity to the electric meter. If the Contractor is unable to secure permission to operate from the electric utility, the Contractor must demonstrate that the full solar facility is placed in a condition of a state of readiness and availability to generate electricity, as described in Treasury Regulation 1.46-3(d)(1).

§ 6.10.3 The Contractor acknowledges that failure to place the solar facility in service as specified in Section 6.10.2 above by the date stated therein may prevent the Owner from applying for and/or securing the ITC and will cause the Owner damages in the full amount of the ITC. Notwithstanding anything to the contrary in the Contract Documents, if the Contractor is delayed beyond December 1, 2027 in placing the solar facility in service, the Contractor shall be responsible for reimbursing the Owner the full amount of the ITC for which the Owner otherwise would have been eligible in addition to any other damages or remedies available to the Owner. No waiver of consequential damages or any other type or nature of damages, nor the Contractor's liability for liquidated damages for delay, shall preclude the Owner from seeking damages under this Section for the Contractor's delay to solar facility placement in service.

ARTICLE 7 ORDER OF PRECEDENCE

§ 7.1 In the event of any conflict or inconsistency among the terms of any of the Contract Documents, the order of precedence of the Contract Documents shall be as follows:

- .1 This Exhibit B-1;
- .2 Modifications, with those executed later in time taking precedence over those executed earlier in time;
- .3 The A101 – 2017 Agreement, as modified;
- .4 Exhibit B, the A201 – 2017 General Conditions, as modified;
- .5 The Specifications;
- .6 The Drawings (and, within the Drawings, larger scale drawings take precedence over smaller scale drawings, figured dimensions over scaled dimensions, and noted materials over graphic indications); and
- .7 Addenda or Exhibits (other than Drawings and Specifications and Exhibits B and B-1) issued prior to execution of the Agreement.

§ 7.2 Any provision of the Contract Documents containing an Order of Precedence that conflicts with that in Section 7.1 above is hereby void, and any reference to such provision shall be deemed to be a reference to this Article 7.

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DRAFT AIA® Document A101® – 2017

Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the « » day of « » in the year «2026»
(In words, indicate day, month and year.)

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

«Eklund at Gales»
«2372 E 7th Avenue»
«Port Angeles, WA 98362»

THE OWNER:
(Name, legal status and address)

«Peninsula Housing Authority»
«727 E 8th Street»
«Port Angeles, WA 98362 »
« (360) 452-7631»

THE CONTRACTOR:
(Name, legal status and address)

« »
« »
« »

TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™-2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

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.

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

This document is intended to be used in conjunction with AIA Document A201®-2017, General Conditions of the Contract for Construction. Article 11 of A201®-2017 contains additional insurance provisions.

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§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 **Causes of Loss.** The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, or collapse. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:
(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss

Sub-Limit

§ A.2.3.1.2 **Specific Required Coverages.** The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:
(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage

Sub-Limit

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 **Deductibles and Self-Insured Retentions.** If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 **Occupancy or Use Prior to Substantial Completion.** The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

- [☐] § A.2.4.1 **Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.
- [☐] § A.2.4.2 **Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.
- [☐] § A.2.4.3 **Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.
- [☐] § A.2.4.4 **Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.
- [☐] § A.2.4.5 **Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.
- [☐] § A.2.4.6 **Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.
- [☐] § A.2.4.7 **Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

[☐] **§ A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. (Indicate applicable limits of coverage or other conditions in the fill point below.)

« »

[☐] **§ A.2.5.2 Other Insurance**
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show additional insureds specified in Section A.3.1.3 below each as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

Deleted:

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include the Owner, its officers, directors, members, agents, employees, and volunteers; the Owner's representative, its shareholders, officers, directors, employees, agents, and affiliates; the Owner's lender(s), if any; the Architect; and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:
(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

« For a duration of six years following Substantial Completion of the Work. »

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than «Two Million Dollars» (\$ «2,000,000.00») each occurrence, « Two Million Dollars » (\$ «2,000,000.00») general aggregate, and «Two Million Dollars» (\$ «2,000,000.00») aggregate for products-completed operations hazard, providing coverage for claims including

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(1148800343)

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than «One Million Dollars» (\$ «1,000,000.00») combined single limit, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than «One Million Dollars» (\$ «1,000,000.00») each accident, «One Million Dollars» (\$ «1,000,000.00») each employee, and «One Million Dollars» (\$ «1,000,000.00») policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks.

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than «Two Million Dollars» (\$ «2,000,000.00») per claim and «Three Million Dollars» (\$ «3,000,000.00») in the aggregate.

Deleted:

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than «Two Million Dollars» (\$ «2,000,000.00») per claim and «Two Million Dollars» (\$ «2,000,000.00») in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than «Four Million Dollars» (\$ «4,000,000.00») per claim and «Four Million Dollars» (\$ «4,000,000.00») in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

« »

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

- [« »] § A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below: *(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)*

« »

- [« »] § A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate, for Work within fifty (50) feet of railroad property.

- [« »] § A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

- [« »] § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the

construction site on an "all-risks" completed value form.

[« »] § A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

[« »] § A.3.3.2.6 Other Insurance
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage	Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	\$ (full Contract Sum)
Performance Bond	\$ (full Contract Sum)

The bonds provided by Contractor shall be in a form acceptable to the Owner and its lender(s) (if any). The bonds provided by Contractor shall be issued by surety companies authorized to transact business in the State of Washington, countersigned by a licensed agent of the surety, and otherwise acceptable to Owner and its Lender (if any), covering faithful performance by the Contractor and its Subcontractors and payment of obligations arising thereunder as specifically required in the Contract Documents and Subcontracts on the date of execution thereof, including but not limited to terms providing for payment of liquidated, actual and other damages, and payment of the costs for the recovery of delay to the Project. Contractor shall also cause its surety to include coverage for Contractor's payment and performance obligations relating to latent defects, indemnity and warranty. The Owner and Owner's lender(s) (if any) shall be named as additional obligees on the payment and performance bonds. Such payment and performance bonds shall stipulate that no Modification, or waiver of the terms of the Agreement, the Contract Documents, Subcontracts or the plans and specifications by either Owner, Architect, or Contractor will in any manner discharge, void or limit any surety liability. The penal amount of each bond, if required by Owner, shall be equal to one hundred percent (100%) of the Contract Sum as amended by Modifications, and all such bonds shall not have conditions limiting in any manner the surety's liability for performance or payment so long as the Owner's obligations have been met. All bonds signed by an agent shall be accompanied by a certified copy of such agent's authority to act.

Performance and Payment Bonds shall be in the form of Exhibit R or a substantively equivalent form.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

«The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Contract Documents on the date of execution of the Contract. 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.»

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SECTION 00 73 43

PREVAILING WAGE RATES

Pursuant to RCW 39.12.030, Peninsula Housing Authority must include a provision stating the required prevailing rate(s) of wages in the bid and contract specifications for public works projects. To comply with this requirement, Peninsula Housing Authority provides the following prevailing wage rate information applicable for this project.

1. State of Washington prevailing wage rates published by the Washington State Department of Labor and Industries (L&I) are obtainable from the L&I website address, <http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp>.
2. This project is located in Clallam County, therefore, the Clallam County wage rates must be used.
3. This project is expected to use residential prevailing wage rates.
3. The effective prevailing wage date is the same date as the bid due date, as noted in Section 00 21 13 – Instructions to Bidders. If an addendum is issued which changes the bid due date, then the effective prevailing wage date will be the bid due date referenced in that addendum.

A copy of the applicable prevailing wage rates at the time of solicitation is attached hereto and also is available for viewing at the Peninsula Housing Authority office located at 727 E 8th Street, WA 98362. Upon request, Peninsula Housing Authority will provide a hard copy of the applicable prevailing wage rates for this project.

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State of Washington
Department of Labor & Industries
Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 7/30/2026

Clallam County

Trade ^	Job Classification ^	Wage ^	Holiday	Overtime	Note	Risk Class
Cabinet Makers (In Shop)	Journey Level	\$17.13		1		View
Electricians - Powerline Construction	Cable Splicer	\$107.31	5A	4D		View
Electricians - Powerline Construction	Certified Line Welder	\$98.45	5A	4D		View
Electricians - Powerline Construction	Groundperson	\$61.75	5A	4D		View
Electricians - Powerline Construction	Heavy Line Equipment Operator	\$98.45	5A	4D		View
Electricians - Powerline Construction	Journey Level Lineperson	\$98.45	5A	4D		View
Electricians - Powerline Construction	Line Equipment Operator	\$84.18	5A	4D		View
Electricians - Powerline Construction	Meter Installer	\$61.75	5A	4D	8W	View
Electricians - Powerline Construction	Pole Sprayer	\$98.45	5A	4D		View
Electricians - Powerline Construction	Powderperson	\$72.81	5A	4D		View

Fence Erectors	Fence Erector	\$57.66	15J	11P	8Y	View
Fence Erectors	Fence Laborer	\$57.66	15J	11P	8Y	View
Flaggers	Journey Level	\$57.66	15J	11P	8Y	View
Laborers	Air, Gas Or Electric Vibrating Screed	\$67.39	15J	11P	8Y	View
Laborers	Airtrac Drill Operator	\$69.37	15J	11P	8Y	View
Laborers	Ballast Regular Machine	\$67.39	15J	11P	8Y	View
Laborers	Batch Weighman	\$57.66	15J	11P	8Y	View
Laborers	Brick Pavers	\$67.39	15J	11P	8Y	View
Laborers	Brush Cutter	\$67.39	15J	11P	8Y	View
Laborers	Brush Hog Feeder	\$67.39	15J	11P	8Y	View
Laborers	Burner	\$67.39	15J	11P	8Y	View
Laborers	Caisson Worker	\$69.37	15J	11P	8Y	View
Laborers	Carpenter Tender	\$67.39	15J	11P	8Y	View
Laborers	Cement Dumper-paving	\$69.37	15J	11P	8Y	View
Laborers	Cement Finisher Tender	\$67.39	15J	11P	8Y	View
Laborers	Change House Or Dry Shack	\$67.39	15J	11P	8Y	View
Laborers	Chipping Gun (30 Lbs. And Over)	\$68.56	15J	11P	8Y	View
Laborers	Chipping Gun (Under 30 Lbs.)	\$67.39	15J	11P	8Y	View
Laborers	Choker Setter	\$67.39	15J	11P	8Y	View
Laborers	Chuck Tender	\$67.39	15J	11P	8Y	View
Laborers	Clary Power Spreader	\$68.56	15J	11P	8Y	View
Laborers	Clean-up Laborer	\$67.39	15J	11P	8Y	View

Laborers	Concrete Dumper/Chute Operator	\$69.37	15J	11P	8Y	View
Laborers	Concrete Form Stripper	\$67.39	15J	11P	8Y	View
Laborers	Concrete Placement Crew	\$69.37	15J	11P	8Y	View
Laborers	Concrete Saw Operator/Core Driller	\$68.56	15J	11P	8Y	View
Laborers	Crusher Feeder	\$57.66	15J	11P	8Y	View
Laborers	Curing Laborer	\$67.39	15J	11P	8Y	View
Laborers	Demolition: Wrecking & Moving (Incl. Charred Material)	\$67.39	15J	11P	8Y	View
Laborers	Ditch Digger	\$67.39	15J	11P	8Y	View
Laborers	Diver	\$69.37	15J	11P	8Y	View
Laborers	Drill Operator (Hydraulic, Diamond)	\$68.56	15J	11P	8Y	View
Laborers	Dry Stack Walls	\$67.39	15J	11P	8Y	View
Laborers	Dump Person	\$67.39	15J	11P	8Y	View
Laborers	Epoxy Technician	\$67.39	15J	11P	8Y	View
Laborers	Erosion Control Worker	\$67.39	15J	11P	8Y	View
Laborers	Faller & Bucker Chain Saw	\$68.56	15J	11P	8Y	View
Laborers	Fine Graders	\$67.39	15J	11P	8Y	View
Laborers	Firewatch	\$57.66	15J	11P	8Y	View
Laborers	Form Setter	\$69.37	15J	11P	8Y	View
Laborers	Gabian Basket Builders	\$67.39	15J	11P	8Y	View
Laborers	General Laborer	\$67.39	15J	11P	8Y	View
Laborers	Grade Checker & Transit Person	\$71.09	15J	11P	8Y	View
Laborers	Grinders	\$67.39	15J	11P	8Y	View

Laborers	Grout Machine Tender	\$67.39	15J	11P	8Y	View
Laborers	Groutmen (Pressure) Including Post Tension Beams	\$68.56	15J	11P	8Y	View
Laborers	Guardrail Erector	\$67.39	15J	11P	8Y	View
Laborers	Hazardous Waste Worker (Level A)	\$69.37	15J	11P	8Y	View
Laborers	Hazardous Waste Worker (Level B)	\$68.56	15J	11P	8Y	View
Laborers	Hazardous Waste Worker (Level C)	\$67.39	15J	11P	8Y	View
Laborers	High Scaler	\$69.37	15J	11P	8Y	View
Laborers	Jackhammer	\$68.56	15J	11P	8Y	View
Laborers	Laserbeam Operator	\$68.56	15J	11P	8Y	View
Laborers	Maintenance Person	\$67.39	15J	11P	8Y	View
Laborers	Manhole Builder-Mudman	\$68.56	15J	11P	8Y	View
Laborers	Material Yard Person	\$67.39	15J	11P	8Y	View
Laborers	Mold Abatement Worker	\$67.39	15J	11P	8Y	View
Laborers	Motorman-Dinky Locomotive	\$71.19	15J	11P	8Y	View
Laborers	nozzleman (concrete pump, green cutter when using combination of high pressure air & water on concrete & rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster)	\$71.09	15J	11P	8Y	View
Laborers	Pavement Breaker	\$68.56	15J	11P	8Y	View
Laborers	Pilot Car	\$57.66	15J	11P	8Y	View
Laborers	Pipe Layer (Lead)	\$71.09	15J	11P	8Y	View
Laborers	Pipe Layer/Tailor	\$68.56	15J	11P	8Y	View

Laborers	Pipe Pot Tender	\$68.56	15J	11P	8Y	View
Laborers	Pipe Reliner	\$68.56	15J	11P	8Y	View
Laborers	Pipe Wrapper	\$68.56	15J	11P	8Y	View
Laborers	Pot Tender	\$67.39	15J	11P	8Y	View
Laborers	Powderman	\$69.37	15J	11P	8Y	View
Laborers	Powderman's Helper	\$67.39	15J	11P	8Y	View
Laborers	Power Jacks	\$68.56	15J	11P	8Y	View
Laborers	Power Washer	\$67.39	15J	11P	8Y	View
Laborers	Railroad Spike Puller - Power	\$68.56	15J	11P	8Y	View
Laborers	Raker - Asphalt	\$71.09	15J	11P	8Y	View
Laborers	Re-timberman	\$69.37	15J	11P	8Y	View
Laborers	Remote Equipment Operator	\$68.56	15J	11P	8Y	View
Laborers	Rigger/Signal Person	\$68.56	15J	11P	8Y	View
Laborers	Rip Rap Person	\$67.39	15J	11P	8Y	View
Laborers	Rivet Buster	\$68.56	15J	11P	8Y	View
Laborers	Rodder	\$69.37	15J	11P	8Y	View
Laborers	Scaffold Erector	\$67.39	15J	11P	8Y	View
Laborers	Scale Person	\$67.39	15J	11P	8Y	View
Laborers	Sloper (Over 20")	\$68.56	15J	11P	8Y	View
Laborers	Sloper Sprayer	\$67.39	15J	11P	8Y	View
Laborers	Spreader (Concrete)	\$69.37	15J	11P	8Y	View
Laborers	Stake Hopper	\$67.39	15J	11P	8Y	View

Laborers	Stock Piler	\$67.39	15J	11P	8Y	View
Laborers	Swinging Stage/Boatswain Chair	\$57.66	15J	11P	8Y	View
Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	\$68.56	15J	11P	8Y	View
Laborers	Tamper (Multiple & Self-propelled)	\$68.56	15J	11P	8Y	View
Laborers	Timber Person - Sewer (Lagger, Shorer & Cribber)	\$68.56	15J	11P	8Y	View
Laborers	Toolroom Person (at Jobsite)	\$67.39	15J	11P	8Y	View
Laborers	Topper	\$67.39	15J	11P	8Y	View
Laborers	Track Laborer	\$67.39	15J	11P	8Y	View
Laborers	Track Liner (Power)	\$68.56	15J	11P	8Y	View
Laborers	Traffic Control Laborer	\$61.41	15J	11P	9C	View
Laborers	Traffic Control Supervisor	\$64.86	15J	11P	9C	View
Laborers	Truck Mounted Attenuator	\$61.41	15J	11P	9C	View
Laborers	Truck Spotter	\$67.39	15J	11P	8Y	View
Laborers	Tugger Operator	\$68.56	15J	11P	8Y	View
Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	\$225.32	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$230.35	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$234.03	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$239.73	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$241.85	15J	11P	9B	View

Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$246.95	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$248.85	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$250.85	15J	11P	9B	View
Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$252.85	15J	11P	9B	View
Laborers	Tunnel Work-Guage and Lock Tender	\$71.19	15J	11P	8Y	View
Laborers	Tunnel Work-Miner	\$71.19	15J	11P	8Y	View
Laborers	Vibrator	\$69.37	15J	11P	8Y	View
Laborers	Vinyl Seamer	\$67.39	15J	11P	8Y	View
Laborers	Watchman	\$52.73	15J	11P	8Y	View
Laborers	Welder	\$68.56	15J	11P	8Y	View
Laborers	Well Point Laborer	\$68.56	15J	11P	8Y	View
Laborers	Window Washer/Cleaner	\$52.73	15J	11P	8Y	View
Laborers - Underground Sewer & Water	General Laborer & Topman	\$67.39	15J	11P	8Y	View
Laborers - Underground Sewer & Water	Pipe Layer	\$68.56	15J	11P	8Y	View
Landscape Construction	Landscape Construction/Landscaping Or Planting Laborers	\$52.73	15J	11P	8Y	View
Landscape Construction	Landscape Operator	\$88.60	15J	11G	8X	View
Plumbers & Pipefitters	Journey Level	\$111.59	6Z	1G		View
Power Equipment Operators	Asphalt Plant Operators	\$90.09	15J	11G	8X	View
Power Equipment Operators	Assistant Engineer	\$84.69	15J	11G	8X	View

Power Equipment Operators	Barrier Machine (zipper)	\$89.28	15J	11G	8X	View
Power Equipment Operators	Batch Plant Operator: concrete	\$89.28	15J	11G	8X	View
Power Equipment Operators	Boat Operator	\$88.20	7A	11H	8X	View
Power Equipment Operators	Bobcat	\$84.69	15J	11G	8X	View
Power Equipment Operators	Brokk - Remote Demolition Equipment	\$84.69	15J	11G	8X	View
Power Equipment Operators	Brooms	\$84.69	15J	11G	8X	View
Power Equipment Operators	Bump Cutter	\$89.28	15J	11G	8X	View
Power Equipment Operators	Cableways	\$90.09	15J	11G	8X	View
Power Equipment Operators	Chipper	\$89.28	15J	11G	8X	View
Power Equipment Operators	Compressor	\$84.69	15J	11G	8X	View
Power Equipment Operators	Concrete Finish Machine - Laser Screed	\$84.69	15J	11G	8X	View
Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$88.60	15J	11G	8X	View
Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$90.09	15J	11G	8X	View
Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$89.28	15J	11G	8X	View
Power Equipment Operators	Conveyors	\$88.60	15J	11G	8X	View
Power Equipment Operators	Cranes Friction: 200 tons and over	\$90.88	7A	11H	8X	View
Power Equipment Operators	Cranes, A-frame: 10 tons and under	\$82.95	7A	11H	8X	View
Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$89.09	7A	11H	8X	View
Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	\$87.42	7A	11H	8X	View

Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$90.00	7A	11H	8X	View
Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$90.88	7A	11H	8X	View
Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$88.20	7A	11H	8X	View
Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$90.00	7A	11H	8X	View
Power Equipment Operators	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$86.75	7A	11H	8X	View
Power Equipment Operators	Crusher	\$89.28	15J	11G	8X	View
Power Equipment Operators	Deck Engineer/Deck Winches (power)	\$89.28	15J	11G	8X	View
Power Equipment Operators	Derricks, On Building Work	\$88.20	7A	11H	8X	View
Power Equipment Operators	Dozers D-9 & Under	\$88.60	15J	11G	8X	View
Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$88.60	15J	11G	8X	View
Power Equipment Operators	Drilling Machine	\$91.00	15J	11G	8X	View
Power Equipment Operators	Elevator and man-lift: permanent and shaft type	\$84.69	15J	11G	8X	View
Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$89.28	15J	11G	8X	View
Power Equipment Operators	Forklift: 3000 lbs and over with attachments	\$88.60	15J	11G	8X	View
Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	\$84.69	15J	11G	8X	View
Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$89.28	15J	11G	8X	View

Power Equipment Operators	Gradechecker/Stakeman	\$84.69	15J	11G	8X	View
Power Equipment Operators	Guardrail Punch	\$89.28	15J	11G	8X	View
Power Equipment Operators	Hard Tail End Dump Articulating Off-Road Equipment 45 Yards. & Over	\$90.09	15J	11G	8X	View
Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$89.28	15J	11G	8X	View
Power Equipment Operators	Horizontal/Directional Drill Locator	\$88.60	15J	11G	8X	View
Power Equipment Operators	Horizontal/Directional Drill Operator	\$89.28	15J	11G	8X	View
Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	\$86.75	7A	11H	8X	View
Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	\$82.95	7A	11H	8X	View
Power Equipment Operators	Leverman	\$91.94	15J	11G	8X	View
Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$90.09	15J	11G	8X	View
Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$89.28	15J	11G	8X	View
Power Equipment Operators	Loaders, Plant Feed	\$89.28	15J	11G	8X	View
Power Equipment Operators	Loaders: Elevating Type Belt	\$88.60	15J	11G	8X	View
Power Equipment Operators	Locomotives, All	\$89.28	15J	11G	8X	View
Power Equipment Operators	Material Transfer Device	\$89.28	15J	11G	8X	View
Power Equipment Operators	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$91.00	15J	11G	8X	View
Power Equipment Operators	Motor Patrol Graders	\$90.09	15J	11G	8X	View
Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$90.09	15J	11G	8X	View
Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$84.69	15J	11G	8X	View

Power Equipment Operators	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$88.60	15J	11G	8X	View
Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	\$87.42	7A	11H	8X	View
Power Equipment Operators	Overhead, bridge type: 100 tons and over	\$89.09	7A	11H	8X	View
Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	\$88.20	7A	11H	8X	View
Power Equipment Operators	Pavement Breaker	\$84.69	15J	11G	8X	View
Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$89.28	15J	11G	8X	View
Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$88.60	15J	11G	8X	View
Power Equipment Operators	Posthole Digger, Mechanical	\$84.69	15J	11G	8X	View
Power Equipment Operators	Power Plant	\$84.69	15J	11G	8X	View
Power Equipment Operators	Pumps - Water	\$84.69	15J	11G	8X	View
Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$90.09	15J	11G	8X	View
Power Equipment Operators	Quick Tower: no cab, under 100 feet in height base to boom	\$89.28	15J	11G	8X	View
Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$90.09	15J	11G	8X	View
Power Equipment Operators	Rigger and Bellman	\$82.95	7A	11H	8X	View
Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	\$86.75	7A	11H	8X	View
Power Equipment Operators	Rollagon	\$90.09	15J	11G	8X	View
Power Equipment Operators	Roller, Other Than Plant Mix	\$84.69	15J	11G	8X	View
Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$88.60	15J	11G	8X	View
Power Equipment Operators	Roto-mill, Roto-grinder	\$89.28	15J	11G	8X	View

Power Equipment Operators	Saws - Concrete	\$88.60	15J	11G	8X	View
Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$89.28	15J	11G	8X	View
Power Equipment Operators	Scrapers - Concrete & Carry All	\$88.60	15J	11G	8X	View
Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$90.09	15J	11G	8X	View
Power Equipment Operators	Service Engineers: Equipment	\$88.60	15J	11G	8X	View
Power Equipment Operators	Shotcrete/Gunite Equipment	\$84.69	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$88.60	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$90.09	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$89.28	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$91.00	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$91.94	15J	11G	8X	View
Power Equipment Operators	Slipform Pavers	\$90.09	15J	11G	8X	View
Power Equipment Operators	Spreader, Topsider & Screedman	\$90.09	15J	11G	8X	View
Power Equipment Operators	Subgrader Trimmer	\$89.28	15J	11G	8X	View
Power Equipment Operators	Tower Bucket Elevators	\$88.60	15J	11G	8X	View
Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	\$90.00	7A	11H	8X	View
Power Equipment Operators	Tower crane: up to 175' in height base to boom	\$89.09	7A	11H	8X	View
Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$90.88	7A	11H	8X	View

Power Equipment Operators	Transporters, All Track Or Truck Type	\$90.09	15J	11G	8X	View
Power Equipment Operators	Trenching Machines	\$88.60	15J	11G	8X	View
Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	\$87.42	7A	11H	8X	View
Power Equipment Operators	Truck crane oiler/driver: under 100 tons	\$86.75	7A	11H	8X	View
Power Equipment Operators	Truck Mount Portable Conveyor	\$89.28	15J	11G	8X	View
Power Equipment Operators	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$89.28	15J	11G	8X	View
Power Equipment Operators	Welder	\$90.09	15J	11G	8X	View
Power Equipment Operators	Wheel Tractors, Farmall Type	\$84.69	15J	11G	8X	View
Power Equipment Operators	Yo Yo Pay Dozer	\$89.28	15J	11G	8X	View
Residential Brick Mason	Journey Level	\$76.07	7E	1N		View
Residential Carpenters	Journey Level	\$51.52	15J	4C		View
Residential Cement Masons	Journey Level	\$67.39	15J	11P	8Y	View
Residential Drywall Applicators	Journey Level	\$51.52	15J	4C		View
Residential Drywall Tapers	Journey Level	\$46.17		1		View
Residential Electricians	Journey Level	\$39.64		1		View
Residential Glaziers	Journey Level	\$25.00		1		View
Residential Insulation Applicators	Journey Level	\$27.63		1		View
Residential Laborers	Journey Level	\$20.00		1		View
Residential Painters	Journey Level	\$28.69	0	1		View
Residential Plumbers & Pipefitters	Journey Level	\$63.85	5A	1G		View

Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$63.85	5A	1G	View
Residential Sheet Metal Workers	Journey Level	\$24.80		1	View
Residential Soft Floor Layers	Journey Level	\$25.00		1	View
Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$28.72		1	View
Residential Stone Masons	Journey Level	\$76.07	7E	1N	View
Roofers	Journey Level	\$70.70	5A	3H	View
Roofers	Using Irritable Bituminous Materials	\$74.15	5A	3H	View
Sign Makers & Installers (Electrical)	Journey Level	\$60.46	0	1	View
Sign Makers & Installers (Non-Electrical)	Journey Level	\$38.53	0	1	View
Telephone Line Construction - Outside	Cable Splicer	\$42.62	5A	2B	View
Telephone Line Construction - Outside	Hole Digger/Ground Person	\$27.97	5A	2B	View
Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	\$35.60	5A	2B	View
Telephone Line Construction - Outside	Telephone Lineperson	\$40.28	5A	2B	View
Traffic Control Stripers	All cleanup required in connection with traffic control stripers work (Group 1)	\$95.41	15L	1K	View
Traffic Control Stripers	Handling, painting and installing of all car stops, stop signs and any other type sign (Group 2)	\$62.69	15L	1K	View
Traffic Control Stripers	Installation of guard rail and posts and similar protective devices (Group 2)	\$62.69	15L	1K	View
Traffic Control Stripers	Installation of parking gates, ticket spitters and other mechanical and	\$62.69	15L	1K	View

	automatic control devices (Group 2)					
Traffic Control Stripers	Installation of plastic metal or composition button, or lines used instead of paint (Group 1)	\$95.41	15L	1K		View
Traffic Control Stripers	Line removal; chemical sand and hydro-blast, paint and button (Group 1)	\$95.41	15L	1K		View
Traffic Control Stripers	Manufacturing and installation of all car stops and control devices and similar traffic regulators (Group 2)	\$62.69	15L	1K		View
Traffic Control Stripers	Manufacturing, painting, stenciling, servicing, repairing, placing and removal of traffic safety and control devices/barricades (Group 2)	\$62.69	15L	1K		View
Traffic Control Stripers	Painting and installing lines, arrows, bumpers, curbs, etc., on parking lots, air fields, highways, game courts (Group 1)	\$95.41	15L	1K		View
Traffic Control Stripers	Preparation and maintenance of all surfaces (Group 1)	\$95.41	15L	1K		View
Traffic Control Stripers	Seal coating, slurry coating and other surface protection (Group 2)	\$62.69	15L	1K		View
Truck Drivers	Asphalt Mix Over 16 Yards	\$82.20	15J	11M	8L	View
Truck Drivers	Asphalt Mix To 16 Yards	\$81.36	15J	11M	8L	View
Truck Drivers	Dump Truck	\$81.36	15J	11M	8L	View
Truck Drivers	Dump Truck & Trailer	\$82.20	15J	11M	8L	View
Truck Drivers	Other Trucks	\$82.20	15J	11M	8L	View
Truck Drivers - Ready Mix	Transit Mix	\$82.20	15J	11M	8L	View

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**SECTION 011000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: EKLUND at GALES
- B. Owner's Name: Peninsula Housing Authority.
- C. Architect's Name: Rice Fergus Miller.
- D. Project Description: A new, two-story wood frame multi-family housing structure with 24 residential units. Work includes civil, landscape, general trades, structural, fire protection, plumbing, HVAC, and electrical.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price.

1.03 DESCRIPTION OF ALTERATIONS WORK

- A. None.

1.04 WORK BY OWNER

- A. Items noted NIC (Not in Contract) will be supplied and installed by Owner after Date of Substantial Completion. Some items include:
 - 1. Movable cabinets.
 - 2. Furnishings.
 - 3. Small equipment.
 - 4. Laundry equipment.

1.05 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.

1.06 CONTRACTOR USE OF SITE AND PREMISES

- A. Provide access to and from site as required by law and by Owner:

1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- B. Utility Outages and Shutdown:
1. Limit shutdown of utility services to any adjoining properties, arranged at least 48 hours in advance with approval from adjoining property owners.
 2. Prevent accidental disruption of utility services to other facilities.

END OF SECTION

**SECTION 012100
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cash allowances.
- B. Payment and modification procedures relating to allowances.

1.02 RELATED REQUIREMENTS

- A. Section 012900 Payment Procedures
- B. Section 012600 Contract Modification Procedures.

1.03 CASH ALLOWANCES

- A. Costs Included in Cash Allowances: Cost of product to Contractor or subcontractor, less applicable trade discounts including overhead and profit, delivery to site, foundations, and installation, not including WSST.
- B. Owner Responsibilities
 - 1. Consult with Contractor for consideration and selection of products, suppliers , and installers.
 - 2. Select products in consultation with Owner and transmit decision to Contractor.
- C. Contractor Responsibilities:
 - 1. Assist Architect or Owner in selection of products, suppliers , and installers.
 - 2. Obtain proposals from suppliers and installers and offer recommendations.
 - 3. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
 - 4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
 - 5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- D. Differences in costs will be adjusted by Change Order.

1.04 ALLOWANCES SCHEDULE

- A. Section 101419 Dimensional Letter Signage: Include the stipulated sum of \$10,000.00 for purchase, delivery, and installation, including foundation, of one free standing monument sign.
- B. Division 26 Electrical Systems
 - 1. Include the stipulated sum of \$ 500 for purchase, delivery, and installation of (1) ceiling mounted Entry Lobby light fixture.
 - 2. Include the stipulated sum of \$ 10,000 for purchase, delivery, and installation of (24) wall mounted vanity light fixtures in residential unit bathrooms.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.03 ACTION SUBMITTALS

- A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use CSI Form 13.1A or equivalent.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
 - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

- c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
- j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's or Owner's Action: If necessary, Architect or Owner will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect or Owner will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect or Owner does not issue a decision on use of a proposed substitution within time allocated.

1.04 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.05 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.06 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 1. Conditions: Architect or Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect or Owner will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.

- e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Architect or Owner will consider requests for substitution if received within 60 days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Architect or Owner.
1. Conditions: Architect or Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.

- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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**SECTION 012600
CONTRACT MODIFICATION PROCEDURES**

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.02 MINOR CHANGES IN THE WORK

- A. Architect or Owner will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.03 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect or Owner will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect or Owner are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use [forms provided by Owner. Sample copies are included in Project Manual] [forms acceptable to Architect] [form provided as part of web-based Project management software].
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use form acceptable to Owner.

1.04 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

1.05 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect or Owner will issue a Change Order for signatures of Owner and Contractor.

1.06 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect or Owner may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 012900
PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
 - 2. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 3. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.02 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.03 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Owner at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:

- a. Project name and location.
 - b. Owner's name.
 - c. Owner's Project number.
 - d. Name of Architect.
 - e. Architect's Project number.
 - f. Contractor's name and address.
 - g. Date of submittal.
2. Arrange schedule of values consistent with format of AIA Document G703 .
3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
6. Allowances: Provide a separate line item in the schedule of values for each allowance.
7. Engineering Submittals: Provide separate line item for engineering submittals of delegated design work, separate from line item for materials, equipment, and installation.
8. Overhead Costs, Proportional Distribution: Include total cost and proportionate share of general overhead and profit for each line item.
9. Temporary Facilities: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
10. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling not less than five percent of the Contract Sum and subcontract amount. Provide separate line items values under Closeout for the following at a minimum:
 - a. Owner training.
 - b. Punch list work.
 - c. Demobilization.
 - d. Record Drawings and O&M's.
11. Schedule of Values Revisions: Revise the schedule of values when Change Orders result in a change in the Contract Sum. Include at least one separate line item for each Change Order.

1.04 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous approved applications and payments.
- B. Payment Application Times: The date for each progress payment is indicated in the Owner/Contractor Agreement. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

- C. Payment Application Times: Submit Application for Payment to Owner by the of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
 - 1. Submit draft copy of Application for Payment five days prior to due date for review.
- D. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 - 3. Include amounts of Change Orders issued before last day of construction period covered by application.
- F. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
 - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
 - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 - 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

- G. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Owner by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment for construction period covered by the previous application.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit conditional final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - 5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of values.
 - 3. Contractor's construction schedule, preliminary if not final.
 - 4. Products list, preliminary if not final.
 - 5. Submittal schedule, preliminary if not final.
 - 6. List of Contractor's staff assignments.
 - 7. List of Contractor's principal consultants.
 - 8. Copies of building permits.

9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
 13. Performance and payment bonds.
 14. Data needed to acquire Owner's insurance.
- J. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 - a. Complete administrative actions, submittals, and Work preceding this application, as described in Section 017700 "Closeout Procedures."
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Certification of completion of final punch list items.
 3. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 4. Updated final statement, accounting for final changes to the Contract Sum.
 5. AIA Document G706.
 6. AIA Document G706A.
 7. AIA Document G707.
 8. Evidence that claims have been settled.

9. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
10. Final liquidated damages settlement statement.
11. Proof that taxes, fees, and similar obligations are paid.
12. Waivers and releases.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 013100
PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. RFIs.
 - 3. Digital project management procedures.
 - 4. Project meetings.

1.02 DEFINITIONS

- A. BIM: Building Information Modeling.
- B. RFI: Request for Information. Request from Contractor seeking information required by or clarifications of the Contract Documents.

1.03 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, Keep list current at all times.

1.04 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
 1. Schedule construction operations in sequence required to obtain the best results, where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 1. Preparation of Contractor's construction schedule.
 2. Preparation of the schedule of values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.

1.05 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
 2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Owner name.
 3. Owner's Project number.
 4. Name of Architect.
 5. Architect's Project number.
 6. Date.
 7. Name of Contractor.
 8. RFI number, numbered sequentially.
 9. RFI subject.
 10. Specification Section number and title and related paragraphs, as appropriate.
 11. Drawing number and detail references, as appropriate.
 12. Field dimensions and conditions, as appropriate.
 13. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 14. Contractor's signature.
 15. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

- C. RFI Forms: AIA Document G716 or software-generated form with substantially the same content as indicated above..
 - 1. Attachments shall be electronic files in PDF format.
- D. Architect or Owner will review each RFI, determine action required, and respond. Allow seven days for response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
 - 1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 - 2. Architect's or Owner's action may include a request for additional information, in which case time for response will date from time of receipt of additional information.
 - 3. Architect's or Owner's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Owner in writing within 5 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly, with not less than the following:
 - 1. Project name.
 - 2. Name and address of Contractor.
 - 3. Name and address of Architect.

4. RFI number, including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's/Owner's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Architect's or Owner's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect or Owner within three days if Contractor disagrees with response.

1.06 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Architect's Digital Data Files: Digital data files of Architect's 2-d exported CAD drawings may be provided by Architect for Contractor's use during construction.
1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project Record Drawings.
 2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
 3. Contractor shall execute a data licensing agreement in the form provided by the Architect.
 4. The following digital data files will be furnished for each appropriate discipline:
 - a. Floor Plans.
 - b. Reflected ceiling plans.
- B. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
1. Assemble complete submittal package into a single indexed file, incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.

2. Name file with submittal number or other unique identifier, including revision identifier.
3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.07 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of seven days prior to meeting.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Owner will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect.
 1. Attendees: Authorized representatives of Owner, Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Responsibilities and personnel assignments.
 - b. Tentative construction schedule.
 - c. Phasing.
 - d. Critical work sequencing and long lead items.
 - e. Designation of key personnel and their duties.
 - f. Lines of communications.
 - g. Use of web-based Project software.

- h. Procedures for processing field decisions and Change Orders.
 - i. Procedures for RFIs.
 - j. Procedures for testing and inspecting.
 - k. Procedures for processing Applications for Payment.
 - l. Distribution of the Contract Documents.
 - m. Submittal procedures.
 - n. Sustainable design requirements.
 - o. Preparation of Record Documents.
 - p. Use of the premises.
 - q. Work restrictions.
 - r. Working hours.
 - s. Owner's occupancy requirements.
 - t. Responsibility for temporary facilities and controls.
 - u. Procedures for moisture and mold control.
 - v. Procedures for disruptions and shutdowns.
 - w. Construction waste management and recycling.
 - x. Parking availability.
 - y. Office, work, and storage areas.
 - z. Equipment deliveries and priorities.
 - aa. First aid.
 - bb. Security.
 - cc. Progress cleaning.
3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, Owner and Owner's Commissioning Authority of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Sustainable design requirements.
 - i. Review of mockups.
 - j. Possible conflicts.
 - k. Compatibility requirements.
 - l. Time schedules.
 - m. Weather limitations.
 - n. Manufacturer's written instructions.
 - o. Warranty requirements.
 - p. Compatibility of materials.
 - q. Acceptability of substrates.

- r. Temporary facilities and controls.
 - s. Space and access limitations.
 - t. Regulations of authorities having jurisdiction.
 - u. Testing and inspecting requirements.
 - v. Installation procedures.
 - w. Coordination with other work.
 - x. Required performance results.
 - y. Protection of adjacent work.
 - z. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect.
- 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 - 2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of Record Documents.

- b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for completing sustainable design documentation.
 - e. Requirements for preparing operations and maintenance data.
 - f. Requirements for delivery of material samples, attic stock, and spare parts.
 - g. Requirements for demonstration and training.
 - h. Preparation of Contractor's punch list.
 - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - j. Submittal procedures.
 - k. Coordination of separate contracts.
 - l. Owner's partial occupancy requirements.
 - m. Installation of Owner's furniture, fixtures, and equipment.
 - n. Responsibility for removing temporary facilities and controls.
4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at weekly intervals.
- 1. Coordinate dates of meetings with preparation of payment requests.
 - 2. Attendees: In addition to representatives of Owner each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

- a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
- b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Status of sustainable design documentation.
 - 5) Deliveries.
 - 6) Off-site fabrication.
 - 7) Access.
 - 8) Site use.
 - 9) Temporary facilities and controls.
 - 10) Progress cleaning.
 - 11) Quality and work standards.
 - 12) Status of correction of deficient items.
 - 13) Field observations.
 - 14) Status of RFIs.
 - 15) Status of Proposal Requests.
 - 16) Pending changes.
 - 17) Status of Change Orders.

- 18) Pending claims and disputes.
- 19) Documentation of information for payment requests.
- 4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 013200
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Site condition reports.
 - 7. Unusual event reports.

1.02 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine the critical path of Project and when activities can be performed.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

1.03 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file.
 - 2. PDF file.
 - 3. Two paper copies, of sufficient size to display entire period or schedule, as required.
- B. Startup construction schedule.
 - 1. Submittal of cost-loaded startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- E. Construction Schedule Updating Reports: Submit with Applications for Payment.
- F. Daily Construction Reports: Submit at weekly intervals.
- G. Site Condition Reports: Submit at time of discovery of differing conditions.
- H. Unusual Event Reports: Submit at time of unusual event.

1.04 QUALITY ASSURANCE

1.05 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities, and schedule them in proper sequence.

1.06 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- B. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting, using CPM scheduling.
 - 1. In-House Option: Owner may waive requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
- C. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion.
 - 1. Contract completion date to not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- D. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Owner.
 - 2. Temporary Facilities: Indicate start and completion dates for the following as applicable:
 - a. Securing of approvals and permits required for performance of the Work.
 - b. Temporary facilities.

- c. Construction of mock-ups, prototypes and samples.
 - d. Owner interfaces and furnishing of items.
 - e. Interfaces with Separate Contracts.
 - f. Regulatory agency approvals.
 - g. Punch list.
 - 3. Procurement Activities: Include procurement process activities for the following long lead-time items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 4. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
 - 5. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
 - 6. Commissioning Time: Include no fewer than 15 days for commissioning.
 - 7. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 - 8. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and Final Completion.
- E. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
- 1. Phasing: Arrange list of activities on schedule by phase.
 - 2. Work under More Than One Contract: Include a separate activity for each contract.
 - 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 - 4. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Uninterruptible services.
 - b. Partial occupancy before Substantial Completion.

- c. Use-of-premises restrictions.
 - d. Provisions for future construction.
 - e. Seasonal variations.
 - f. Environmental control.
5. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
- a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Building flush-out.
 - m. Startup and placement into final use and operation.
 - n. Commissioning.
6. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
- a. Structural completion.

- b. Temporary enclosure and space conditioning.
 - c. Permanent space enclosure.
 - d. Completion of mechanical installation.
 - e. Completion of electrical installation.
 - f. Substantial Completion.
7. Other Constraints: .
- F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion, and the following interim milestones:
- 1. Temporary enclosure and space conditioning.
- G. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
- 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and the Contract Time.
- H. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities.
- 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Final Completion percentage for each activity.

- I. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- J. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

1.07 STARTUP CONSTRUCTION SCHEDULE

- A. Gantt-Chart Schedule: Submit startup, horizontal, Gantt-chart-type construction schedule within seven days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first [90] days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

1.08 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for the Notice to Proceed.
 - 1. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

1.09 CPM SCHEDULE REQUIREMENTS

- A. Prepare network diagrams using AON (activity-on-node) format.
- B. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.
 - 1. Develop network diagram in sufficient time to submit CPM schedule, so it can be accepted for use no later than the first Application for Payment.
 - a. Failure to include any work item required for performance of this Contract must not excuse Contractor from completing all work within applicable completion dates.
 - 2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 - 3. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- C. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
 - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by Contractor's activities.

- i. Testing and inspection.
 - j. Commissioning.
 - k. Punch list and Final Completion.
 - l. Activities occurring following Final Completion.
2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates to be consistent with Contract milestone dates.
3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
- D. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.
- E. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
 1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Main events of activity.
 4. Immediate preceding and succeeding activities.
 5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.
 8. Total float or slack time.

- F. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the critical path.
 6. Changes in total float or slack time.
 7. Changes in the Contract Time.

1.10 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 7. Testing and inspection.
 8. Accidents.
 9. Meetings and significant decisions.
 10. Unusual events.
 11. Stoppages, delays, shortages, and losses.
 12. Meter readings and similar recordings.

13. Emergency procedures.
 14. Orders and requests of authorities having jurisdiction.
 15. Change Orders received and implemented.
 16. Construction Change Directives received and implemented.
 17. Services connected and disconnected.
 18. Equipment or system tests and startups.
 19. Partial completions and occupancies.
 20. Substantial Completions authorized.
- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- C. Unusual Event Reports: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
1. Submit unusual event reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 013233
PHOTOGRAPHIC DOCUMENTATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction photographs.
 - 2. Concealed Work photographs.
 - 3. Periodic construction photographs.

1.02 INFORMATIONAL SUBMITTALS

- A. Digital Photographs: Submit image files within five days of taking photographs.
 - 1. Identification: Provide the following information with each image description:
 - a. Name of Project.
 - b. Name and contact information for photographer.
 - c. Name of Architect[and Construction Manager].
 - d. Name of Contractor.
 - e. Date photograph was taken.
 - f. Description of location, vantage point, and direction.

1.03 FORMATS AND MEDIA

- A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 10 megapixels.
- B. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

1.04 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs with maximum depth of field and in focus.
 - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.

- B. Preconstruction Photographs: Before commencement of the Work, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points.
 - 1. Take photographs to show existing conditions adjacent to property before starting the Work.
 - 2. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- C. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficient in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:
 - 1. Underground utilities.
 - 2. Underslab services.
 - 3. Piping.
 - 4. Electrical conduit.
 - 5. Waterproofing and weather-resistant barriers.
- D. Periodic Construction Photographs: Take monthly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 013300 SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Submittal schedule requirements.
 - 2. Administrative and procedural requirements for submittals.

1.02 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's or Owner's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's or Owner's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.03 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect or Owner and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.

- a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal Category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled dates for purchasing.
 - h. Scheduled date of fabrication.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.04 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
 1. Project name.
 2. Date.
 3. Name of Architect.
 4. Name of Contractor.
 5. Name of firm or entity that prepared submittal.
 6. Names of subcontractor, manufacturer, and supplier.
 7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
 8. Category and type of submittal.
 9. Submittal purpose and description.

10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
 11. Drawing number and detail references, as appropriate.
 12. Indication of full or partial submittal.
 13. Location(s) where product is to be installed, as appropriate.
 14. Other necessary identification.
 15. Remarks.
 16. Signature of transmitter.
- B. Options: Identify options requiring selection by Architect or Owner.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. Paper Submittals:
1. Place a permanent label or title block on each submittal item for identification; include name of firm or entity that prepared submittal.
 2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by Architect or Owner.
 3. Action Submittals: Submit three paper copies of each submittal unless otherwise. Two copies will be returned.
 4. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated.
 5. Transmittal for Submittals: Assemble each submittal individually and appropriately for transmittal and handling.
- E. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

1.05 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package and transmit to Architect or Owner by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
 - a. Architect or Owner will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.
 2. Paper: Prepare submittals in paper form and deliver to Owner.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect or Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's or Owner's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.

2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's or Owner action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's or Owner's action stamp.

1.06 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams that show factory-installed wiring.

- b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
- 5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.
 - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 - 2. Paper Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches .
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
 - 1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
 - 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
 - a. Project name and submittal number.

- b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Sample source.
 - e. Number and title of applicable Specification Section.
 - f. Specification paragraph number and generic name of each item.
3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect or Owner will return submittal with options selected.
6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit two sets of Samples. Architect or Owner will retain one Sample sets; remainder will be returned.

- 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
 2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

- a. Name of evaluation organization.
- b. Date of evaluation.
- c. Time period when report is in effect.
- d. Product and manufacturers' names.
- e. Description of product.
- f. Test procedures and results.
- g. Limitations of use.

1.07 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
- B. Delegated Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file or three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.08 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Architect and Owner will not review submittals received from Contractor that do not have Contractor's review and approval.

1.09 ARCHITECT'S AND OWNERS REVIEW

- A. Action Submittals: Architect or Owner will review each submittal, indicate corrections or revisions required and return.
- B. Submittals marked " Approved as Noted" or "Conforms as Noted" are to have comments incorporated into the work and provided as noted; no re-submittal required.
- C. Informational Submittals: Architect or Owner will review each submittal and will not return it, or will return it if it does not comply with requirements.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect or Owner will return without review submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect or Owner without action.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 013329.01
SUSTAINABLE DESIGN REPORTING - ESDS V4.1

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General requirements for sustainable design reporting.
 - 1. This project intends to be constructed using procedures and documentation complying with the Washington State Evergreen Sustainable Development Standard (ESDS) v4.1 and other requirements identified in this specification.
 - 2. Attachment A: The ESDS v4.1 Checklist for this project is attached to this Section identifying the sustainable Design Elements required for this project.
 - 3. Attachment B: ESDS Narrative for this project is attached to this Section identifying the sustainable design compliance path.

1.02 REPORTING REQUIREMENTS

- A. Free-standing furniture and furnishings are not included in the Contract.
- B. Contractor must familiarize himself with the relevant reporting requirements and provide the necessary information and instruction to all subcontractors and installers.

1.03 PRODUCT REPORTING SCOPE

- A. General: Product reporting scope for the purpose of achieving the selected sustainability certification level is limited to those items directly affecting ability to achieve targeted credits.

1.04 SUBMITTALS

- A. See Section 013300 Submittal Procedures for additional submittal procedures requirements.
- B. Sustainable Design Documentation: The scope of required documentation is specified in ESDS v4 and is incorporated by Reference into this work.
- C. Contractor is required to provide the Documentation applicable to each Design Element Identified on the Checklist applicable to construction activities, materials, and system.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROCEDURES

- A. Submit sustainable design documentation required of Contractor, using procedures defined under Submittals for Information in Section 013300.
- B. Where an item of sustainable design documentation is specified, fill out and submit electronically the appropriate forms, using appropriate software, including forms in Sections 013329.04 and 013329.07..
 - 1. Fill out one line for each different brand name product and each different manufacturer of a lot of commodity products.
 - 2. Where required attachments are specified, attach the documentation.
 - 3. Mark each blank with the appropriate information; use "ATT" for items attached; if any item is not relevant use the code "NR"; if any item is not available use the code "NA".
- C. Each form must be signed by the entity capable of certifying the information.
 - 1. Certification signatures must be made by an officer of the company.
 - 2. For products, certification must be made by the manufacturer not the supplier.
 - 3. For custom fabricated products, certification by the fabricator is acceptable.
- D. Submit the completed forms in accordance with the requirements of Section 013300 information submittals.
 - 1. Give each form a unique submittal number.
 - 2. Do not combine sustainable design documentation with product data or shop drawing submittals.
- E. Specific General Trades, Owner/Architect Requirements in addition to requirements in technical sections:
 - 1. Physical barriers to pest control: Provide rodent and corrosion-resistant screens on all openings greater than 1/4 inch.

2. Architect will provide periodic visual observation of exterior envelope of materials, installation methods, and potential water and moisture infiltration.
3. O&M Instructions/Manuals: At completion of the work, Owner to provide permanently on site and digitally available online.
4. One-year Post-Occupancy Evaluation: As part of one -year Warranty Walk-Through, Owner and Architect to review durability, original intent vs actual functionality, and lessons learned.

END OF SECTION

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Evergreen Standard v4.1 Checklist

INSTRUCTIONS: **Do not leave any cells blank.**

For Mandatory Criteria:

- Indicate with a capital "X" all criteria that apply to your project in the Points column.
- Select "N/A" if the criterion does not apply to your project.

For Optional Criteria:

- New Construction projects must achieve 50 points; Rehab projects must achieve 40.
- Enter the appropriate number of optional points you are claiming in the Points column, or 0 if no points are selected.

Evergreen Sustainable Development Standard v4.1 Checklist

Project Name: EKLUND at GALES

Site Name: Eklund Heights

Site Region: Rural

Site Activity: New Construction

Project Type: Rental

Design Element: Integrative Process

#	Title	Requirement Type/Optional Points	Points
1.01 a	Integrative Process Planning	Mandatory	X
b	Integrative Design: Documentation	Mandatory	X
c	Integrative Design: Construction Management	Mandatory	X
d	Integrative Design: Post Occupancy Evaluation	Optional 6 Points	6
1.02	Advanced Tools	Optional up to 13 Points	0
1.03	Beyond ADA: Universal Design	Optional 8 Points	8
1.04	Healing-Centered Design	Optional 8 Points	0
1.05	Active Design: Promoting Physical Activity	Optional 8 Points	0
Section 1 SUBTOTAL			14

Design Element: Location & Neighborhood Fabric

#	Criterion Title	Requirement Type/Optional Points	Points
2.01	Appropriate Project Siting	Mandatory	X
2.02 a	Connections to Existing Development & Infrastructure		
b	Connections to Existing Development & Infrastructure	Optional 2 Points for Rural/Tribal New Construction	2
2.03 a	Compact Development	Mandatory for New Construction	X
b	Compact Development: Higher Density	Optional 5 Points for New Construction	5
2.04 a	Access to Services	Mandatory for New Construction	X
b	Enhanced Access to Services	Optional 5 Points	5
2.05 a	Access to Transit	Mandatory for New Construction	X
b	Enhanced Access to Transit	Optional 2, 6, or 8 Points	8
2.06 a	Preservation of and Access to Open Space	Mandatory for Rural/Tribal New Construction	X
b	Preservation of and Access to Urban Open Space		
2.07	Walkable Neighborhoods - Sidewalks & Pathways	Mandatory Except for Tribal	X
2.08	Reducing Private Automobile Use	Optional Up to 5 Points	0
2.09	Greyfield, Brownfield, or Adaptive Reuse Site	Optional 5 or 7 Points	0
2.10	Access to Fresh, Local Foods	Optional 3 Points	0
2.11	Locating in Certified Communities	Optional 8 Points	0
2.12 a	Access to Broadband: Broadband Ready	Mandatory	X
b	Access to Broadband: Connectivity	Optional 6 Points	0
Section 2 SUBTOTAL			20

Design Element: Site Improvements

#	Criterion Title	Requirement Type/Optional Points	Points
3.01	Environmental Remediation	Mandatory	X
3.02 a	Landscaping	Mandatory	X
b	Advanced Landscaping	Optional 5 Points	5
c	Landscaping- Significant Trees	Optional up to 5 Points	0
3.03	Efficient Irrigation	Mandatory	X
3.04	Storm Drain Labels	Mandatory	X
Section 3 SUBTOTAL			5

Design Element: Water Conservation

#	Criterion Title	Requirement Type/Optional Points	Points
4.01 a	Water-Conserving Fixtures	Mandatory	X
b	Advanced Water-Conserving Fixtures	Optional up to 6 Points	0
4.02 a	Leak Detection		
b	Leak Detection Pre-Acquisition		
4.03 a	Lead Service Lines in Existing Buildings		
b	Lead Service Lines in New Buildings	Optional 3 Points for New Construction with Demolition	0
4.04 a	Water Metering – New Construction	Optional 2 Points for New Construction	0
b	Water Metering - Rehab		
4.05	Water Reuse	Optional up to 12 Points	0
4.06	Efficient Plumbing Layout & Design	Optional 4 Points	0
4.07	Access to Potable Water During Emergencies	Optional 8 Points	0
Section 4 SUBTOTAL			0

Design Element: Energy Efficiency

#	Criterion Title	Requirement Type/Optional Points	Points
5.01 a	Building Performance – Commissioning	Mandatory for New Construction	X
b	Building Performance – Weatherization		
5.02 a	Additional Efficiency	Optional 3-25 Points for New Construction	10
b	Additional Efficiency - Window Replacement		
5.03	ENERGY STAR Appliances	Mandatory	X
5.04	Central Laundry	Optional 3 Points	3
5.05	Electricity Metering		
5.06	Renewable Energy		
5.07 a	Photovoltaic Ready	Mandatory for New Construction	X
b	Photovoltaic Ready - Upgrades		
5.08 a	Domestic Water Heating	Mandatory for New Construction	X
b	Domestic Water Heating – Higher Efficiency		
5.09	Space Heating & Cooling Equipment Replacement		
Section 5 SUBTOTAL			13

Design Element: Materials

#	Criterion Title	Requirement Type/Optional Points	Points
6.01 a	Healthier Material Selection	Mandatory	X
b	Healthier Material Selection - Advanced	Optional up to 15 Points	0
c	Healthier Material Selection - Toxin-Free Recycled Content	Optional up to 3 Points	0
6.02 a	Embodied Carbon Reduction - Materials	Optional up to 11 Points	2
b	Embodied Carbon Reduction - Regional Sourcing	Optional up to 4 Points	0
6.03	Construction Waste Management	Optional Up to 5 Points	2
6.04 a	Reduced Heat Island Effect: Roofing	Optional 2 Points	0
b	Reduced Heat-Island Effect: Paving	Optional 2 Points	0
6.05	Socially Sustainable Products	Optional up to 3 Points	0
Section 6 SUBTOTAL			4

Design Element: Healthy Living Environment

#	Criterion Title	Requirement Type/Optional Points	Points
7.01	Combustion Equipment	Mandatory	X
7.02	Garage Isolation	Mandatory	n/a
7.03	Integrated Pest Management	Mandatory	X
7.04	Lead-Safe Work Practices	Mandatory for Rehab & New Construction with Demolition	n/a
7.05 a	Smoke-Free Units and Common Areas	Mandatory	X
b	Smoke-Free Property	Optional 7 Points	7
7.06	Exhaust Fans – Bathroom Upgrade		
7.07 a	Exhaust Fans – Kitchen	Mandatory for New Construction	X
b	Exhaust Fans – Kitchen Upgrade		
7.08 a	Ventilation	Mandatory for New Construction (single family & ≤3 Stories)	X
b	Ventilation Upgrades		
c	Ventilation - Outside Air Filtration	Optional 8 Points	0
7.09	Clothes Dryer Exhaust	Mandatory	X
7.10	Mold Prevention: Surfaces	Mandatory	X
7.11	Mold Prevention: Tub & Shower Enclosures	Mandatory	X
7.12	Vapor Barrier Protection Strategies	Mandatory for Projects with Foundation Work	n/a
7.13	Enhanced Building Envelope Design	Optional up to 8 Points	0
Section 7 SUBTOTAL			7

Design Element: Operations, Maintenance & Resident Management

#	Criterion Title	Requirement Type/Optional Points	Points
8.01 a	Building Maintenance Manual – Sustainability Supplement	Mandatory	X
b	O&M Instructions for Maintenance Staff	Optional 7 Points	7
8.02	Resident/Owners' Manual	Mandatory	X
8.03	Walk-Throughs and Orientations to Property Operation	Mandatory	X
8.04	Project Data Collection	Optional 5 Points	0
8.05	Educational Signage	Optional 1 Point	0
8.06	ESDS Certification Plaque	Optional 2 Points	0
Section 8 SUBTOTAL			7

Thresholds

In order to ensure that your project will pass the threshold for the Evergreen Sustainable Development Standard, we advise building in a "cushion" of 5-10 points above what is required.

New Construction projects must achieve 50 points

Rehab projects must achieve 40 points, unless otherwise approved

Section 1	14
Section 2	20
Section 3	5
Section 4	0
Section 5	13
Section 6	4
Section 7	7
Section 8	7
Overall Checklist Total	70

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DIVISION 01 33 29.01

EVERGREEN SUSTAINABLE DEVELOPMENT STANDARD V4.1 NARRATIVE

PART 1 - GENERAL

1.01 INTRODUCTION

- A. This section outlines the requirements and responsibilities for achieving compliance with the Evergreen Sustainable Development Standard (ESDS) Version 4.1 for Eklund Heights.
- B. ESDS v4.1 is a performance-based green building standard required for affordable housing projects funded through the Housing Trust Fund and other public agencies.
- C. The project shall comply with all applicable mandatory criteria and achieve the required number of optional points as outlined in the Evergreen Project Plan (EPP).
- D. All contractors and consultants shall support the Owner's compliance with ESDS requirements as described in this Section and other related sections of the specifications.

1.02 SECTION INCLUDES

- A. Section Includes:
 - 1. General requirements and procedures for the pursuit of Evergreen Sustainable Development Standard (ESDS) New Construction Certification using the Housing Trust Fund Evergreen Sustainable Development Standard v4.1.
 - a. ESDS v4.1 Certification requires 50 points, currently at 70 points. The Work shall incorporate the sustainable design measures and procedures required to achieve this level of ESDS certification.
 - b. Contractor shall comply with performance, administrative and documentation requirements for all ESDS mandatory and selected 'optional' criteria for which the Contractor is assigned responsibility. The ESDS Checklist following this section indicates the mandatory and selected 'optional' criteria to be pursued. Reference 1.7 below for specific ESDS documentation required by Contractor.

- c. Remaining ESDS mandatory and selected 'optional' criteria required to obtain the Owner's targeted level of ESDS certification are dependent on the Architect, Engineers and other team members, and are not part of the Work of the Contractor's responsibility.
- 2. Coordination of ESDS requirements with other Sections of this Work, as described in Part 3 of this Section.
- 3. Coordination with other related requirements within Sections listed in "Related Requirements" and "Submittals."

1.03 RELATED REQUIREMENTS

- A. See "General Conditions of the Contract" for Submittal Procedures
- B. Section 01 7419 – Construction Waste Management and Disposal
- C. Section 01 9113 – General Commissioning Requirements
- D. Divisions 2-48 where ESDS Requirements are specific to the work of each of these sections.

1.04 DEFINITIONS

- A. ESDS/Evergreen [Standard] Checklist – This is a form prepared by the Evergreen Coordinator. It is to support ESDS criteria tracking throughout ESDS implementation, documentation, and submission.
- B. ESDS/Evergreen Project Plan (EPP) – This is a form prepared and submitted by the Evergreen Coordinator. It describes what 'optional' criteria were selected for the project and how mandatory and selected 'optional' criteria will be implemented in the project. This form and the attachments required for mandatory and selected 'optional' criteria are to be submitted for review and approval by the reviewing entity.
- C. ESDS/Evergreen Binder – The Evergreen Coordinator must compile and maintain this binder throughout construction. This binder must be kept on a filesharing site online and may also be kept on site as a physical binder. The binder includes the EPP, the Evergreen Binder Matrix, and all documents required to confirm compliance with ESDS. During construction, the Third Party Verifier, on-site project team (General Contractor, Project Engineer, and any relevant designees/subcontractors), reviewing

entity, and other appropriate parties must have access to the binder. Near the end of construction, the property management team must be granted access to the binder.

- D. ESDS/Evergreen Binder Matrix – This is a document to support ESDS documentation tracking and completion of ESDS work. It shall be filled out and included in the ESDS Binder.
- E. Project Sponsor – The project owner/client organization.
- F. Evergreen Advocate (EA) – The Project Sponsor's representative regarding ESDS implementation. This person must be an employee of the sponsor organization, and their primary responsibility is to conduct the Project Priorities Survey (PPS) and to ensure the findings of the PPS are applied as the project is developed.
- G. Evergreen Coordinator (EC) – The Project Sponsor's agent regarding ESDS implementation. This person does not need to be an employee of the sponsor organization. This role may be filled by the same person designated to be the EA. The EC completes and maintains the EPP, ESDS Binder, coordinates site visits, ensures that ESDS features are implemented and correctly installed, and troubleshoots any ESDS problems with appropriate project team members.
- H. Third Party Verifier (3PV) – The 3PV's verifies the correct implementation of ESDS criteria without delaying construction. They conduct ESDS on-site inspections in a consistent, fair, and transparent manner, scheduled to coincide with draw inspections.
- I. Project Priorities Survey (PPS) – This is a survey that must be completed for ESDS Integrative Process Planning (IP) mandatory criteria. It must be completed before ESDS application and submitted in the full application. It will serve as a simple guide to understand the context, population, and environmental considerations that a project must address in order to facilitate a well-informed integrative design process.
- J. Bio-based Materials – Organic material or product containing in whole or part biogenic (biological sources) carbon. Organic materials contain carbon-based compounds in which the carbon is attached to other carbon atoms, hydrogen, oxygen, or other elements in a chain, ring, or three-dimensional structures.
- K. EPA WaterSense – A third party certification program indicating the certified plumbing fixture has been tested for good performance and water savings. Products and services that have earned the WaterSense label have been certified to be at least 20 percent more efficient without sacrificing performance.

- L. Cradle to Cradle Certification – A protocol developed by McDonough Braungart Design Chemistry that establishes guidelines for the manufacture of products in ways that harmonize with natural systems. These guidelines require, for example, that products be recyclable indefinitely, contain no hazardous ingredients, and be manufactured using renewable energy.
- M. Forest Stewardship Council (FSC) – Independent, third-party verification that forest products are produced and sold based on a set of criteria for forest management and chain-of-custody controls developed by the Forest Stewardship Council (FSC), an international nonprofit organization. FSC criteria for certifying forests around the world address forest management, legal issues, indigenous rights, labor rights, multiple benefits, and environmental impacts.
- N. FloorScore – A third party entity which tests and certifies hard surface flooring and flooring adhesive products, ensuring they meet stringent indoor air quality emissions requirements. FloorScore certification is applicable to any hard surface flooring and flooring adhesives.
- O. Green Label Plus – A voluntary, industry testing program for carpet, adhesive and cushion products which establishes the highest standard for indoor air quality (IAQ) ever set by the carpet industry. The Carpet and Rug Institute (CRI) created Green Label Plus to identify carpets, adhesives and cushions that are tested by an independent, certified laboratory and meet stringent criteria for low chemical emissions.
- P. GreenGuard Select – A chemical exposure minimization standard combining indoor air quality product emissions criteria with other product specific chemical requirements. Criteria includes volatile organic compound (VOC) content limits, lower formaldehyde emission requirements, lead and phthalate content requirements, and commercial furniture testing protocols.
- Q. SCS Indoor Advantage Gold – A certification program, developed by SCS Global Services, certifies compliance with rigorous indoor air quality emission requirements. The program is designed for interior building materials, furnishings and finish systems. This standard aligns with both ANSI/BIFMA M7.1 and X7.1, and CA 01350.
- R. CARB Phase II ULEF – California's Air Resources Board Phase II is the stringent emission standards for formaldehyde emissions from composite wood products, include hardwood plywood, particleboard, and MDF.

- S. Solar Reflectance – The fraction of solar energy that is reflected by a surface. The standard technique for its determination uses spectrophotometric measurements, with an integrating sphere to determine the reflectance at each wavelength. The average reflectance is then determined by an averaging process, using a standard solar spectrum, as documented by ASTM Standards E903 and E892.

1.05 REFERENCE STANDARDS

- A. Evergreen Sustainable Development Standard Version 4.1 – A guide of all the mandatory and ‘optional’ criteria, which can be viewed or downloaded for free from Evergreen Sustainable Development - Washington State Department of Commerce.
- B. California Department of Public Health (CDPH) Standard Method v1.1 – 2010, CA Section 01350 – A method for emission testing and requirements for all products and materials except furniture. This method, widely recognized as a leadership standard for its stringent scientific criteria and detailed specificity, was developed through an open, consensus process. It uses the chronic reference exposure levels established by the California Office of Environmental Health Hazard Assessment, which include some of the most stringent criteria in use. It also adopted an incorporated the first edition of the ANSI/BIFMA M7.1 standard test method for furniture.

1.06 ORDER OF PRECEDENCE PROVISIONS

- A. In the case of inconsistency or ambiguities in design documents (all specifications and drawings), compliance with the strictest design requirement among conflicting criteria is required.
- B. If provided, alternate pricing for compliance with less strict criteria will be evaluated in addition to the mandatory baseline strictest criteria.
- C. Provide notice upon discovering potential design conflicts prior to bid where possible.

1.07 GENERAL ESDS REQUIREMENTS

- A. Designate a Evergreen Coordinator, responsible for the following ESDS-related tasks and coordination:
 - 1. Scheduling and conducting ESDS meetings, quarterly, throughout construction. Combine with regular project meetings, when possible.

2. Documentation, and associated procedures, as required in all Contractor-assigned ESDS mandatory and selected 'optional' criteria.
 3. Monitor all on-site ESDS-related Work while in progress.
- B. Coordinate and schedule site visits with Evergreen Coordinator and Third Party Verifier to allow viewing of all ESDS criteria pursued.
 - C. Coordinate and schedule with Evergreen Coordinator visits to allow viewing of related ESDS credits pursued.
 - D. Integrate commissioning activities within construction schedule and work with commissioning authority (CxA) to ensure they are able to lead, review and oversee the completion of the commissioning process activities for any central commercial heating, cooling, water heating and ventilation system. See Section 01 9100 – General Commissioning.
 - E. Download the Evergreen Sustainable Development Standard Version 4.1 (see 1.4 A) and keep this guide at the site construction office throughout the duration of construction.
 - F. Submit all final ESDS documentation to Evergreen Coordinator.

1.08 SUBMITTALS

- A. All ESDS-related submittals are in addition to typical submittals. In cases where ESDS-submittal requests result in duplication of documentation, these documents must still be submitted to verify compliance of ESDS certification as well as for typical submittal procedures. ESDS-submittals shall have all pertinent ESDS product data highlighted or flagged prior to submission to the Evergreen Coordinator.
- B. ESDS-Procedural Plans: Within 30 days of Notice to Proceed, prior to the start of any demolition, construction or removal of waste from the site, submit the following plans for review and approval:
 1. Construction Waste Management Plan – See Section 01 7419.
- C. Preliminary Submittals:
 1. Attend ESDS kick-off meeting when concrete foundation is at grade.
- D. Progress Submittals:

1. Report ongoing compliance with Contractor-responsible ESDS credits at all ESDS progress meetings.
- E. Final Submittals: Submit final ESDS related documents to the Evergreen Coordinator, within 30 days of completion of construction.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 ESDS CERTIFICATION

- A. All mandatory and selected 'optional' criteria marked as "Yes" in the final ESDS Checklist must be met in order to achieve ESDS v4.1 New Construction certification with 50 points, currently at 60 points.
- B. Prior to construction, confirm that site does not present any obstacles to achievement of the ESDS mandatory and selected 'optional' criteria for which the Contractor is responsible.

END OF SECTION

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SECTION 013329.04
MATERIAL CONTENT FORM

PROJECT NAME: EKLUND AT GALES; NO.: 45370.

1.01 APPLICABLE SPECIFICATION SECTION NUMBER(S) _____

1.02 PRODUCT NAME: _____ (BRAND NAME, MODEL NUMBER, ETC.)

1.03 MANUFACTURER NAME: _____ WWW. _____

1.04 SOURCE LOCATION: _____ (IF PROCESSED AT MULTIPLE
LOCATIONS, ATTACH A DESCRIPTION; SEE SECTION 016000)

PRODUCT CONTENT

2.01 TOTAL WEIGHT: _____ POUNDS PER _____ (UNIT).

2.02 ENVIRONMENTAL PRODUCT DECLARATION (EPD) ____ IS ATTACHED OR ____ IS NOT
AVAILABLE.

2.03 ____ % SOLID WOOD, WOOD CHIP, AND WOOD FIBER CONTENT, BY WEIGHT.

A. ____ Product is FSC-trademarked.

B. ____ FSC Chain-of-Custody certificate number is _____

C. ____ SFI Certified ____ ATFS Certified ____ SFM Certified.

2.04 ____ % OTHER BIO-BASED CONTENT, BY WEIGHT; SOURCED FROM A SAN-CERTIFIED
FARM.

2.05 ____ % STEEL CONTENT, BY WEIGHT.

A. ____ Steel Mill Source is: _____

B. ____ Mill letter describing mill process and typical re-used steel content is attached.

2.06 ____ % PRE-CONSUMER (POST-INDUSTRIAL) RECYCLED CONTENT, BY WEIGHT, OTHER THAN STEEL.

2.07 ____ % POST-CONSUMER RECYCLED CONTENT, BY WEIGHT, OTHER THAN STEEL.

2.08 ____ ZERO LEAD CONTENT.

2.09 ____ ZERO ASBESTOS CONTENT.

2.10 ____ ZERO INTENTIONALLY ADDED METHYLENE CHLORIDE OR PERCHLOROETHYLENE (PAINTS AND COATINGS).

2.11 ____ ZERO INTENTIONALLY ADDED CADMIUM (PAINTS AND COATINGS).

EMISSIONS AND HEALTH

3.01 HEALTH PRODUCT DECLARATION (HPD) ____ IS ATTACHED OR ____ IS NOT AVAILABLE.

3.02 ____ FORMALDEHYDE: COMPLYING WITH CARB COMPOSITE WOOD REGULATION FOR ULEF OR NO ADDED FORMALDEHYDE RESIN.

3.03 ____ LOW-EMITTING MATERIAL MEETING REQUIREMENTS OF CAL (CDPH SM), PRIVATE OFFICE SCENARIO.

3.04 WET-APPLIED PRODUCTS:

3.05 ____ VOC CONTENT MEETING SCAQMD RULE 1113.

3.06 ____ VOC CONTENT: MEETING CARB 2007, SCM FOR ARCHITECTURAL COATINGS.

3.07 ____ VOC CONTENT MEETS SCAQMD RULE 1168.

3.08 ____ OTHER VOC CONTENT TEST REPORTS; SEE SECTION 013329.02 - SUSTAINABLE DESIGN REPORTING - LEED V4.

CERTIFIED BY: (MANUFACTURER)

4.01 ____ DOCUMENTATION OF ALL CLAIMS MADE ABOVE IS ATTACHED.

4.02 PRINT NAME: _____

4.03 SIGNATURE: _____

4.04 TITLE: _____ (OFFICER OF COMPANY), DATE: _____

COST CERTIFICATION

5.01 TOTAL INSTALLED MATERIAL COST OF THIS PRODUCT: \$ _____

5.02 NO. OF UNITS INSTALLED: _____ TOTAL VOLUME INSTALLED: _____(WET-APPLIED PRODUCTS)

5.03 CERTIFIED BY: (CONTRACTOR)

A. Print Name: _____

B. Signature: _____

C. Title: _____ (officer of company), Date: _____

END OF SECTION

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SECTION 013329.07
PROHIBITED CONTENT INSTALLER CERTIFICATION

PROJECT NAME: EKLUND AT GALES; NO.: 45370.

USE OF THIS FORM

- 1.01 BECAUSE INSTALLERS ARE ALLOWED AND DIRECTED TO CHOOSE ACCESSORY MATERIALS SUITABLE FOR THE APPLICABLE INSTALLATION, THERE IS A POSSIBILITY THAT SUCH ACCESSORY MATERIALS MIGHT CONTAIN VOC CONTENT IN EXCESS OF THAT PERMITTED, ESPECIALLY WHERE SUCH MATERIALS HAVE NOT BEEN EXPLICITLY SPECIFIED.**
- 1.02 CONTRACTOR IS REQUIRED TO OBTAIN AND SUBMIT THIS FORM FROM EACH INSTALLER OF WORK ON THIS PROJECT.**
- 1.03 FOR EACH PRODUCT CATEGORY LISTED, CIRCLE THE CORRECT WORDS IN BRACKETS: EITHER [HAS] OR [HAS NOT].**
- 1.04 IF ANY OF THESE ACCESSORY MATERIALS HAS BEEN USED, ATTACH TO THIS FORM PRODUCT DATA AND SDS SHEET FOR EACH SUCH PRODUCT.**

PRODUCT CERTIFICATION

2.01 I CERTIFY THAT THE INSTALLATION WORK OF MY FIRM ON THIS PROJECT:

- A. [HAS] [HAS NOT] required the use of ADHESIVES that exceed the allowable VOC content .
- B. [HAS] [HAS NOT] required the use of JOINT SEALANTS that exceed the allowable VOC content.
- C. [HAS] [HAS NOT] required the use of PAINTS OR COATINGS that exceed the allowable VOC content.
- D. [HAS] [HAS NOT] required the use of COMPOSITE WOOD or AGRIFIBER PRODUCTS that exceed the allowable VOC content.
- E. No Asbestos Containing Materials (ACM's) are incorporated into this construction..
- F. No lead-based paints are incorporated into this construction..

**2.02 ___ LIST OF PRODUCTS OF THESE TYPES THAT WERE USED IS ATTACHED, WITH
MANUFACTURER AND BRAND NAME.**

2.03 ___ PRODUCT DATA AND SDS SHEETS FOR THESE PRODUCTS:

- A. ___ Are attached.
- B. ___ Were submitted as normal submittals.
- C. ___ Were submitted as sustainable design submittals using the Material Content Form.

CERTIFIED BY: (INSTALLER/MANUFACTURER/SUPPLIER FIRM)

3.01 FIRM NAME: _____

3.02 PRINT NAME: _____

3.03 SIGNATURE: _____

3.04 TITLE: _____ **(OFFICER OF COMPANY)**

3.05 DATE: _____

SECTION 014000 QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, Commissioning Authority, or authorities having jurisdiction are not limited by provisions of this Section.

1.02 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
 - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

- D. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.
 - 1. Mockups are used for one or more of the following:
 - a. Verify selections made under Sample submittals.
 - b. Demonstrate aesthetic effects.
 - c. Demonstrate the qualities of products and workmanship.
 - d. Demonstrate successful installation of interfaces between components and systems.
 - e. Perform preconstruction testing to determine system performance.
 - 2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
 - 3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) in accordance with 29 CFR 1910.7, by a testing agency accredited in accordance with NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.03 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.04 ACTION SUBMITTALS

- A. Mockup Shop Drawings:
 - 1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
 - 2. Indicate manufacturer and model number of individual components.
 - 3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.05 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Contractor's Statement of Responsibility: Submit copy of written Statement of Contractor's Responsibility in accordance with ICC requirements to Owner, Architect, and Authority Having Jurisdiction (AHJ) before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
 2. Primary wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
1. Specification Section number and title.
 2. Entity responsible for performing tests and inspections.
 3. Description of test and inspection.
 4. Identification of applicable standards.
 5. Identification of test and inspection methods.
 6. Number of tests and inspections required.
 7. Time schedule or time span for tests and inspections.
 8. Requirements for obtaining samples.
 9. Unique characteristics of each quality-control service.
- F. Reports: Prepare and submit certified written reports and documents as specified.
- G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.06 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities and to coordinate Owner's quality-assurance and quality-control activities. Coordinate with Contractor's Construction Schedule.

- B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
 - 1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections, including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
 - 2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
 - 3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by Commissioning Authority.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring the Work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports, including log of approved and rejected results. Include Work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming Work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.07 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.

3. Name, address, telephone number, and email address of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement of whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.

- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement of whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.

1.08 QUALITY ASSURANCE

- A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Responsible Design Professional: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.

- F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
 - 1. Requirements of authorities having jurisdiction supersede requirements for specialists.
- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor's Responsibilities:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups, using installers who will perform same tasks for Project.
 - e. When testing is complete, remove test specimens and test assemblies[, and mockups]; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect[and Commissioning Authority][, through Construction Manager], with copy to Contractor. Interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 1. Build mockups of size indicated.
 2. Build mockups in location indicated or, if not indicated, as directed by Architect.
 3. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
 5. Demonstrate the proposed range of aesthetic effects and workmanship.
 6. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
 8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 10. Demolish and remove mockups when directed unless otherwise indicated.

1.09 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
 2. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Engage a qualified testing agency to perform quality-control services.
 - a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect, Commissioning Authority and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect[, Commissioning Authority, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.

7. Security and protection for samples and for testing and inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.10 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency/special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated on the drawings and as follows:
 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures, and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect, Owner, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Owner with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, stating that all deficiencies have been resolved.
 5. Interpreting tests and inspections, and stating in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected Work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.

3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's[, Commissioning Authority's,][and Construction Manager's] [and] [authorities' having jurisdiction] reference during normal working hours.
1. Submit log at Project closeout as part of Project Record Documents.

3.02 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

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SECTION 014200 REFERENCES

PART 1 GENERAL

1.01 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms, including "requested," "authorized," "selected," "required," and "permitted," have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms, including "shown," "noted," "scheduled," and "specified," have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.02 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
 - 1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.03 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 015000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.02 USE CHARGES

- A. Installation, removal, and use charges for temporary facilities to be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.
- E. Telephone/Internet Service: Pay service use charges for services used by all entities for construction operations.

1.03 INFORMATIONAL SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.
- C. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
 2. Indicate sequencing of work that requires water or wet work and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
 3. Indicate methods to be used to avoid trapping water in finished work.
- D. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
1. Locations of dust-control partitions at each phase of work.
 2. HVAC system isolation schematic drawing.
 3. Location of proposed air-filtration system discharge.
 4. Waste-handling procedures.
 5. Other dust-control measures.
- E. Noise and Vibration Control Plan: Identify construction activities that may impact the adjacent existing buildings, whether occupied by others, or occupied by Owner. Include the following:
1. Methods used to meet the goals and requirements of Owner.
 2. Concrete cutting method(s) to be used.
 3. Location of construction devices on the site.
 4. Show compliance with the use and maintenance of quieted construction devices for the duration of the Project.
 5. Indicate activities that may disturb building occupants and that are planned to be performed during non-standard working hours as coordinated with Owner.

1.04 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the DOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1 .

1.05 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch-D top rails
- B. Portable Chain-Link Fencing: Minimum 2-inch , 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide concrete bases for supporting posts.
- C. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.
- D. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches (914 by 1524 mm).
- E. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.02 TEMPORARY FACILITIES

- A. Field Offices:
 - 1. Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents, including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 8 individuals. Provide electrical power service and 120-V ac duplex receptacles. Furnish room with conference table, and chairs.
 - 3. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.03 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Provide vented, self-contained, electric, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 EXECUTION

3.01 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

3.02 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.03 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service:
 - 1. Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

1. Use of Permanent Toilets: Use of Owner's existing or new toilet facilities is not permitted.
- E. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
 1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.
- F. Electric Power Service:
 1. Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - a. Install electric power service.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- H. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment for each field office.
- I. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Architect and Owner.

3.04 SUPPORT FACILITIES INSTALLATION

- A. Comply with the following:
 1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.

2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations.
 1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 2. Prepare subgrade and install subbase and base for temporary roads and paved areas.
 3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
 4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course.
- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 1. Protect existing site improvements to remain, including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- E. Parking: Provide parking areas for construction personnel.
- F. Storage and Staging :Use designated areas of Project site for storage and staging needs.
- G. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- H. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Temporary Signs: Provide other signs as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 2. Maintain and touch up signs, so they are legible at all times.
- I. Waste Disposal Facilities:
1. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
 2. Provide waste-collection containers in sizes adequate to handle waste from construction operations.
- J. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- K. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- L. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.
- M. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.05 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Erosion and Sedimentation Control:
 - 1. Comply with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 312500 "Erosion and Sediment Control."
 - 2. Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, in accordance with erosion- and sedimentation-control Drawings, requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
 - a. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
 - b. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - c. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
 - d. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection:
 - 1. Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals, so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.
- G. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel.
- H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- J. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.
- K. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- L. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
 1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.06 MOISTURE AND MOLD CONTROL

- A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.
- B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.

- C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard and replace stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.
- D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use temporary system to control humidity within ranges specified for installed and stored materials.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

3.07 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 - 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION

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SECTION 016000 PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. The Work of This Section Includes: Administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

1.02 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products unless otherwise indicated.
 - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.

1. Evaluating Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.
- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
- D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
 1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
 2. Data indicating compliance with the requirements specified in "Comparable Products" Article.
- E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."
- F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

1.03 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
 1. Resolution of Compatibility Disputes between Multiple Contractors:
 - a. Contractors are responsible for providing products and construction methods compatible with products and construction methods of other contractors.

- b. If a dispute arises between the multiple contractors over concurrently selectable but incompatible products, Architect will determine which products will be used.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is inconspicuous.
 - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service- or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.
 - e. Ratings.
 - 3. See individual Sections for additional equipment identification requirements.

1.04 COORDINATION

- A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.

C. Storage:

1. Provide a secure location and enclosure at Project site for storage of materials and equipment.
2. Store products to allow for inspection and measurement of quantity or counting of units.
3. Store materials in a manner that will not endanger Project structure.
4. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation and with adequate protection from wind.
5. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.06 PRODUCT WARRANTIES

- A. Warranties specified in other Sections are to be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of Owner or endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of Owner or endorsed by manufacturer to Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 PRODUCTS

2.01 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in Specifications establish salient characteristics of products.

6. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by Architect, whose determination is final.

B. Product Selection Procedures:

1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Sole product may be indicated by the phrase "Subject to compliance with requirements, provide the following."
2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Sole manufacturer/source may be indicated by the phrase "Subject to compliance with requirements, provide products by the following."
3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements.
 - a. Limited list of products may be indicated by the phrase "Subject to compliance with requirements, provide one of the following."
4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed or an unnamed product that complies with requirements.
 - a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."
 - b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.

5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 - a. Limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, provide products by one of the following."
 6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.
 - a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
 - b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.
 7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
 - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Matching Specification: Where Specifications require the phrase "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or a similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

- E. Sustainable Product Selection: Where Specifications require product to meet sustainable product characteristics, select products complying with indicated requirements. Comply with requirements in Division 01 sustainability requirements Section and individual Specification Sections.
 - 1. Select products for which sustainable design documentation submittals are available from manufacturer.

2.02 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
 - 1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
 - 2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 - 3. Evidence that proposed product provides specified warranty.
 - 4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
 - 5. Samples, if requested.
- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation within seven] days of receipt of a request for a comparable product. Architect will notify Contractor of approval or rejection of proposed comparable product within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - 1. Architect's Approval of Submittal: Marked with approval notation from Architect's action stamp of approval. See Section 013300 "Submittal Procedures."
 - 2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

- C. Submittal Requirements, Two-Step Process: Approval by Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements.
Comply with specified submittal requirements.

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 017300 EXECUTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering.
 - 3. Installation.
 - 4. Cutting and patching.
 - 5. Coordination of Owner's portion of the Work.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
 - 9. Correction of the Work.

1.02 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.03 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor.

1.04 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Professional Engineer Qualifications: Refer to Section 014000 "Quality Requirements."

- C. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
1. Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.[Operational elements include the following:]
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Plumbing piping systems.
 - f. Mechanical systems piping and ducts.
 - g. Control systems.
 - h. Communication systems.
 - i. Fire-detection and -alarm systems.
 - j. Conveying systems.
 - k. Electrical wiring systems.
 - l. Operating systems of special construction.
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

- a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior closure construction.
 - d. Sprayed fire-resistive material.
 - e. Equipment supports.
 - f. Piping, ductwork, vessels, and equipment.
 - g. Noise- and vibration-control elements and systems.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- D. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Comply with requirements specified in other Sections.
- 1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
- 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities,[mechanical and electrical systems,] and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
 2. List of detrimental conditions, including substrates.
 3. List of unacceptable installation tolerances.
 4. Recommended corrections.

- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination."

3.03 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect promptly.
- B. Engage a land surveyor experienced in laying out the Work, using the following accepted surveying practices:
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish limits on use of Project site.
 - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 4. Inform installers of lines and levels to which they must comply.
 - 5. Check the location, level and plumb, of every major element as the Work progresses.
 - 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 - 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.04 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- B. Benchmarks: Establish and maintain a minimum of permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.05 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb, and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces, unless otherwise indicated on Drawings or required by the Authority Having Jurisdiction (AHJ).
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect and in compliance with Accessibility standards.
 2. Allow for building movement, including thermal expansion and contraction.

3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

3.06 CUTTING AND PATCHING

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of Work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- E. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- F. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.07 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, in accordance with regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces in accordance with written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."

- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.08 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.09 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION

SECTION 017419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- B. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- C. 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.
- D. Develop and follow a Waste Management Plan designed to implement these requirements.
- E. The following sources may be useful in developing the Waste Management Plan:
- F. 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.
- G. 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 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

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

1.03 SUBMITTALS

- A. Sustainable Design Submittals: Submit Waste Management Plan and Waste Disposal Reports in accordance with procedures specified in Section 01329.01 Sustainable Design Reporting - ESDS v4.1.

B. Waste Management Plan: Include the following information:

1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.

C. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.

1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
2. Submit Report on a form acceptable to Owner.
3. Landfill Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
 - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.

- d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
- 4. Incinerator Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
 - c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
- 5. Recycled and Salvaged Materials: Include the following information for each:
 - a. Identification of material, including those retrieved by installer for use on other projects.
 - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
 - c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
- 6. Material Reused on Project: Include the following information for each:
 - a. Identification of material and how it was used in the project.
 - b. Amount, in tons or cubic yards.
 - c. Include weight tickets as evidence of quantity.
- 7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
 - 1. Prebid meeting.
 - 2. Preconstruction meeting.
 - 3. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
 - 1. Provide containers as required.
 - 2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
 - 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
 - 1. Recycle Materials: Divert minimum of 50 percent of construction waste from landfill.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.

- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION

SECTION 017700 CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final Completion procedures.
 - 3. List of incomplete items.
 - 4. Submittal of Project warranties.
 - 5. Final cleaning.

1.02 DEFINITIONS

- A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.04 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest-control inspection.

1.05 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.06 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Owner. Label with manufacturer's name and model number.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of submittals.
 - 5. Submit testing, adjusting, and balancing records.
 - 6. Submit sustainable design submittals not previously submitted.
 - 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.

2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
 6. Advise Owner of changeover in utility services.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements.
 10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.07 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."

2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list).
Certified copy of the list will state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.08 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, listed by room or space number.
 2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:

- a. MS Excel Electronic File: Architect will return annotated file.
- b. PDF Electronic File: Architect will return annotated file.

1.09 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Warranties in Paper Form:
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- E. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 EXECUTION

3.01 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Clean flooring, removing debris, dirt, and staining; clean in accordance with manufacturer's instructions.

- i. Vacuum and mop concrete.
 - j. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean in accordance with manufacturer's instructions if visible soil or stains remain.
 - k. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - l. Remove labels that are not permanent.
 - m. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - p. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
 - q. Clean strainers.
 - r. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.
- D. Construction Waste Disposal: Comply with waste-disposal requirements in Section 015000 "Temporary Facilities and Controls." and [Section 017419 "Construction Waste Management and Disposal."

3.02 CORRECTION OF THE WORK

- A. Complete repair and restoration operations required by "Correction of the Work" Article in Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION

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SECTION 017823
OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Systems and equipment maintenance manuals.
 - 2. Product maintenance manuals.

1.02 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.03 CLOSEOUT SUBMITTALS

- A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect and Commissioning Authority will comment on whether content of operation and maintenance submittals is acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operation and maintenance manuals in the following format:
 - 1. Submit on digital media acceptable to Architect. Enable reviewer comments on draft submittals.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 14 days before commencing demonstration and training. Architect and Commissioning Authority will comment on whether general scope and content of manual are acceptable.

- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 14 days before commencing demonstration and training. Architect and Commissioning Authority will return copy with comments.
 - 1. Correct or revise each manual to comply with Architect's and Commissioning Authority's comments. Submit copies of each corrected manual within 14 days of receipt of Architect's[and Commissioning Authority's] comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.04 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
 - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

1.05 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:

1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Construction Manager.
 7. Name and contact information for Architect.
 8. Name and contact information for Commissioning Authority.
 9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

1.06 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds as described below.
- C. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.

3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.
- E. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training video recording, if available.
- F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 1. Include procedures to follow and required notifications for warranty claims.

- J. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of maintenance manuals.

1.07 PRODUCT MAINTENANCE MANUALS

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.

5. Repair instructions.
- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 017839
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous record submittals.

1.02 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit PDF electronic files of scanned record prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit PDF electronic files of scanned Record Prints and one set(s) of file prints.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files of each submittal.
 - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.
- E. Reports: Submit written report weekly indicating items incorporated into Project Record Documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

1.03 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
 - 1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding photographic documentation.
 - 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.

- h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Construction Change Directive.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
- 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
- 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
- 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
- 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - 1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Format: Annotated PDF electronic file.
 - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."

- d. Name of Architect.
- e. Name of Contractor.

1.04 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 - 5. Note related Change Orders[, Record Product Data,] and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

1.05 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
- C. Format: Submit Record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.
 1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

1.06 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file or scanned PDF electronic file(s) of marked-up miscellaneous record submittals.
 1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

1.07 MAINTENANCE OF RECORD DOCUMENTS

- A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 017900 DEMONSTRATION AND TRAINING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Instruction in operation and maintenance of systems, subsystems, and equipment.

1.02 CLOSEOUT SUBMITTALS

- A. Submit log of Demonstration and Training session attendees with name, position, and contact information. Include in Operation and Maintenance Manuals.

1.03 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

1.04 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data have been reviewed and approved by Architect.

1.05 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Systems and equipment operation manuals.
 - c. Systems and equipment maintenance manuals.
 - d. Product maintenance manuals.
 - e. Project Record Documents.
 - f. Identification systems.
 - g. Warranties and bonds.
 - h. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.

- f. Special operating instructions and procedures.
- 4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
- 5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
- 7. Maintenance: Include the following:

- a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning.
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
- a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

1.06 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."
- B. Set up instructional equipment at instruction location.

1.07 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
- B. Scheduling: Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner with at least seven days' advance notice.

- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- D. Cleanup: Collect used and leftover educational materials and remove from Project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 019100 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. The Commissioning Authority directs and coordinates all commissioning activities; this section describes some but not all of the Commissioning Authority's responsibilities.
- C. The Commissioning Authority is employed by Owner.

1.02 SCOPE OF COMMISSIONING

- A. Building systems are to be tested and commissioned to meet WSEC minimum requirements using WSEC Commissioning Compliance Checklist C408.1.4.1 and ESDS Standard Checklist credits established for this project per Section 013329.01 Sustainable Design Reporting.
- B. Refer to technical sections for detailed testing and commissioning requirements.
- C. The following are to be commissioned:
 - 1. Plumbing Systems:

- a. Water heaters; service water heating systems.
- 2. HVAC System, including:
 - a. Major and minor equipment items.
 - b. Refrigeration Systems.
 - c. Equipment and systems installed to meet energy efficiency requirements.
 - d. Control system.
- 3. Electrical Systems:
 - a. Receptacles and lighting control systems.
 - b. Energy metering systems.
- D. Other equipment and systems explicitly identified elsewhere in Contract Documents as requiring commissioning.

1.03 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 Architect; in that case, submit to Architect 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.
 - 5. As soon as possible after submittals made to Architect are approved, submit copy of approved submittal to the Commissioning Authority.
- B. Product Data: If submittals to Architect 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.
- F. At project completion, contractor's Commissioning Agent to provide Owner with completed WSEC Commissioning Compliance Checklist C408.1.4.1 certified by the Commissioning Agent, ready for Owner's signature.

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. 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. 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 complete 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. Prefunctional Checklists and Functional Tests are to be performed in sequence from components, to subsystems, to systems.
 - 2. 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 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.
- B. 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.
- 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.
- 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. 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").
- D. 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.
- E. 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.
- F. 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.
- G. 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.

3.07 OPERATION AND MAINTENANCE MANUALS

- A. See Section 017800 - Closeout Submittals for additional requirements.
- B. Submit manuals related to items that were commissioned to Commissioning Authority for review; make changes recommended by Commissioning Authority.

END OF SECTION

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SECTION 033000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete formwork.
- B. Floors and slabs on grade.
- C. Concrete reinforcement.
- D. Joint devices associated with concrete work.
- E. Concrete curing.

1.02 REFERENCE STANDARDS

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary; 2019 (Reapproved 2022).
- B. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- C. ACI PRC-302.1 - Guide to Concrete Floor and Slab Construction; 2015.
- D. ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- E. ACI PRC-305 - Guide to Hot Weather Concreting; 2020.
- F. ACI PRC-306 - Guide to Cold Weather Concreting; 2016.
- G. ACI PRC-308 - Guide to External Curing of Concrete; 2016.
- H. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- I. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2022.
- J. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2024.
- K. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2023.

- L. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2023.
- M. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2023.
- N. ASTM C150/C150M - Standard Specification for Portland Cement; 2022.
- O. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2019.
- P. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2021.
- Q. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2020.
- R. ASTM C1202 - Standard Test Method for Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration; 2019.
- S. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete; 2019.
- T. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- U. 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.
- V. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017 (Reapproved 2023).

1.03 SUBMITTALS

- A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
- B. Mix Design: Submit proposed concrete mix design.
 - 1. Indicate proposed mix design complies with requirements of ACI SPEC-301, Section 4 - Concrete Mixtures.
 - 2. Indicate proposed mix design complies with requirements of ACI CODE-318, Chapter 5 - Concrete Quality, Mixing and Placing.

3. Indicate proposed mix design complies with admixture manufacturer's written recommendations.
- C. Test Reports: Submit report for each test or series of tests specified.

1.04 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. Follow recommendations of ACI PRC-306 when concreting during cold weather.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 1. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches of concrete surface.

2.02 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
 1. Type: Deformed billet-steel bars.
 2. Finish: Unfinished, unless otherwise indicated.
- B. Steel Welded Wire Reinforcement (WWR): Galvanized, plain type, ASTM A1064/A1064M.
- C. Reinforcement Accessories:
 1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.
 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
- C. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.04 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Provide admixtures as indicated on structural drawings.

2.05 ACCESSORY MATERIALS

- A. Underslab Vapor Retarder:
 - 1. Sheet Material: ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. Single-ply polyethylene is prohibited.
 - 2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.
- B. Non-Shrink Cementitious Grout: Premixed compound consisting of nonmetallic aggregate, cement, water reducing and plasticizing agents.
 - 1. Grout: Comply with ASTM C1107/C1107M.
 - 2. Minimum Compressive Strength at 28 Days, ASTM C109/C109M: 6000 pounds per square inch.
 - 3. Minimum Compressive Strength at 28 Days: 6000 pounds per square inch.

2.06 BONDING AND JOINTING PRODUCTS

- A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.
 - 1. Products:
 - a. Per Structural Drawings.
- B. Slab Contraction Joint Device: Preformed linear strip intended for pressing into wet concrete to provide straight route for shrinkage cracking.
 - 1. Products:
 - a. Per Structural Drawings.
- C. Slab Construction Joint Devices: Per Structural Drawings.

2.07 CURING MATERIALS

- A. Curing and Sealing Compound, Moisture Emission-Reducing, Penetrating: Clear, water-based, non-film-forming curing agent; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission, moisture vapor emission, and alkalinity.
- B. Provide at all locations with floor finishes.
 - 1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
 - 2. Compressive Strength of Treated Concrete: Equal to or greater than strength after 28-day water cure when tested according to ASTM C39/C39M.
 - 3. Chloride Ion Resistance of Treated Concrete: Equal to or greater than strength after 28-day water cure when tested according to ASTM C1202.
 - 4. Comply with ASTM C309 and ASTM C1315 Type I Class A.
- C. Curing Compound, Non-Dissipating: Liquid, membrane-forming, clear, nonyellowing acrylic; complying with ASTM C309.
 - 1. Vehicle: Water-based.
 - 2. Gloss: Low.
 - 3. Solids by Mass: 15 percent, minimum.
 - 4. Provide all locations with no floor finish.

2.08 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations.
- B. Refer to Structural drawings for additional requirements.
- C. Concrete Strength: Establish required average strength for each type of concrete on the basis of trial mixtures, as specified in ACI SPEC-301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- D. Normal Weight Concrete:

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days:
As indicated on drawings.

PART 3 EXECUTION

3.01 PREPARATION

- A. Formwork: Comply with requirements of ACI SPEC-301. Design and fabricate forms to support all applied loads until concrete is cured and for easy removal without damage to concrete.
- B. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
 1. Use latex bonding agent only for non-load-bearing applications.
- C. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Comply with ASTM E1643. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.
 1. Granular Fill Over Vapor Retarder: Cover vapor retarder with compactible granular fill as indicated on drawings. Do not use sand.

3.02 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. 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.
- B. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI PRC-304.
- B. Place concrete for floor slabs in accordance with ACI PRC-302.1.
- C. Ensure reinforcement, inserts, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- D. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.04 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.

3.05 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Concrete Floors: 1/4 inch in 10 feet.
- 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. Re-measure corrected areas by the same process.

3.06 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
- C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
 - 1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
- D. 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, seamless flooring, and laminated wood flooring.
 - 2. Other Surfaces to Be Left Exposed: Trowel as described in ACI PRC-302.1, minimizing burnish marks and other appearance defects.

3.07 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.
- 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.

3.08 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - Quality Requirements.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

3.09 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- B. 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.

3.10 PROTECTION

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

END OF SECTION

SECTION 035413
GYPSUM CEMENT UNDERLAYMENT

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.
- B. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

1.02 SUBMITTALS

- A. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations.
- B. Test Reports: Indicate moisture content of existing concrete substrates.
- C. Manufacturer's Instructions: Indicate surface preparation.
- D. Applicator's qualification statement.

1.03 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing work of type specified, with minimum 3 years of documented experience.

1.04 FIELD CONDITIONS

- A. Maintain minimum ambient temperatures of 50 degrees F 24 hours before, during, and 72 hours after installation of underlayment.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Gypsum Cement Underlayment:
 - 1. Maxxon Corporation; Gyp-Crete 2000 Multifamily: www.maxxon.com/#sle.
 - 2. Substitutions: See Section 016000 - Product Requirements.

3. Source Limitations: Furnish products produced by single manufacturer and obtained from single supplier.

2.02 MATERIALS

- A. Gypsum Cement Underlayment: Self-leveling gypsum-based mix producing the following properties when mixed with water in accordance with manufacturer's directions:
 1. Compressive Strength: Minimum 2,500 psi in accordance with ASTM C472.
 2. Density: Maximum 115 pcf.
 3. Thickness: 1-1/2 inch
 4. Surface Burning Characteristics: Flame spread/smoke developed index of 0/0 in accordance with ASTM E84.
- B. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch; or coarse sand as recommended by underlayment manufacturer.
 1. Provide aggregate when recommended in writing by underlayment manufacturer for underlayment thickness required.
- C. Reinforcement: For underlayment applied to wood substrates, provide galvanized metal lath or other corrosion-resistant reinforcement recommended in writing by underlayment manufacturer.
- D. Accessories: Perimeter isolation strips and tape as recommended by underlayment manufacturer.
- E. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to underlayment mix materials.
- F. Primer: Manufacturer's recommended type for substrates specified for project.
- G. Joint and Crack Filler: As recommended by manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify substrates are structurally sound and surfaces are clean, dry, and do not contain petroleum byproducts or other compounds detrimental to underlayment material bond to substrate.

3.02 PREPARATION

- A. Remove substrate surface irregularities; fill voids and deck joints with filler. Finish smooth and vacuum surfaces.
- B. Prime substrates and allow to dry in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Mix materials in accordance with manufacturer's instructions.
- B. Install in accordance with manufacturer's written instructions.
- C. Add aggregate for areas where thickness exceeds 1/2 inch. Mix underlayment and water for minimum two minutes before adding aggregate, and ensure aggregate is coated by continuously mixing.
- D. Install reinforcement as recommended by manufacturer.
- E. Place to indicated thickness, with top surface level to 1/8 inch in 10 feet.
- F. Apply before partition installation.

3.04 PROTECTION

- A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.
- B. Do not permit foot traffic over unprotected floor surface until installed surfaces are set for 4 hours minimum.

END OF SECTION

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SECTION 044313
STONE MASONRY VENEER

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Adhered cut stone veneer at exterior walls.
- B. Accessories for adhered veneer.
- C. Setting mortar.

1.02 SUBMITTALS

- A. Product Data: Provide data on stone units, mortar, and reinforcement.

1.03 QUALITY ASSURANCE

- A. Stone Fabricator Qualifications: Company specializing in fabricating cut stone with minimum ten years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type required by this section, with minimum 5 years of documented experience.

PART 2 PRODUCTS

2.01 STONE

- A. Stone, General: See recommendations in ASTM C1528/C1528M.
- B. Type: adhered, natural thin veneer stone for exterior application.
- C. Basis of Design: XL Rock Panels Stone Veneer by Norstone USA.
- D. Color: As scheduled on drawings.
- E. Field Units nominal 6 inches tall x 14 inches long. Provide factory outside corner units and finished end units.

2.02 MORTAR APPLICATIONS

- A. Use only factory premixed packaged dry materials for mortar, with addition of water only at project site.

2.03 MORTAR MIXES

- A. Provide one of the following in accordance with stone veneer manufacturer's directions.
 - 1. Latex-Portland modified Cement Mortar Thinset: ANSI A118.4.
- B. Mixing: Use mechanical batch mixer and comply with referenced standards.

2.04 ACCESSORIES - ADHERED VENEER

2.05 STONE FABRICATION - ADHERED VENEER

- A. Comply with ASTM C1242 requirements for adhered stone system without mechanical anchors for maximum stone weight and maximum individual stone panel size.
- B. Slope exposed top surfaces of stone and horizontal sill surfaces for shedding water.

2.06 ACCESSORIES FOR STONE MASONRY VENEER

- A. Penetrating, water based natural stone sealer as recommended by stone veneer manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION - ADHERED VENEER

- A. Install thin stone veneer with a cementitious mortar setting bed to a scratch coat backing surface, in accordance with stone fabricator's instructions and applicable sections of the ICC (IBC), TMS 402/602 and ASTM C1242 that apply to adhered masonry veneer.
- B. Mortar Joints: Concave.
 - 1. Style: Tight fit joints.

3.02 INSTALLATION - MASONRY FLASHINGS

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
- B. Extend metal flashings through exterior face of stone and terminate in an angled drip with hemmed edge.
- C. Lap end joints of flashings at least 6 inches, minimum, and seal watertight with flashing sealant/adhesive.

3.03 SEALING

- A. Seal stone veneer with clear, non-yellowing, penetrating sealer; provide number of coats recommended by manufacturer.

3.04 CLEANING

- A. Remove excess mortar as work progresses, and upon completion of work.
- B. Finals Cleaning: Clean Rock Panel system no fewer than six days after completion of pointing and sealing, using clean water and stiff-bristle fiber brushes. Do not use wire brushes, acid-type cleaning agents, cleaning agents containing caustic compounds or abrasives, or other materials or methods that could damage stone. Do not powerwash stone.

END OF SECTION

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SECTION 054000
COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Formed steel girt exterior wall framing.

1.02 REFERENCE STANDARDS

- A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2022).
- B. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2020.
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings; 2020.
- E. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2025.
- F. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020 (Reapproved 2024).
- G. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.03 SUBMITTALS

- A. Product Data: Provide data on cold-formed steel structural members; include material descriptions and base steel thickness.
- B. Product Data: Provide manufacturer's data on factory-made connectors and mechanical fasteners, showing compliance with requirements.
- C. Shop Drawings: Indicate component details, framed openings, anchorage, loading, welds, and type and location of fasteners, and accessories or items required of related work.
- D. Design Data:
 - 1. Shop drawings signed and sealed by a professional structural engineer.

2. Design calculations sufficient to demonstrate compliance with design criteria; signed and sealed by a professional structural engineer.
3. Calculations to include grits, bracing and bridging, and fastener design.

1.04 QUALITY ASSURANCE

- A. Designer Qualifications: Design framing system under direct supervision of a professional structural engineer experienced in designing this work and licensed in the State in which the Project is located.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Structural Framing:
- B. Basis of Design: Monarch Metal, Inc.
- C. Connectors:
 1. Same manufacturer as metal framing.

2.02 PERFORMANCE REQUIREMENTS

- A. Design Requirements: Design cold-formed framing systems, components and connectors to withstand specified design loads in compliance with ICC (IBC), ASCE 7, AISI S100, AISI S240, and as indicated on Structural Drawing, including seismic and wind loads.
- B. Dead Loads: Weight of exterior wall assembly, including insulation, metal girts, cement board sheathing, and exterior wall cladding.
- C. Live Loads: Per applicable building code and structural drawing.
 1. Live load deflection meeting the following, unless otherwise indicated:
 - a. Exterior Walls: Maximum horizontal deflection under wind load of 1/360 of span.
 2. Able to tolerate movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
 3. Able to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

2.03 LATERAL AND GRAVITY FORCE-RESISTING SYSTEMS

- A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S240.
 - 1. Structural Grade: As required to meet design criteria.
 - 2. Corrosion Protection Coating Designation: CP 60 in accordance with AISI S240.
- B. Girts:
 - 1. Thickness and Depth: Depth as indicated on the drawings to meet wall assembly; thickness and structural grade as required to meet design criteria.
- C. Vented Framing:
 - 1. Perforated or slotted, pre-punched steel where vented materials are indicated, Z girt or hat channel.

2.04 CONNECTIONS

- A. Performance Requirements: Provide connections in compliance with requirements of AISI S240.
- B. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S240.
 - 1. Structural Grade: As required to meet design criteria.
 - 2. Corrosion Protection Coating Designation: CP 60 in accordance with AISI S240.
- C. Structural Performance: Maintain load and movement capacity required by applicable building code and specified design criteria.

2.05 SHEATHING

- A. Cement Board Wall Sheathing: See Section 092116.

2.06 ACCESSORIES

- A. Bracing, Furring, Bridging: Formed sheet steel, thickness determined for conditions encountered; finish to match framing components.
- B. Fasteners: Stainless steel or galvanized, type, size and spacing per designated design calculation requirements.

- C. Galvanizing Repair: Touch up bare steel with zinc-rich paint in compliance with ASTM A780/A780M.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Install structural members and connections in compliance with ASTM C1007.

3.02 INSTALLATION OF GIRTS AND PREFORATED FRAMING

- A. Install plumb and level.
- B. Install material full length in one piece. Splicing is not permitted.
- C. Fasteners: Install per delegated design requirements for type, size, and spacing.
- D. Touch-up field welds and damaged corrosion-protected surfaces zinc-rich paint in compliance with ASTM A780/A780M.

3.03 INSTALLATION OF WALL SHEATHING

- A. Install wall sheathing with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using self-tapping screws.
 - 1. Provide steel diagonal bracing at corners with foam insulation or gypsum board wall sheathing.

END OF SECTION

**SECTION 055000
METAL FABRICATIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.

1.02 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.
- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2022.
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2024.
- E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.
- F. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2023.
- G. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.
- H. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- 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; 2025.
- J. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2023.
- K. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025.

- L. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.
- M. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Angles and Channels: ASTM A36/A36M.
- B. Steel Tubing: ASTM A500/A500M Grade B cold-formed structural tubing.
- C. Plates: ASTM A36/A36M.
- D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- E. Stainless Steel, General: ASTM A666/A666M, Type 304.
- F. Slotted Channel Fittings: ASTM A1011/A1011M.
- G. Common Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.
- H. Structural Framing Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain.
- I. Hex Nuts: A563.
- J. Flat Circular Washers: F436.
- K. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- L. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- M. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.

- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.
- B. Slotted Channel Framing: Fabricate channels and fittings from structural steel complying with the referenced standards; factory-applied, rust-inhibiting thermoset acrylic enamel finish.
- C. Countertop supports: Steel tube, minimum 1-1/2 inch x 1-1/2 Inch, 0.120 inch thick, with mitered joints. Steel plate endcaps at all open ends. Prime painted for field finishing.
- D. Miscellaneous steel fabricated items as indicated on drawings.
- E. Screen Wall Framing
 - 1. Steel tube, angles, and plates as indicated on drawings to support screen walls.
 - 2. Provide shop welded closure plates at all open ends.
 - 3. Provide factory weeps to discharge condensation and rain water.
 - 4. Hot dip galvanize all components.
 - 5. Shop weld and field bolt assemblies to the greatest extent possible, minimize field welding of galvanized members.

2.04 FINISHES - STEEL

- A. Prime paint steel items.
 - 1. Exceptions: Galvanize items to be embedded in concrete, items specified for galvanized finish, and exterior items..
- B. Prime Painting: One coat.
- C. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Obtain approval prior to site cutting or making adjustments not scheduled.

3.02 TOLERANCES

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

END OF SECTION

SECTION 055213
PIPE AND TUBE RAILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Stair railings and guardrails.

1.02 REFERENCE STANDARDS

- A. ICC A117.1 Accessible and Usable Building and Facilities.
- B. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2022.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.
- B. Calculations: Structural calculations of railing and guardrails showing design and fasteners meet loading requirements of IBC for handrails and guardrails, stamped and signed by structural engineer.

1.04 QUALITY ASSURANCE

- A. Structural Designer Qualifications: Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located, or personnel under direct supervision of such an engineer.
- B. Performance Criteria for handrails and guardrails:
 - 1. Rails: Resist a linear load of 50 pounds per linear foot in accordance with Section 4.5.1.1 of ASCE 7.
 - 2. Rails: Resist a concentrated load of 200 pounds in accordance with Section 4.5.1 of ASCE 7.
 - 3. Guard Infill Components, including all rails except the handrail and top rail shall resist a concentrated load of 50 pounds in accordance with Section 4.5.1.2 of ASCE 7.

4. Guard Infill Components shall not have openings that allow passage of a sphere 4-3/8 inches in diameter. The triangular openings at the open sides of a stair, formed by the riser, tread, and bottom rail shall not allow passage of a sphere 6 inches in diameter.

PART 2 PRODUCTS

2.01 RAILINGS - GENERAL REQUIREMENTS

- A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of applicable local code.
- B. Allow for expansion and contraction of members and building movement without damage to connections or members.
- C. Dimensions: See drawings for configurations and heights.
- D. Provide anchors and other components as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.
- E. Provide welding fittings to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbows, T-shapes, splice connectors, flanges, escutcheons, and wall brackets.

2.02 STEEL RAILING AND GUARDRAIL SYSTEM

- A. Steel Pipe: ASTM A53/A53M Grade B Schedule 80, prime painted for field painting.
- B. Steel Bars and plates for guardrail infill: ASTM A53/A53M Grade B Schedule 80, prime painted for field painting
- C. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.
- D. Exposed Fasteners: Flush countersunk screws or bolts; consistent with design of railing.
- E. Straight Splice Connectors: Steel concealed spigots.

2.03 FABRICATION

- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.
- C. Grind all welds smooth before applying factory primer.

- D. Fabricate components with joints tightly fitted and secured. Provide spigots and sleeves to accommodate site assembly and installation.
- E. Welded Joints:
 - 1. Interior Components: Continuously seal joined pieces by intermittent welds and plastic filler.
 - 2. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.
- C. Install railings in compliance with ADA Standards for accessible design at applicable locations.
- D. Anchor railings securely to structure.

END OF SECTION

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**SECTION 061000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Structural composite lumber framing.
- C. Nonstructural dimension lumber framing.
- D. Rough opening framing for doors, windows, and roof openings.
- E. Sheathing.
- F. Roofing nailers.
- G. Preservative treated wood materials.
- H. Miscellaneous framing and sheathing.
- I. Concealed wood blocking, nailers, and supports.
- J. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCE STANDARDS

- A. ANSI A190.1 - Product Standard for Structural Glued Laminated Timber; 2022.
- B. ANSI A208.1 - American National Standard for Particleboard; 2022.
- C. APA Z725 - Performance Rated I-Joists Design and Construction Guide; 2024.
- D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- F. ASTM D3498 - Standard Specification for Adhesives for Field-Gluing Wood Structural Panels (Plywood or Oriented Strand Board) to Wood Based Floor System Framing; 2019a.
- G. ASTM D5055 - Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists; 2019, with Editorial Revision (2020).

- H. ASTM D5456 - Standard Specification for Evaluation of Structural Composite Lumber Products; 2021, with Editorial Revision.
- I. AWP A U1 - Use Category System: User Specification for Treated Wood; 2025.
- J. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- K. PS 1 - Structural Plywood; 2023.
- L. PS 2 - Performance Standard for Wood Structural Panels; 2018.
- M. PS 20 - American Softwood Lumber Standard; 2025.
- N. WWPA G-5 - Western Lumber Grading Rules; 2025.

1.03 SUBMITTALS

- A. Structural Composite Lumber: Submit manufacturer's published structural data including span tables, marked to indicate which sizes and grades are being used; if structural composite lumber is being substituted for dimension lumber or timbers, submit grading agency structural tables marked for comparison.
- B. Wood I-Joists: Submit shop drawings and product data for wood I-Joists per Structural Drawings.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species and Grade: As indicated on structural drawings.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Western Wood Products Association; WWPA G-5.
- B. Sizes: Nominal sizes and grades as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Stud Framing (2 by 2 through 2 by 6):
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.

2. Boards: Standard or No. 3.

2.03 EXPOSED DIMENSION LUMBER

- A. Sizes: Nominal sizes as indicated on drawings.
- B. Surfacing: S4S.
- C. Moisture Content: S-dry or MC19.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16):
 1. Species and Grades: As indicated on drawings for various locations.

2.04 EXPOSED TIMBERS

- A. Submit manufacturer's certificate that products meet or exceed specified requirements, in lieu of grade stamping.
- B. Moisture Content: Kiln-dry (20 percent maximum).
- C. Surfacing: S4S.
- D. Species and Grade: Species and Grade: As indicated on structural drawings.

2.05 STRUCTURAL COMPOSITE LUMBER

- A. Structural Composite Lumber Materials: Factory-fabricated engineered wood products consisting of wood veneers, strands, or flakes pressed with moisture-resistant adhesive into blocks of material, evaluated in accordance with ASTM D5456.
 1. Laminated Veneer Lumber (LVL): Engineered wood products consisting of thin wood veneer bonded together with adhesive with grain of veneers running parallel to long dimension.
 2. Laminated Strand Lumber (LSL): Engineered wood products consisting of flaked wood strands bonded together with adhesive.
- B. Structural Composite Lumber Assemblies:
 1. Wood I-Joists: Factory-prefabricated engineered wood structural members consisting of structural composite flanges and oriented strand board webs, bonded together with adhesive, evaluated in accordance with ASTM D5055.
 - a. Markings: Comply with APA Z725.

2.06 CONSTRUCTION PANELS

- A. Subflooring: PS 2 type, rated Sheathing.
 - 1. Bond Classification: Exterior.
 - 2. Span Rating: As indicated on structural drawings..
 - 3. Performance Category: 3/4 PERF CAT.
- B. Roof Sheathing: PS 2 type, rated Structural I Sheathing.
 - 1. Bond Classification: Exterior.
 - 2. Span Rating: As indicated on structural drawings..
 - 3. Tongue and groove edges or square edges with panel clips.
- C. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.
 - 1. Span Rating: As indicated on structural drawings.
- D. Wall Sheathing: See Section 092116.

2.07 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.
- B. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
 - 1. For contact with preservative treated wood in exposed locations, provide minimum G185 galvanizing complying with ASTM A653/A653M.
- C. Sill Gasket on Top of Foundation Wall: 3/8 inch thick, closed-cell plastic foam.
 - 1. Width: Full width of studs/bottom plate.
 - 2. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 30 days of weather exposure.
- D. Subfloor Adhesives: Gap-filling construction adhesive for bonding wood structural panels to wood-based floor system framing; complying with ASTM D3498.
- E. Water-Resistive Barrier: See Section 072500.

2.08 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWP A U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWP A standards.
- B. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWP A U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with roofing, flashing, or waterproofing.
 - c. Treat lumber in contact with masonry or concrete.

PART 3 EXECUTION

3.01 PREPARATION

- A. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

3.02 FRAMING INSTALLATION

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

- F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.03 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 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.
- C. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

3.04 INSTALLATION OF CONSTRUCTION PANELS

- A. Subflooring: Screw and glue to framing; staples are not permitted.
- B. Roof Sheathing: Screw fasten panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. Nail panels to framing; staples are not permitted.
- C. Wall Sheathing: Screw fasten with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails or screws.

3.05 BLOCKING

- A. Provide 2x blocking in partitions for all wall mounted and recessed items, including but not limited to handrail bracket, FE's, FE cabinets, Kox box, casework, countertops, shelving, wall stops, whiteboards, tackboards, display cases, mirrors, toilet accessories, grab bars, future grab bar locations, coathooks, owner installed wall mounted equipment (OFOI), contractor installed wall mounted equipment (CFCI) and the like. Hollow wall anchors and toggle bolts are not acceptable.

Place water-resistive barrier horizontally over wall sheathing, weather lapping edges and ends.

TOLERANCES

Framing Members: 1/4 inch from true position, maximum.

Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

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

END OF SECTION

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SECTION 061753
SHOP-FABRICATED WOOD TRUSSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop-fabricated wood trusses.
- B. Truss bridging.

1.02 REFERENCE STANDARDS

- A. ANSI/TPI 1 - National Design Standard for Metal-Plate-Connected Wood Truss Construction; 2014.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- C. SBCA (BCSI) - Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses; 2018 (Updated 2020).
- D. TPI DSB-89 - Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses; 1989.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Show truss configurations, sizes, spacing, size and type of plate connectors, cambers, framed openings, bearing and anchor details, and bridging and bracing.
- C. Structural calculations showing performance with design criteria, signed and stamped by Professional Structural Engineer.
 - 1. Include identification of engineering software used for design.
 - 2. Provide shop drawings stamped or sealed by design engineer.

1.04 QUALITY ASSURANCE

- A. Designer Qualifications: Perform design by or under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State in which the Project is located.

PART 2 PRODUCTS

2.01 TRUSSES

- A. Wood Trusses: Design and fabricate trusses in accordance with ANSI/TPI 1 and to achieve specified design requirements indicated.
 - 1. Design and fabricate temporary bracing in accordance with TPI DSB-89.
 - 2. Species and Grade: As indicated on structural drawings.,
 - 3. Connectors: Steel plate.
 - 4. Design Floor Live and Dead Loads, including roof mounted equipment and fall protection devices: As indicated on structural drawings..
 - 5. Floor Deflection: As indicated in structural drawings.
 - 6. Roof Deflection: As indicted on structural drawings.

2.02 MATERIALS

- A. Lumber:
 - 1. Moisture Content: Between 7 and 9 percent.
- B. Steel Connectors: Hot-dipped galvanized steel sheet, ASTM A653/A653M Structural Steel (SS) Grade 33/230, with G90/Z275 coating; die stamped with integral teeth; thickness as indicated.
- C. Truss Bridging: Type, size and spacing recommended by truss manufacturer.

2.03 ACCESSORIES

- A. Wood Blocking, Bridging, Plates, and Miscellaneous Framing: Softwood lumber, any species, construction grade, 19 percent maximum and 7 percent minimum moisture content.
- B. Fasteners: Electrogalvanized steel, type to suit application.

PART 3 EXECUTION

3.01 ERECTION

- A. Install trusses in accordance with manufacturer's instructions, SBCA (BCSI); maintain a copy of applicable documents on site until installation is complete.

- B. Set members level and plumb, in correct position.
- C. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure plumb, and in true alignment until completion of erection and installation of permanent bracing.
- D. Install permanent bridging and bracing.

END OF SECTION

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**SECTION 062000
FINISH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Finish carpentry items.
- B. Wood Stairs
- C. Wood casings, base, and moldings.
- D. Exterior Wood Trim and Battens.
- E. Exterior Wood Furring.
- F. Exterior Exposed Wood Decking for stained finish.

1.02 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

1.03 SUBMITTALS

- A. Product Data:
 - 1. Provide manufacturer's product data, storage and handling instructions for factory-fabricated units.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Wood Base: Size and profile as indicated on drawings.

- C. Interior wood trim, wall caps, sills.
- D. Exterior Wood Trim: Doug-Fir, Appearance Grade D & Better, S4S, 1x and 2x as indicated on drawings.
- E. Exterior Exposed Wood Decking: Doug-Fir, Appearance Grade D & Better, S4S, Tongue and Groove 2x6.
- F. Interior Woodwork Items:
 - 1. Moldings, Bases, Casings, Sill, Caps, and Miscellaneous Trim: Clear, tight grain hardwood for painted finish.

2.02 LUMBER MATERIALS

- A. Softwood Lumber: TBD species, TBD sawn, maximum moisture content of 6 percent; with vertical grain, SFS, Grade A Select, finger jointed..
- B. Hardwood Lumber: TBD species, TBD sawn, maximum moisture content of 6 percent ; with vertical grain SFS, Grade A Select, finger jointed. where scheduled for transparent finish and paint grade where scheduled for painted finish.

2.03 HARDWARE AND FASTENERS

- A. Interior Trim: Finishing nails, length as required to secure through GWB or finish material, into solid framing, countersunk.
- B. Exterior Trim: Corrosive resistant coated, star drive, trim head screw fasteners.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install custom fabrications in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure materials and components in place, plumb and level.
- C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.
 - 1. Anchor interior architectural woodwork to anchors or blocking built in or directly attached to substrates.
 - 2. Secure with countersunk, concealed fasteners and blind nailing.

3. Use fine finishing nails for exposed fastening, countersunk and filled flush with interior architectural woodwork.
 4. For shop-finished items, use filler matching finish of items being installed.
- D. Standing and Running Trim, Caps, Sills:
1. Install with minimum number of joints possible, using full-length pieces from maximum length of lumber available, to greatest extent possible.
 2. Do not use pieces less than 36 inches long, except where shorter single-length pieces are necessary.
 3. Scarf running joints and stagger in adjacent and related members.
 4. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.
- E. Stairs: Securely anchor carriages to supporting substrates.
1. Install stairs with treads and risers no more than 1/8 inch from indicated position.
 2. Secure with countersunk, concealed fasteners and blind nailing.
 3. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with wood surface.
- F. Corner Boards and Trim: Screw fasten prior to siding installation with finishing screws.
- G. Furring: Screw fasten through continuous insulation into framing.
- H. Exterior Exposed Wood Decking: Screw fasten to framing with finishing screws, appearance side down.

END OF SECTION

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SECTION 071113
BITUMINOUS DAMPPROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Bituminous dampproofing.

1.02 REFERENCE STANDARDS

- A. ASTM D41/D41M - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011 (Reapproved 2023).
- B. ASTM D1227/D1227M - Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing; 2013, with Editorial Revision (2019).
- C. ASTM D4479/D4479M - Standard Specification for Asphalt Roof Coatings - Asbestos-Free; 2007 (Reapproved 2024).

1.03 SUBMITTALS

- A. Product Data: Provide properties of primer, bitumen, and mastics.

1.04 FIELD CONDITIONS

- A. Maintain ambient temperatures above 40 degrees F for 24 hours before and during application until dampproofing has cured.

PART 2 PRODUCTS

2.01 BITUMINOUS DAMPPROOFING

- A. Bituminous Dampproofing: Cold-applied, spray-grade; asphalt base, volatile petroleum solvents, and other content, suitable for application by spray, brush, roller, or squeegee; asbestos-free; suitable for application on vertical and horizontal surfaces.
 - 1. Composition: ASTM D4479/D4479M Type I, asbestos free.
 - 2. VOC Content: Not more than permitted by local, State, and federal regulations.
 - 3. Applied Thickness: 1/16 inch, minimum, wet film.

2.02 BITUMEN MATERIALS

- A. Cold Asphaltic Type:

1. Emulsified Asphalt: ASTM D1227/D1227M, with fiber reinforcement other than asbestos, Type II, Class 1 or 2.
2. Asphalt Primer: ASTM D41/D41M, compatible with substrate.

PART 3 EXECUTION

3.01 APPLICATION

- A. Foundation Walls: Apply one coat of asphalt dampproofing.
- B. Apply bitumen with mop.
- C. Apply from 2 inches below finish grade elevation down to top of footings.
- D. Seal items watertight with mastic, that project through dampproofing surface.
- E. Immediately backfill against dampproofing to protect from damage.

END OF SECTION

**SECTION 072100
THERMAL INSULATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Board insulation at perimeter foundation wall, underside of floor slabs, and exterior wall behind wall cladding.
- B. Faced board insulation on exterior face of concrete stemwalls.
- C. Batt insulation in exterior wall, ceiling, and roof construction.
- D. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.
- E. Rainscreen Wall vents

1.02 REFERENCE STANDARDS

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.
- B. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2023.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- D. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- E. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2024.

1.03 SUBMITTALS

- A. Product Data: Provide data on product characteristics, performance criteria, product limitations, and all accessories.
- B. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Insulation Under Concrete Slabs: Extruded polystyrene (XPS) board.
- B. Insulation at Perimeter of Foundation: Extruded polystyrene (XPS) board.
- C. Insulation on face of concrete stemwalls: Extruded polystyrene (SPS) board.
- D. Insulation Over Wood Stud Framed Walls, Continuous: Extruded polystyrene (XPS) board.
- E. Insulation in Wood Framed Walls: Batt insulation with separate vapor retarder.
- F. Insulation in Wood Framed Ceiling Structure: Batt insulation with separate vapor retarder.

2.02 FOAM BOARD INSULATION MATERIALS

- A. Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces.
 - 1. Unfaced Board Type and Compressive Resistance: Below grade, under slabs, concrete walls: Type IV, 25 psi (173 kPa), minimum. Continuous insulation on exterior face of framed exterior walls: Type X, 15 PSI, minimum.
 - 2. Faced Board Type and Compressive Resistance: Type VI, 40 psi, minimum.
 - 3. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
 - 4. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
 - 5. Type and Thermal Resistance, R-value: Type IV, 5.0 (0.88), minimum, per 1 inch thickness at 75 degrees F mean temperature.
 - 6. R or U Value as indicated on drawings, Energy Calculations sheets.
 - 7. Unfaced Board Edges: Square.
 - 8. Faced Board Edges: Tongue and Groove on long edges.
 - 9. Unfaced Board Type and Water Absorption: Type XII, 0.3 percent by volume, maximum, by total immersion.
 - 10. Faced Board Type and Water Absorption: 0.7 percent by volume, maximum, by total immersion.

11. Faced Board: Rigid insulation factory-faced with latex modified concrete, 5/16 inch thick nominal.
12. Unfaced Board Products:
 - a. DuPont de Nemours, Inc: building.dupont.com/#sle.
 - b. Kingspan Insulation LLC; GreenGuard GG25-LG XPS Insulation Board: www.kingspan.com/#sle.
 - c. Owens Corning Corporation: www.owenscorning.com/en-us/#sle.
13. Faced Board Products:
 - a. Basis of Design: T. Clear Corporation; WallGUARD

2.03 MINERAL FIBER BLANKET INSULATION MATERIALS

- A. Flexible Glass Fiber Blanket Thermal Insulation: Preformed insulation, complying with ASTM C665; friction fit.
 1. Flame Spread Index: 75 or less, when tested in accordance with ASTM E84.
 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 3. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
 4. Formaldehyde Content: Zero.
 5. R or U Value as indicated on drawings, Energy Calculations sheets.

2.04 ACCESSORIES

- A. Tape: Reinforced polyethylene film with acrylic pressure sensitive adhesive.
 1. Application: Sealing of interior circular penetrations, such as pipes or cables.
 2. Width: As required for application.
 3. Temperature Resistance: Range of minus 40 to 212 degrees F.
- B. Sill Plate Sealer: Closed-cell foam tape with rubberized adhesive membrane; bridges gap between foundation structure and sill plate or skirt board.
 1. Width: To match stud depth___ inches.

2. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 30 days of weather exposure.
- C. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.
- D. Nails: Steel wire; electroplated or galvanized; type and size to suit application.
- E. Wire Mesh: Galvanized steel, hexagonal wire mesh.
- F. Adhesive: Type recommended by insulation manufacturer for application.
- G. Baffles: Polystyrene, 46 or 48 inches long. Basis of Design: Durovent by A.D.O. Products.
- H. Faced Board Insulation Clips: Galvanized steel clips and concrete screws by faced board manufacturer.
- I. Rainscreen wall Vents
 1. Heat resistant, vented polypropylene plastic. Basis of Design: Cor-A-Vent SV-5 Siding Vent.

PART 3 EXECUTION

3.01 UNFACED BOARD INSTALLATION AT FOUNDATION PERIMETER

- A. Adhesive apply board insulation to perimeter foundation walls where indicated on drawings. Cut, scribe, and fit joints tightly with no gaps.
- B. Install boards horizontally on foundation perimeter.
 1. Place boards to maximize adhesive contact.
 2. Install in running bond pattern.
 3. Butt edges and ends tightly to adjacent boards and to protrusions.
- C. Extend boards over expansion joints, unbonded to foundation on one side of joint.
- D. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.02 FACED BOARD INSULATION ON CONCRETE STEMWALLS

- A. Install per manufacturer's written instructions.

- B. Install boards vertical. Cut, scribe, and fit tongue and groove panels to fit tightly with no gaps. Secure with manufacture's metal clips screwed to concrete stemwall..
- C. Outside corners: Install with optional mitered corners.

3.03 BOARD INSTALLATION USING CLADDING AND CONTINUOUS INSULATION SUPPORTS

- A. Install supports in accordance with manufacturer's installation instructions.
- B. Install supports in compliance with system orientation, sizes, and locations as indicated on drawings and in accordance with approved shop drawings.
- C. Install supports to fill in exterior wall spaces without gaps or voids in insulation.
- D. Trim insulation neatly to fit spaces and provide a continuous thermal layer.

3.04 BOARD INSTALLATION UNDER CONCRETE SLABS

- A. Place insulation under slabs on grade after base for slab has been compacted.
- B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- C. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.

3.05 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Install insulation baffles at eaves and all locations where needed to maintain clear air vent pathways. Trim, fit, and staple in place per manufacturers installation instructions.
- D. Support insulation on wire mesh where indicated to maintain clearances. Staple mesh to wood framing.
- E. Support with impaling clips where needed.
- F. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- G. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

3.06 RAINSCREEN WALL VENTS

- A. Install in full length strips wherever possible., butt joints tight. Staple or nail in place with galvanized or stainless steel fasteners.

END OF SECTION

**SECTION 072500
WEATHER BARRIERS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water-resistive barriers.

1.02 DEFINITIONS

- A. Weather Barriers: Materials or assemblies forming water-resistive barriers, air barriers, vapor retarders, or combination of one or more assemblies.
- B. Water-Resistive Barriers: Materials or assemblies installed behind exterior wall coverings; designed to prevent liquid water from further penetration into exterior wall assembly.

1.03 REFERENCE STANDARDS

- A. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- C. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- D. ASTM E2178 - Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials; 2021a.

1.04 SUBMITTALS

- A. Product Data: Provide data on material characteristics and performance criteria.
- B. Manufacturer's Installation Instructions: Indicate preparation, installation methods, and storage and handling criteria.

PART 2 PRODUCTS

2.01 WATER-RESISTIVE BARRIERS

- A. Description: Materials installed behind exterior wall coverings; designed to prevent liquid water from further penetration into exterior wall assembly. Primary materials include mechanically applied sheets; accessory materials include flashings and seam tapes.

- B. Water-Resistive and Air Barrier, Multilayers: Outer layers of nonwoven, spunbonded polypropylene with vapor permeable, watertight polymeric middle layer.
 - 1. Air Permeance: 0.0011 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.
 - 2. Water Vapor Permeance: 28 perms, minimum, when tested in accordance with ASTM E96/E96M using Procedure A - Desiccant Method, at 73.4 degrees F.
 - 3. Ultraviolet (UV) and Weathering Resistance: Approved by manufacturer for up to 3 months of weather exposure.
 - 4. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, Class A when tested in accordance with ASTM E84.
 - 5. Seam and Perimeter Tape: As recommended by sheet manufacturer.

2.02 ACCESSORIES

- A. Seal and Perimeter Tapes: As recommended by water-resistive barrier manufacturer.
- B. Building Insulation: See Section 072100.
- C. Metal Flashings: See Section 076200.
- D. Sealant for Cracks and Joints In Substrates: Resilient elastomeric joint sealant compatible with substrates and weather barrier materials.
 - 1. Application: Apply at 30 to 40 mil, 0.030 to 0.040 inch nominal thickness.
- E. Primer: Liquid applied polymer.
- F. Flexible Flashing: Self-adhering sheet flashing complying with ASTM D1970/D1970M; waive slip resistance requirement if not installed on roof.
 - 1. Width: 3 inches.
- G. Threshold Flashing: Closed-cell foam tape with rubberized adhesive membrane; seals subfloor under threshold.
 - 1. Width: Match threshold width.
 - 2. Ultraviolet (UV) and Weathering Resistance: Approved by manufacturer for up to 180 days of weather exposure.
- H. Flashing Tape: Special reinforced film with high-performance adhesive.

1. Application: Window and door opening flashing tape.
2. Width: As required for application.

2.03 FASTENERS

- A. Fasteners for Attaching Water-Resistive Barriers to Substrates: As recommended by barrier manufacturer for application.

PART 3 EXECUTION

3.01 PREPARATION

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- B. Clean and prime substrate surfaces to receive adhesives, sealants, and flexible flashings in accordance with manufacturer's installation instructions.

3.02 INSTALLATION

- A. Install materials in accordance with manufacturer's installation instructions.
- B. Install continuous water-resistive barriers where indicated on drawings, with sheets lapped to shed water.
- C. Mechanically Fastened Sheets:
 1. Install sheets in shingle fashion to shed water; align horizontally.
 2. Overlap seams as recommended by manufacturer, 6 inches, minimum.
 3. Overlap at outside and inside corners as recommended by manufacturer, 12 inches, minimum.
 4. Install water-resistive barrier over jamb flashings.
 5. Install head flashings under water-resistive barrier.
 6. At framed openings with frames having nailing flanges, extend sheet into opening and over flanges; at head of opening, seal sheet over flange and flashing.
- D. Openings and Penetrations in Exterior Water-Resistive Barriers:

1. Install flashing over sills, covering entire sill framing member, and extend at least 5 inches onto water-resistive barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
2. At openings filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
3. At openings filled with nonflanged frames, seal water-resistive barrier to each side of framing at opening using flashing at least 9 inches wide, and covering entire depth of framing.
4. At head of openings, install flashing under water-resistive barrier extending at least 2 inches beyond face of jambs; seal water-resistive barrier to flashing.
5. At interior face of openings, seal gaps between window and door frames and rough framing using appropriate joint sealant over backer rod.
6. Service and Other Penetrations: Form flashing around penetrating items and seal to surface of water-resistive barrier.

END OF SECTION

SECTION 072600 VAPOR RETARDERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Vapor retarders.

1.02 REFERENCE STANDARDS

- A. ASTM D4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications; 2016 (Reapproved 2023).
- B. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.

1.03 SUBMITTALS

- A. Product Data: Provide data on material characteristics, performance criteria, and limitations.

PART 2 PRODUCTS

2.01 VAPOR RETARDERS

- A. Vapor Retarder Sheet: Polyethylene sheeting complying with ASTM D4397, clear colored, IBC Class I.
 - 1. Thickness: 10 mil, 0.010 inch, nominal.
 - 2. Water Vapor Permeance: 0.1 perm, maximum, when tested in accordance with ASTM E96/E96M.
 - 3. Seam and Perimeter Tape: Polyethylene self-adhering type, mesh reinforced, 2 inches wide; compatible with sheet material.

2.02 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Vapor Retarder and Adjacent Substrates: As indicated, complying with vapor retarder manufacturer's installation instructions.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install materials in accordance with manufacturer's installation instructions.
- B. Vapor Retarders: Install continuous airtight barrier over surfaces indicated, with sealed seams and sealed joints to adjacent surfaces.
- C. Apply sealants and adhesives within recommended temperature range in accordance with manufacturer's installation instructions.

END OF SECTION

SECTION 074113
METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal roof panel system of preformed steel panels.

1.02 REFERENCE STANDARDS

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.
- C. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.
- D. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).
- E. ASTM E1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference; 1995 (Reapproved 2018).
- F. ASTM E1680 - Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems; 2016 (Reapproved 2022).
- G. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
 - 3. Specimen warranty.
- B. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.

1. Show work to be field-fabricated or field-assembled.
- C. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- D. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.04 QUALITY ASSURANCE

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

1.05 WARRANTY

- A. Finish Warranty: Provide 40 year manufacturer standard warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.
- B. Weathertightness Warranty: Provide 20 year manufacturer standard warranty for weathertightness of roofing system, including agreement to repair or replace metal roof panels that fail to keep out water commencing on the Date of Substantial Completion. Complete forms in Owner's name and register with warrantor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design: AEP Span-Lok HP.

2.02 PERFORMANCE REQUIREMENTS

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed $L/180$ of span length(L) when tested in accordance with ASTM E1592.
 - a. Dead Loads: Weight of roofing system.
 - b. Live Loads: As required by ASCE 7.

2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
3. Wind Uplift: Class 90 wind uplift resistance of UL 580.
4. Air Infiltration: Maximum 0.06 cfm/sq ft at air pressure differential of 6.24 lbf/sq ft, when tested according to ASTM E1680.
5. Water Penetration: No water penetration when tested in accordance with procedures and recommended test pressures of ASTM E1646; perform test immediately following air infiltration test.
6. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 120 degrees F.
7. Solar Reflective Index: Provide panels with SRI minimum of 64 to meet ESDS compliance path.

2.03 STRUCTURAL METAL ROOF PANELS

- A. General: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Structural Metal Panels: Factory-formed panels with factory-applied finish.
 1. Steel Panels:
 - a. Aluminum-zinc alloy-coated SS (structural steel) sheet complying with ASTM A792/A792M; minimum AZ50 coating.
 - b. Steel Thickness: Minimum 22 gauge, 0.03 inch.
 2. Profile: Standing seam, with 2-inch seam height; concealed fastener system for field seaming with special tool.
 3. Width and Profile: Maximum panel coverage of 16 inches with two pencil ribs.

2.04 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard galvanized concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.05 FINISHES

- A. Fluoropolymer Coil Coating System: Polyvinylidene fluoride (PVDF) multi-coat superior performing organic coatings system complying with AAMA 2605, including at least 70 percent PVDF resin, and at least 80 percent of coil coated metal surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss as indicated on drawings.

2.06 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, trim, moldings, closure strips, preformed crickets, caps, and similar sheet metal items of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
- D. Underlayment: Self-adhering polymer modified sheet complying with ASTM D1970/D1970M, with strippable release film, designed for high temperatures. woven polypropylene sheet.
 - 1. Basis of Design: WR Grace Ice and Water Shield HT.
- E. Factory finished trims and flashings to match roof panels: Rake, eave, vented ridge cap, head wall flashings, and counterflashings.

PART 3 EXECUTION

3.01 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to ensure that completed roof will be free of leaks.
- B. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by metal roof panel manufacturer.

- C. At locations where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.02 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and metal roof panel manufacturer's instructions and recommendations, as applicable to specific project conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.
- B. Underlayment: Install self-adhering underlayment continuous over entire roof sheathing. Lap seams in weatheright manner to shed water. Side laps minimum 3-1/2 inches and end laps minimum 6 inches, or greater per manufacturer's written instructions.
- C. Provide UL listed clip designed to allow panels to thermally expand and contract and provide ± 1 inch of thermal movement. Clip shall incorporate a self-centering feature to allow 1" of movement in both directions along panel length.
- D. Mechanically field crimp and interlock entire length of seams.
 - 1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 - 2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.
- E. Accessories: Install necessary components that are required for complete roofing assembly, including flashings, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- F. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.
 - 1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by panel manufacturer.

3.03 CLEANING

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

END OF SECTION

SECTION 074213
METAL WALL PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured metal panels for exterior wall panels and soffit panels, with related flashings and accessory components.

1.02 REFERENCE STANDARDS

- A. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.

1.03 SUBMITTALS

- A. Product Data - Wall System: Manufacturer's data sheets on each product to be used, including:
 - 1. Physical characteristics of components shown on shop drawings.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation instructions and recommendations.
- B. Shop Drawings: Indicate dimensions, layout, joints, construction details, support clips, and methods of anchorage.
- C. Manufacturer's qualification statement.
- D. Installer's qualification statement.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in installing products specified in this section with minimum three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.

- B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

1.06 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Finish Warranty: Provide 20-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Wall Panels - Exposed Fasteners: Basis of Design AEP Span Box Rib.
- B. Metal Soffit Panels - Vented: Basis of Design AEP Span Flush Panel, vented with one rib.
- C. Metal Soffit Panels - Un-Vented: Basis of Design AEP Span Prestige Series, 1-1/2 inches x 12 inches.

2.02 METAL WALL PANEL SYSTEM

- A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.
 - 1. Provide exterior wall panels, interior liner panels, soffit panels, retrofit wall panels, and subgirt framing assembly.
 - 2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
 - 3. Maximum Allowable Deflection of Panel: $L/180$ for length(L) of span.
 - 4. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
 - 5. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 - 6. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.

7. Corners: Factory-fabricated in one continuous piece with minimum 2-inch returns.
- B. Exterior Wall Panels:
1. Profile: Vertical and horizontal, as indicated; style as indicated.
 2. Side Seams: Double-interlocked, tight-fitting, with continuous bead of sealant or butyl tape as required by panel manufacturer.
 3. Material: Precoated steel sheet, 24 gauge, 0.0276 inch minimum thickness.
 4. Panel Width: 36 inches.
 5. Color: As indicated on drawings.
- C. Soffit Panels:
1. Profile: As indicated on drawings, with vented and un-vented as indicated, and interlocking seams.
 2. Material: Precoated steel sheet, 26 gauge, 0.0217 inch minimum thickness.
- D. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.
- E. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.
- F. Anchors: Galvanized steel.

2.03 MATERIALS

- A. Precoated Steel Sheet: Aluminum-zinc alloy-coated steel sheet, ASTM A792/A792M, Commercial Steel (CS)) or Forming Steel (FS), with AZ50/AZM150 coating; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

2.04 FINISHES

- A. Exposed Surface Finish: Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over corrosion-resistant primer.
- B. Panel Backside Finish: Panel manufacturer's standard siliconized polyester wash coat.

2.05 ACCESSORIES

- A. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, stainless steel. Fastener cap same color as exterior panel.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install panels on walls and soffits in accordance with written manufacturer's instructions for watertight assembly.

3.02 TOLERANCES

- A. Offset From True Alignment Between Adjacent Members Abutting or In Line: 1/16 inch, maximum.
- B. Variation from Plane or Location As Indicated on Drawings: 1/4 inch, maximum.

3.03 CLEANING

- A. Remove site cuttings from finish surfaces.
- B. Remove protective material from wall panel surfaces.
- C. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION

SECTION 074616
ALUMINUM SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum siding.

1.02 REFERENCE STANDARDS

- A. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum; 2025.
- B. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- C. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's data sheets for each product, including:
 - 1. Preparation instructions and recommendations.
 - 2. Siding materials, underlayment, flashings, fasteners and accessories.
 - 3. Dimensions, physical properties, and typical details.
 - 4. Storage and handling requirements and recommendations.
 - 5. Installation instructions and recommendations.
- B. Shop Drawings: Indicate layout, methods of attachment and support clips, provisions for movement, flashing, trim, edge and field conditions, interface with adjacent materials, locations of cutouts or special shapes, , and details.
- C. Manufacturer's qualification statement.
- D. Installer's qualification statement.

1.04 QUALITY ASSURANCE

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

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing brand name and manufacturer's identification until ready for installation.
- B. Store products elevated above ground, within manufacturer's temperature and environmental limits, away from moisture, and protected from traffic and construction activities. Minimize on-site storage before installation.

1.06 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer's Warranty: Provide manufacturer's standard 20 year non-prorated, transferable warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Aluminum Siding Manufacturers:
 - 1. Longboard Architectural Products, Inc: www.longboardproducts.com/#sle.

2.02 ALUMINUM SIDING

- A. Smooth plank and T&G planks size, profile, and color as scheduled on drawings.

2.03 MATERIALS

- A. Precoated Aluminum Sheet: ASTM B209/B209M, 3105 alloy, O temper, with smooth surface texture; continuous-coil-coated on exposed surfaces with indicated finish coating and manufacturer's standard panel back coating.

2.04 ACCESSORIES

- A. Fasteners: Stainless steel; nonstaining, size and type per manufacture's requirements.

- B. Sealant: Comply with ASTM C920; see Section 079200.
- C. Flashing: Siding manufacturer's standard, factory-finished flashing accessories.
- D. Provide the following factory-finished accessories by siding manufacture as required for complete installation:
 - 1. Starter strip.
 - 2. Corner trims.
 - 3. J-Channels.
 - 4. Termination trims.
 - 5. Drip edges
 - 6. Window and door trim.
 - 7. Drip cap.

2.05 FINISHES

- A. Precoated in shop with manufacturer's standard PVDF coating system.
- B. Fluoropolymer Coil-Coating System: Multi-coat system for metal coils, complying with AAMA 2605, including at least 70 percent PVDF resin with minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch on at least 80 percent of coil-coated metal surfaces.
 - 1. Color: As scheudled on drawings..
 - 2. Texture: As scheduled on drawings..

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install aluminum siding, trim, and accessories in accordance with manufacturer's written instructions.
- B. Attach siding using manufacturers recommended fasteners, sealants, and adhesives, allowing for thermal expansion.

3.02 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

- B. Remove grease and oil films, excess joint sealer, handling marks, and other installation debris from aluminum siding, leaving siding clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to material finishes.

END OF SECTION

SECTION 076200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 REFERENCE STANDARDS

- A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- B. ASTM A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products; 2018.
- C. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- E. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2024).
- F. CDA A4050 - Copper in Architecture - Handbook; Current Edition.
- G. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- B. Samples: Submit two samples of each color, illustrating material finish and color.
- C. Submit color chart of manufacturer's full range of standard colors for initial selection. Up to three colors may be selected for Different applications.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

2.02 PREPAINTED, METALLIC-COATED STEEL SHEETS

- A. Description: Factory-applied coatings applied to metallic-coated steel sheet substrates prior to fabrication by coil coating; topcoat systems consist of primers and organic topcoats on exposed, top side of sheet; washcoats on bottom, unexposed sheet side.
- B. Comply with ASTM A755/A755M.
- C. Metallic-Coated Steel Sheet Substrates:
 - 1. Aluminum-Zinc-Alloy-Coated Steel Sheets: Commercial steel sheets, alloy-coated by hot-dip process; comply with ASTM A792/A792M; coating designation AZ50.
- D. Substrate Preparation for Prefinishing: Clean and prepare substrate surfaces in accordance with coating manufacturer's recommendations for substrate type and application.
- E. Washcoats or Backercoats: Provide washcoats or backercoats in accordance with organic coating manufacturer's recommendations.
- F. Primer Coats: Provide basecoat primers in accordance with coating manufacturer's recommendations for substrate type, topcoat, and application.
- G. High-Performance Organic Coating System: Provide thermally cured, 50-percent PVDF or silicone-modified polyester systems in accordance with AAMA 2604; tested for weathering for 5 years with 5 delta units maximum of color change.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

- E. Fabricate as indicated on drawings and per SMACMA Architectural Sheet Metal Manual.
- F. Fabricate corners from one piece with minimum 18-inch long legs; seam for rigidity, seal with sealant.

2.04 GUTTERS AND DOWNSPOUTS

- A. See Section 077123 for manufactured gutters and downspouts.
- B. Seal metal joints.

2.05 FLASHING

- A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.

2.06 ACCESSORIES

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

PART 3 EXECUTION

3.01 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil, 0.015 inch.

3.02 INSTALLATION

- A. Install as indicated on drawings and per SMACMA Architectural Sheet Metal Manual.

- B. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.
- C. Apply plastic cement compound between metal flashings and felt flashings.
- D. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Seal metal joints watertight.

END OF SECTION

SECTION 077123
MANUFACTURED GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

1.01 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. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Comply with SMACNA (ASMM) for sizing components for rainfall intensity of 5-minute duration for a 100 year storm.

1.03 SUBMITTALS

- A. Product Data: Provide data on prefabricated components.
- B. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.
- C. Samples: Submit two samples, illustrating component finish and color.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Pre-Finished Galvanized Steel Sheet: Comply with Section 076200.

2.02 COMPONENTS

- A. Gutters: Profile as indicated.
- B. Downspouts: Profile as indicated on drawings.
- C. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Anchoring Devices: In accordance with SMACNA requirements.
 - 2. Gutter Supports: Brackets.
 - 3. Downspout Supports: Brackets.

- D. Fasteners: Galvanized steel, with soft neoprene washers.

2.03 FABRICATION

- A. Form gutters and downspouts of profiles and size indicated.
- B. Fabricate as indicated on drawings and per SMACMA Architectural Sheet Metal Manual.
- C. Fabricate with required connection pieces.
- D. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints.
- E. Hem exposed edges of metal.
- F. Fabricate gutter and downspout accessories; seal watertight.

2.04 FINISHES

- A. Comply with finish requirements of Section 076200.

2.05 ACCESSORIES

- A. Downspout Boots: Smooth interior without boxed corners or choke points; include integral lug slots.
 - 1. Configuration: Angular.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install as indicated on drawings and per SMACMA Architectural Sheet Metal Manual.
- B. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.
- C. Slope gutters 1/4 inch per 10 feet for positive drainage., ____ percent minimum.

END OF SECTION

**SECTION 077200
ROOF ACCESSORIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fall Protection Anchors
- B. Roof hatches with access ladders.
- C. Ridge vents.

1.02 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used.
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Maintenance requirements.
- B. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
- C. Fall Protection Devices: Test Reports and Certifications showing compliance with ANSI and OSHA requirements, installation, use, and maintenance instructions, and inspection log..

PART 2 PRODUCTS

2.01 ROOF HATCHES AND VENTS

- A. Ridge Vents: Factory fabricated, non-woven fabric with butyl tape.
 - 1. Basis of Design: Marco Industries Standing Seam Vent (SSV).

2. Performance Requirements: 18 square inches net free area per linear foot.
 3. Height: 2 inches to match standing seam height.
 4. Length: Field cut to fit between standing seams.
 5. Screws: 410 stainless steel.
- B. Flat Roof Access Hatches with Ladder: Factory-assembled roof hatch with PVC frame and flat cover and folding metal access ladder, complete with operating and release hardware.
1. Mounting: Provide frames and insulated curbs suitable for mounting conditions as indicated on drawings.
 2. Thermally Broken Hatches: Provide insulation within hatch frame and cover.
 3. Folding Ladder Access: Triple section ladder, upper roof hatch door with PVC frame and lower insulated door with wood box to enclose and support ladder; 23-1/2 by 47 inches rough opening.
 - a. Ladder Room Height Range: 91-3/4 to 110-1/4 inches, nominal.

2.02 ROOFTOP SUPPORTS/ASSEMBLIES

- A. Rooftop Support/Assemblies: Manufacturer-engineered and factory-fabricated assemblies.
1. Design Loadings and Configurations: As required by applicable codes.
- B. Fall Prevention Anchors
1. Provide components and system in compliance with:
 - a. OSHA 1926.502.
 - b. OSHA 1910.140.
 - c. ANIS/ISEA 125-2014.
 2. Standing Seam Roof Clamp
 3. Basis of Design: Guardian # 00250 with two roof clamps, telescoping crosstube, and pivoting stanchion for SRL installation, compatible with specified standing seam metal roof.
 4. 5,000 pound ultimate load.

5. User Weight including all clothing and equipment: 130-310 pounds.
6. Steel Components: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
7. Hardware, Bolts, Nuts, and Washers: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A153/A153M.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.
- B. Fall protection anchors: Provide four standing seam roof clamps and turn over to Owner with full instructions, logs, and test reports.
- C. Ridge Vents: Install per manufacture's written instructions. Field cut vent material to length to fit tight between ribs. Provide sealant between ends of vent material and standing seams to seal completely. Secure with provided butyl tape and screw fasten with stainless steel screws 3 inches on center, penetrating roof deck minimum of 1/2 inch.

END OF SECTION

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**SECTION 078400
FIRESTOPPING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Firestopping systems.

1.02 REFERENCE STANDARDS

- A. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.
- B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2024.
- C. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems; 2015 (Reapproved 2019).
- D. ITS (DIR) - Directory of Listed Products; Current Edition.
- E. FM (AG) - FM Approval Guide; Current Edition.
- F. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.
- G. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.
- H. UL (DIR) - Online Certifications Directory; Current Edition.
- I. UL (FRD) - Fire Resistance Directory; Current Edition.

1.03 SUBMITTALS

- A. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.
- B. Product Data: Provide data on product characteristics, performance ratings, and limitations.

1.04 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated, ASTM E119, and ASTM E814.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Firestopping Materials: Any materials meeting requirements.
- B. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.

2.02 FIRESTOPPING ASSEMBLY REQUIREMENTS

- A. Floor-to-Floor (FF), Floor-to-Wall (FW), Head-of-Wall (HW), and Wall-to-Wall (WW) Joints, Except Perimeter, Where Both Are Fire-Rated: Use system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.
 - 1. Listing by FM (AG), ITS (DIR), UL (DIR), or UL (FRD) in their certification directories will be considered evidence of successful testing.
- B. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.

2.03 FIRESTOPPING SYSTEMS

- A. Firestopping: Any material meeting requirements.
 - 1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.
- B. Remove incompatible materials that could adversely affect bond.

3.02 INSTALLATION

- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.
- B. Do not cover installed firestopping until inspected by authorities having jurisdiction.

- C. Install labeling required by code.

END OF SECTION

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SECTION 079200 JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 REFERENCE STANDARDS

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).
- B. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- E. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2023.

1.03 SUBMITTALS

- A. 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. Backing material recommended by sealant manufacturer.
 - 4. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 5. Substrates the product should not be used on.
 - 6. Substrates for which use of primer is required.

- B. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

1.04 PERFORMANCE REQUIREMENTS

- A. All adhesives and sealants must have VOC content less than or equal to the thresholds provided by the SCAQMD Rule 1168 dated 10/6/2017.

1.05 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Exterior Joints:
 - a. Seal open joints except open joints indicated on drawings as not sealed.
 - b. Seal the following joints:
 - 1) Joints between doors, windows, and other frames or adjacent construction.
 - 2) Joints between dissimilar materials.
 - 2. Interior Joints:
 - a. Seal open joints except specific open joints indicated on drawings as not sealed.
 - b. 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) Joints between dissimilar materials.
- B. Exterior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.

1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, noncuring.
 2. Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane traffic-grade sealant.
- C. Interior Joints: Use nonsag silicone sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Nonwet Areas: Acrylic emulsion latex sealant.
 2. Wall and Ceiling Joints in Wet Areas: Nonsag mildew-resistant silicone sealant for continuous liquid immersion.
 3. Floor Joints in Wet Areas: mildew-resistant silicone sealant suitable for continuous liquid immersion.
 4. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
- D. Interior Wet Areas Mildew-Resistant Silicone.: Bathrooms, restrooms, kitchens, and laundry rooms; fixtures in wet areas include plumbing fixtures, countertops, cabinets, and other similar items.
- E. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated, sound-rated, or acoustical.

2.02 JOINT SEALANTS - GENERAL

2.03 NONSAG JOINT SEALANTS

- A. 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 or white depending on adjacent materials.
- B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; multi-component; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus and minus 50 percent, minimum.
 2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
 3. Color: To be selected by Architect from manufacturer's standard range.
 4. Service Temperature Range: Minus 40 to 180 degrees F.

- C. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.
 - 1. Movement Capability: Plus and minus 50 percent, minimum.
 - 2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
 - 3. Color: To be selected by Architect from manufacturer's standard range.
 - 4. Service Temperature Range: Minus 40 to 180 degrees F.
- D. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonstaining, nonbleeding, nonsagging; not intended for exterior use.
 - 1. Color: To be selected by Architect from manufacturer's standard range.
- E. Acrylic Latex Sealant: ASTM C834; for use as acoustical sealant.
 - 1. Color: To be selected by Architect from manufacturer's standard range.
- F. Noncuring Butyl Sealant: Solvent-based, single component, nonsag, nonskinning, nonhardening, nonbleeding; nonvapor permeable; intended for fully concealed applications.

2.04 SELF-LEVELING JOINT SEALANTS

- A. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single component; explicitly approved by manufacturer for traffic exposure and continuous water immersion.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
 - 2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
 - 3. Color: Gray.

2.05 ACCESSORIES

- A. Sealant Backing Materials, General: Materials placed in joint before applying sealants; assists sealant performance and service life by developing optimum sealant profile and preventing three-sided adhesion; type and size recommended by sealant manufacturer for compatibility with sealant, substrate, and application.
- B. 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.
- C. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- 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 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.

3.02 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

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**SECTION 081113
HOLLOW METAL DOORS AND FRAMES**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. Section Includes:
 - 1. Standard and custom hollow metal doors and frames.
 - 2. Steel sidelight, borrowed lite and transom frames.
 - 3. Louvers installed in hollow metal doors.
 - 4. Light frames and glazing installed in hollow metal doors.
- B. Related Sections:
 - 1. Division 01 Section "General Conditions".
 - 2. Division 06 Section "Rough Carpentry".
 - 3. Division 06 Section "Finish Carpentry".
 - 4. Division 08 Section "Operations and Maintenance".
 - 5. Division 08 Section "Flush Wood Doors".
 - 6. Division 08 Section "Glazing".
 - 7. Division 08 Section "Door Hardware".
 - 8. Division 09 Sections "Painting".
 - 9. Division 26 Section "Electrical"
- C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.

2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
9. SDI-113 Standard Practice for Determining the Steady-State Thermal Transmittance of Steel Door & Frame Assemblies.
10. ASTM C1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
11. ASTM C1199 - Standard Test Method for Measuring the Steady-State Thermal Transmittance of Fenestration Systems Using Hot Box Methods
12. ASTM E1423 - Practice for Determining Steady State Thermal Transmittance of Fenestration Systems.
13. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
14. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
15. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
16. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
17. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.

18. UL 10C - Positive Pressure Fire Tests of Door Assemblies.

19. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, hardware reinforcements, profiles, anchors, fire-resistance rating, and finishes.
- B. Maintenance manual must be provided for tornado/hurricane storm shelter impact protective systems.
- C. Door hardware supplier is to furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items.
- D. Shop Drawings: Include the following:
 - 1. Elevations of each door design.
 - 2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
 - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 4. Locations of reinforcement and preparations for hardware.
 - 5. Details of anchorages, joints, field splices, and connections.
 - 6. Details of accessories.
 - 7. Details of moldings, removable stops, and glazing.
 - 8. Details of conduit and preparations for power, signal, and control systems.
- E. Samples for Verification:
 - 1. Samples are only required by request of the architect and for manufacturers that are not current members of the Steel Door Institute.

1.04 QUALITY ASSURANCE

- A. Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.

- B. Quality Standard: In addition to requirements specified, furnish SDI-Certified manufacturer products that comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".
- C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to UL 10C (neutral pressure at 40" above sill) or UL 10C.
 - 1. Oversize Fire-Rated Door Assemblies Construction: For units exceeding sizes of tested assemblies, attach construction label certifying doors are built to standard construction requirements for tested and labeled fire rated door assemblies except for size.
 - 2. Temperature-Rise Limit: Where indicated and at vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
 - 3. Smoke Control Door Assemblies: Comply with NFPA 105.
 - a. Smoke "S" Label: Doors to bear "S" label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.
- D. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257. Provide labeled glazing material.
- E. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.
 - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

1.06 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.07 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- B. Building Information Modeling (BIM) Support: Utilize designated BIM software tools and obtain training needed to successfully participate in the Project BIM processes. All technical disciplines are responsible for the product data integration and data reliability of their Work into the coordinated BIM applications.

1.08 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
- B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide steel doors and frames from a SDI Certified manufacturer:
 - 1. CECO Door Products (C).
 - 2. Curries Company (CU).

2.02 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
- C. Frame Anchors: ASTM A653/A653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.03 HOLLOW METAL DOORS

- A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.
- B. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A653/A653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 - 1. Design: Flush panel.
 - 2. Core Construction: Manufacturer's standard polystyrene. Where indicated, provide doors fabricated as thermal-rated assemblies with a minimum R-value of 2.8 or better.
 - 3. Core Construction: Manufacturer's thermally enhanced QMax core. Where indicated provide doors fabricated as thermal-rated assemblies with a minimum thermal rating of 0.35 /hr-ft²-F.
 - 4. Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), Minimum 16 gauge (0.053-inch - 1.3-mm) thick steel, Model 2.
 - 5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
 - 6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.

7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- C. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A1008/A1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 1. Design: Flush panel.
 2. Core Construction: Manufacturer's standard kraft-paper honeycomb, or one-piece polystyrene core, securely bonded to both faces.
 - a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
 3. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
 4. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
 5. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
 6. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- D. Manufacturers Basis of Design:
 1. Curries Company (CU) - Polystyrene Core - 707 Series.
 2. Curries Company (CU) - QMax Core - 707 Series.

2.04 HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Thermal Break Frames: Subject to the same compliance standards and requirements as standard hollow metal frames. Tested for thermal performance in accordance with NFRC 102, and resistance to air infiltration in accordance with NFRC 400. Where indicated provide thermally broken frame profiles available for use in both masonry and drywall construction. Fabricate with 1/16" positive thermal break and integral vinyl weatherstripping.

- C. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A653/A653M, Coating Designation A60.
 - 1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
 - 2. Frames: Minimum 14 gauge (0.067-inch -1.7-mm) thick steel sheet.
 - 3. Manufacturers Basis of Design:
 - a. Curries Company (CU) - M CM Series.
 - b. Curries Company (CU) - Mercury 3 Thermal Break TQ Series.
- D. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A1008/A1008M.
 - 1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
 - 2. Frames: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.
 - 3. Manufacturers Basis of Design:
 - a. Curries Company (CU) - M Series.
- E. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.
- F. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.05 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
 - 2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
 - 3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.
- B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.

- C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.06 LOUVERS

- A. Metal Louvers: Unless otherwise indicated provide louvers to meet the following requirements.
 - 1. Blade Type: Vision proof inverted V or inverted Y.
 - 2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.
- B. Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less.
 - 1. Manufacturers: Subject to compliance with requirements, provide louvers to meet rating indicated.
 - 2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

2.07 LIGHT OPENINGS AND GLAZING

- A. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops to allow multiple glazed lites each to be removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated.
- B. Moldings for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.
- C. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on secure side of interior doors and frames.
- D. Preformed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable.

2.08 ACCESSORIES

- A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.
- B. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.09 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.
- C. Hollow Metal Doors:
 - 1. Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified.
 - 2. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
 - 3. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
 - 4. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
- D. Hollow Metal Frames:
 - 1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.

- a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.
3. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
4. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48-inches and wider with mortise butt type hinges at top hinge locations.
5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
6. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
7. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.
8. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
9. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches on-center and as follows:
 - 1) Two anchors per jamb up to 60 inches high.
 - 2) Three anchors per jamb from 60 to 90 inches high.
 - 3) Four anchors per jamb from 90 to 120 inches high.
 - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
 - b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches high.

- 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
 - 5) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions.
10. Door Silencers: Except on weatherstripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".
11. Bituminous Coating: Where frames are fully grouted with an approved Portland Cement based grout or mortar, coat inside of frame throat with a water based bituminous or asphaltic emulsion coating to a minimum thickness of 3 mils DFT, tested in accordance with UL 10C and applied to the frame under a 3rd party independent follow-up service procedure.
- E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."
1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
 2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
 4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.10 STEEL FINISHES

- A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for square, level, twist, and plumb condition.
- C. Tolerances shall comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.
- E. Verify tolerances against manufacturers installations instructions for tornado and hurricane storm shelter openings.

3.03 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.

1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.
 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
 3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
 4. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.
- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
1. Non-Fire-Rated Standard Steel Doors:
 - a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
 - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
 - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
- D. Field Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.

3.04 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.

- C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

3.05 FIELD QUALITY CONTROL

- A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
 - 1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

END OF SECTION

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SECTION 081420
PRE HUNG WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hollow core pre-finished wood doors with frames and hinges.
- B. Hollow core pre-finished wood doors without frames for bi-pass closet doors for residential units.

1.02 REFERENCE STANDARDS

- A. ICC A117.1 Accessible and Usable Building and Facilities.

1.03 SUBMITTALS

- A. Product Data: Indicate door and frame materials and construction; type and characteristics.
- B. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
- C. Schedule: Provide integrated door, frame, and hardware schedule using door numbers indicated on drawings.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Mark doors with location of installation, door type, color, and weight
- B. .Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact
- C. .Deliver pre-assembled doors and frames with braces, spreaders, and packaging as required to prevent damage
- D. Store materials in original packaging, under cover, protected from exposure to harmful weather conditions and from direct contact with water.Store at temperature and humidity conditions recommended by manufacturer
- E. .Do not use non-vented plastic or canvas shelters
- F. Immediately remove wet wrappers.

- G. Store in position recommended by manufacturer, elevated minimum 4 inches above grade, with minimum 1/4 inch space between doors.

1.05 WARRANTY

- A. Manufacturer Warranty: Provide manufacturer's standard one-year warranty on interior doors.
 - 1. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 PRODUCTS

2.01 DOORS AND PANELS

- A. Doors: See drawings for locations and additional requirements.
 - 1. Pre-hung side-hung and sliding interior hollow core molded wood doors:
 - a. Factory primed for field applied opaque finish. Prime faces, stiles, and rails.
 - b. Faces: MDF
 - c. Stiles and Rails: Wood. Vertical edges beveled.
 - d. Core: Corrugated Cell.
 - e. Construction: Molded wood fiber facings, three ply core, edge-bonded, 1 3/8-inch total thickness.
 - f. Door Frame: Manufacturer's standard solid wood flat jambs with integral door stop.
 - g. Opaque Finish: Provide doors the smooth finish prepared for field-applied prime and paint per Section 099000 Painting.
 - h. Door Hinges: Three per side-hung door, manufacturer's standard 3-1/2 inch, full mortise, 5-knuckle, plain bearing hinges, brushed chrome/nickel finish.
 - i. Other door hardware specified in Section 087100 – Door Hardware. Provide solid blocking for surface mounted hardware.
 - j. Basis of Design: "Molded Panel Series" by Masonite Corporation.

2.02 DOOR FABRICATION

- A. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- B. Factory fit doors in frame opening dimensions identified on shop drawings.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions.
- B. Coordinate installation of doors with installation of hardware.
- C. Install doors and wood frames as scheduled on the drawings.
- D. Install bi-pass closet doors with hardware specified in Section 087100 and adjust for smooth operation. Ensure door bumpers are in place and aligned to avoid damage to doors/wall finishes.

END OF SECTION

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SECTION 081613
FIBERGLASS DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fiberglass doors.
- B. Fiberglass door frames.
- C. Fiberglass borrowed lite frames.

1.02 REFERENCE STANDARDS

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights; 2022, with Errata (2023).
- B. AAMA 1304 - Voluntary Specification for Determining Forced Entry Resistance of Side-Hinged Door Systems; 2018.
- C. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- 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. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- G. 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.
- H. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).
- I. ASTM E2112 - Standard Practice for Installation of Exterior Windows, Doors and Skylights; 2023.
- J. ICC A117.1 Accessible and Usable Building and Facilities.

- K. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- L. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- M. UL (DIR) - Online Certifications Directory; Current Edition.
- N. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. Product Data: Provide manufacturer's standard details, installation instructions, hardware and anchor recommendations.
- B. Shop Drawings: Indicate layout and profiles; include assembly methods.
 - 1. Indicate product components, including hardware reinforcement locations and preparations, accessories, finish colors, patterns, and textures.
 - 2. Indicate wall conditions, door and frame elevations, sections, materials, gauges, finishes, location of door hardware by dimension, and details of openings; use same reference numbers indicated on drawings to identify details and openings.
- C. Selection Samples: Submit two complete sets of color chips, illustrating manufacturer's available finishes, colors, and textures.
- D. Schedule: Provide integrated door, frame, and hardware schedule using door numbers indicated on drawings.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store materials in original packaging, under cover, protected from exposure to harmful weather conditions and from direct contact with water.
 - 1. Store at temperature and humidity conditions recommended by manufacturer.
 - 2. Do not use non-vented plastic or canvas shelters.
 - 3. Immediately remove wet wrappers.
- C. Store in position recommended by manufacturer, elevated minimum 4 inches above grade, with minimum 1/4 inch space between doors.

1.05 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide 5-year manufacturer warranty covering materials and workmanship, including degradation or failure due to chemical contact. Complete forms in Owner's name and register with manufacturer.
- C. Manufacturer Warranty: Provide 20-year manufacturer warranty for insulated glass units from seal failure, interpane dusting or misting, and replacement of same. Include coverage for degradation of vinyl color finish. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fire-Rated Fiberglass Doors and Frames:
 - 1. Plastpro Inc; fire rated: www.plastproinc.com/#sle.
 - 2. Special-Lite, Inc; FR-Series 20 / 45 / 60 / 90: www.special-lite.com/#sle.

2.02 DOOR AND FRAME ASSEMBLIES

- A. Door and Frame Assemblies: Factory-fabricated, prepared and machined for hardware.
 - 1. Operation: Manual.
 - 2. Operation: Power operator per Section 087113 where scheduled.
 - 3. Screw-Holding Capacity: Tested to 890 pounds, minimum.
 - 4. Surface Burning Characteristics: Flame spread index (FSI) of 0 to 25, Class A, and smoke developed index (SDI) of 450 or less, when tested in accordance with ASTM E84.
 - 5. Flammability: Self-extinguishing when tested in accordance with ASTM D635.
 - 6. Clearance Between Door and Frame: 1/8 inch, maximum.
 - 7. Clearance Between Bottom of Door and Finished Floor: 3/4 inch, maximum; not less than 1/4 inch clearance to threshold.
- B. Fire-Rated Doors and Frames: Comply with fire-ratings as indicated on drawings.

1. Tested in accordance with ICC (IBC) for positive pressure or UL 10C.
2. UL (DIR) listed and labeled.
3. Provide mineral fiber or intumescent core as required for fire-rating as indicated.

2.03 COMPONENTS

- A. Doors: Fiberglass construction with reinforced core.
 1. Type: As indicated on drawings, including swinging doors.
 2. Thickness: 1-3/4 inch, nominal.
 3. Core Material: Manufacturer's standard core material for application indicated.
 4. Construction:
 - a. Molded in one piece including through color gel coating on each side; manufacturer's standard subframe, core and faces fused during curing; hardware reinforcements.
 5. Face Sheet Texture: Smooth.
 6. Door Panel Configuration: As indicated on drawings.
 7. Subframe and Reinforcements: Manufacturer's standard materials.
 8. Waterproof Integrity: Provide factory fabricated edges, cut-outs, and hardware preparations of fiberglass reinforced plastic (FRP); provide cut-outs with joints sealed independently of glazing, louver inserts, or trim.
 9. Hardware Preparations: Factory reinforce, machine, and prepare for door hardware including field installed items; provide solid blocking for each item; field cutting, drilling or tapping is not permitted; obtain manufacturer's hardware templates for preparation as necessary.
- B. Door and Borrowed Lite Frames: Provide type in compliance with performance requirements specified for doors.
 1. Type: Factory assembled with chemically welded joints.
 2. Door Stop: 5/8 inch wide, by 1-7/8 inches deep.
 3. Non-Fire-Rated:

- a. Fiberglass reinforced plastic (FRP) with gel-coating matching doors.
- 4. Fire-Rated: Provide frames bearing labels to match doors.
 - a. Fiberglass reinforced plastic (FRP) with gel-coating matching doors.
- 5. Frame Anchors: Stainless steel, Type 304; provide three anchors in each jamb for heights up to 84 inches with one additional anchor for each additional 24 inches in height.

2.04 PERFORMANCE REQUIREMENTS

- A. Provide door assemblies that have been designed and fabricated in compliance with specified performance requirements.
- B. Fiberglass Doors: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific door type:
 - 1. Performance Class (PC) Interior Doors: LC.
 - 2. Performance Class (PC Exterior Doors): CW.
- C. Forced Entry Resistance: Pass in accordance with AAMA 1304 test method.
- D. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 7.5 psf.
- E. Air Leakage: Maximum 0.1 cfm/sf, when tested in accordance with ASTM E283/E283M at differential pressure of 6.24 psf across assembly.
- F. Thermal Transmittance, Exterior Doors: AAMA 1503, Overall U-value Including Glazing: U Value as indicated on drawings, Energy Calculations sheets.
- G. Acoustical Performance: Sound Transmission Class (STC) of 25, Outdoor/Indoor Transmission Class (OITC) rating of 25, minimum, when tested in accordance with ASTM E90.

2.05 FINISHES

- A. Gel Coating: Ultraviolet (UV) stabilized polyester finish.
 - 1. Thickness: Minimum 15 mils, 0.015 inch wet thickness, plus/minus 3 mils, 0.003 inch.

2.06 HARDWARE

- A. Door Hardware: See Section 087100.

2.07 ACCESSORIES

- A. Stops for Glazing and Louver: Fiberglass, unless otherwise indicated or required by fire rating; provided by door manufacturer to fit factory made openings, with color and texture to match door; fasteners shall maintain waterproof integrity.
 - 1. Glazed Openings: Provide removable stops on interior side.
 - 2. Fire-Rated Doors: Provide stop kit listed by labeling authority.
 - 3. Opening Sizes and Shapes: As indicated on drawings.
- B. Door Vision Lite Frames: Frames with glazing securely fastened within door opening.
 - 1. Size: As indicated on drawings.
 - 2. Frame Material: 18 gauge, 0.0478 inch, galvanized steel.
 - 3. Metal Finish: Color to match door gel coat, polyester powder coating.
- C. Louvers for Non-Fire-Rated Doors: Same materials, construction, finish, and color as door; fixed vanes, 45 degree sloped vanes.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions; do not penetrate frames with anchors.
- B. Install fire-rated assemblies in accordance with NFPA 80.
- C. Install exterior doors in accordance with ASTM E2112.
- D. Set units plumb, level, and true-to-line, without warping or racking doors, and with specified clearances; anchor in place.
- E. Separate aluminum and other metal surfaces from sources of corrosion of electrolytic action at points of contact with other materials.

3.02 ADJUSTING

- A. Lubricate, test, and adjust doors to operate easily, free from warp, twist or distortion, and to fit watertight for entire perimeter.
- B. Adjust hardware for smooth and quiet operation.

- C. Adjust doors to fit snugly and close without sticking or binding.

END OF SECTION

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**SECTION 083100
ACCESS DOORS AND PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wall- and ceiling-mounted access units.

1.02 REFERENCE STANDARDS

- A. ITS (DIR) - Directory of Listed Products; Current Edition.
- B. UL (FRD) - Fire Resistance Directory; Current Edition.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work.

PART 2 PRODUCTS

2.01 ACCESS DOORS AND PANELS ASSEMBLIES

2.02 WALL- AND CEILING-MOUNTED ACCESS UNITS

- A. Wall- and Ceiling-Mounted Units: Factory-fabricated door and frame, fully assembled units with corner joints welded, filled and ground flush; square and without rack or warp; coordinate requirements with type of installation assembly being used for each unit.
 - 1. Material: Steel.
 - 2. Style: Exposed frame with door surface flush with frame surface.
 - a. Gypsum Board Mounting Criteria: Use drywall bead type frame.
 - 3. Door Style: Single thickness with rolled or turned in edges.
 - 4. Frames: 16-gauge, 0.0598-inch minimum thickness.
 - 5. Single Steel Sheet Door Panels: 16-gauge, 0.0625-inch minimum thickness.
 - 6. Units in Fire-Rated Assemblies: Fire rating as required by applicable code for fire-rated assembly that access doors are being installed.

- a. Provide products listed by ITS (DIR) or UL (FRD) as suitable for purpose indicated.
- 7. Steel Finish: Primed.
- 8. Hardware:
 - a. Hardware for Fire-Rated Units: As required for listing.
 - b. Hinges for Non-Fire-Rated Units: Continuous piano hinge.
 - c. Latch/Lock: Screw driver slot for quarter turn cam latch.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Install frames plumb and level in openings, and secure units rigidly in place.
- C. Position units to provide convenient access to concealed equipment when necessary.

END OF SECTION

SECTION 085313
VINYL WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Vinyl-framed, factory-glazed windows.
- B. Operating hardware.
- C. Insect screens.

1.02 REFERENCE STANDARDS

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights; 2022, with Errata (2023).
- B. AAMA 701/702 - Performance Specification for Pile Weatherstrips (AAMA 701) and Polymer Weatherseals (AAMA 702); 2023.
- C. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- D. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- E. ASTM E1332 - Standard Classification for Rating Outdoor-Indoor Sound Attenuation; 2022.
- F. ASTM F2090 - Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms; 2021.
- G. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

1.03 SUBMITTALS

- A. Product Data: Provide component dimensions, anchors, fasteners, glass, and internal drainage.
- B. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work, installation requirements, and recommended head, sill, and jamb details.
- C. Color Chart: Manufacturer's chart showing full range of standard color for initial selection. Provide samples of actual material color(s) as requested.

- D. Grade Substantiation: Prior to submitting shop drawings or starting fabrication, submit one of the following showing compliance with specified grade:
 - 1. Evidence of AAMA Certification.
 - 2. Evidence of WDMA Certification.
 - 3. Evidence of CSA Certification.
 - 4. Test report(s) by independent testing agency itemizing compliance.
- E. Test Reports: Prior to submitting shop drawings or starting fabrication, submit test report(s) by independent testing agency showing compliance with performance requirements in excess of those prescribed by specified grade.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with minimum 5 years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

1.06 QUALITY ASSURANCE

- A. Field Testing and Inspection:
 - 1. Owner will engage independent testing and inspection for water and air infiltration of select windows. If select windows fail, contractor to pay for testing of all windows.

1.07 WARRANTY

- A. Manufacturer Warranty: Provide manufactures standard Commercial Warranty for Multi-Family buildings. Complete form in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design: VPI, Spokane, Washington

2.02 DESCRIPTION

- A. Vinyl Windows: Factory-fabricated frame and sash members of extruded, hollow, ultraviolet-resistant, glass-fiber reinforced polyvinyl chloride (PVC) with integral color; with factory-installed glazing, hardware, related flashings, anchorage and attachment devices.
 - 1. Configuration: As indicated on drawings.
 - a. Product Type: FW - Fixed window and HS - Horizontal sliding window in accordance with AAMA/WDMA/CSA 101/I.S.2/A440.
 - 2. Interior Color: As selected by Architect from manufacturer's full line of colors.
 - 3. Exterior Color: As selected by Architect from manufacturer's full line of colors.
 - 4. Size to fit openings with minimum clearance around perimeter of assembly providing necessary space for perimeter seals.
 - 5. Operable Units: Double weatherstripped.
 - 6. Framing Members: Fusion welded corners and joints, with internal reinforcement where required for structural rigidity; concealed fasteners.
 - 7. System Internal Drainage: Drain to exterior side by means of weep drainage network any water entering joints, condensation within glazing channel, or other migrating moisture within system.
 - 8. Glazing Stops, Trim, Flashings, and Accessory Pieces: Formed of rigid PVC, fitting tightly into frame assembly.
 - 9. Mounting Flange: Integral to frame assembly, providing weather stop at entire perimeter of frame.
 - 10. Insect Screens: Tight fitting for operating sash location.

2.03 PERFORMANCE REQUIREMENTS

- A. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific window type:
 - 1. Performance Class (PC): R.
- B. Design Pressure: In accordance with applicable codes.
- C. Condensation Resistance Factor: CRF of 60, minimum, the lower value of the glass and frame window components and determined in accordance with AAMA 1503.

- D. Overall Thermal Transmittance (U-value): As indicated on drawings, including glazing, measured on window sizes required for this project. R or U Value as indicated on drawings, Energy Calculations sheets.
- E. Center of Glass Solar Heat Gain Coefficient (SHGC): As indicated on drawings.
- F. Acoustic Performance: Minimum outdoor-indoor transmission class (OITC) rating of 25, when tested in accordance with ASTM E90 and ASTM E1332.

2.04 COMPONENTS

- A. Glazing: Insulated double pane, annealed and tempered glass as scheduled , clear, low-E coated, krypton filled, bird-friendly, with thermoplastic warm-edge spacer, with glass thicknesses as recommended by manufacturer for specified wind conditions and acoustic rating indicated.
- B. Frame Depth: As indicated on drawings.
 - 1. Type: Nailing flange.
 - 2. Frame Corners: Block-reinforced butt-joint corner inserts.
- C. Insect Screens: Aluminum, extruded or roll-formed frame with mitered and reinforced corners; apply screen mesh taut to frame; secure to window with hardware to allow easy removal.
 - 1. Hardware: Manufacturer's standard; quantity as required per screen.
 - 2. Screen Mesh: Vinyl-coated fiberglass, window manufacturer's 18 x 16 mesh.
 - 3. Frame Finish: Manufacturer's standard, color to match window frame and sash color.
- D. Operable Sash Weatherstripping: Wool pile; permanently resilient, profiled to maintain weather seal in accordance with AAMA 701/702.

2.05 HARDWARE

- A. Horizontal Sliding Sash: Rigid PVC interfacing tracks with dual brass wheel and stainless steel axle assembly housing, provide two sets for each operating sash and opening stops in head and sill track as required.
- B. Window Opening Control Devices (WOCD): Provide operable window sash hardware that limits openings to only allow passage of 4-inch diameter rigid sphere or less, and is easily releasable to fully open without use of keys, tools, or special knowledge. Comply with ASTM F2090.

- C. Finish of Exposed Hardware: Baked enamel, match interior sash and frame color.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install window unit assemblies in accordance with manufacturer's instructions and applicable building codes.
- B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities as necessary.
- C. Align window plumb and level, free of warp or twist, and maintain dimensional tolerances and alignment with adjacent work.

3.02 TOLERANCES

- A. Maximum Variation from Level or Plumb: 0.06 inches every 3 ft non-cumulative or 0.5 inches per 100 ft, whichever is less.

3.03 ADJUSTING

- A. Adjust hardware for smooth operation and secure weathertight closure.

END OF SECTION

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SECTION 087100
DOOR HARDWARE

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. BHMA A156.1 - Standard for Butts and Hinges; 2025.
- B. BHMA A156.2 - Bored and Preamsembled Locks and Latches; 2022.
- C. BHMA A156.3 - Exit Devices; 2025.
- D. BHMA A156.4 - Door Closers and Pivots; 2024.
- E. BHMA A156.6 - Standard for Architectural Door Trim; 2021.
- F. BHMA A156.8 - Door Controls - Overhead Stops and Holders; 2021.
- G. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022.
- H. BHMA A156.14 - Sliding and Folding Door Hardware; 2024.
- I. BHMA A156.16 - Standard for Auxiliary Hardware; 2023.
- J. BHMA A156.18 - Standard for Materials and Finishes; 2020.
- K. BHMA A156.19 - Power Assist and Low Energy Power Operated Swinging Doors; 2019.
- L. BHMA A156.31 - Electric Strikes and Frame Mounted Actuators; 2024.
- M. BHMA A156.36 - Auxiliary Locks; 2020.
- N. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- O. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- P. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- Q. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- R. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- S. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2025.

- T. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.
- U. UL 294 - Access Control System Units; Current Edition, Including All Revisions.
- V. UL 305 - Standard for Panic Hardware; Current Edition, Including All Revisions.
- W. UL 437 - Standard for Key Locks; Current Edition, Including All Revisions.
- X. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
- Y. UL 1784 - Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.03 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Sliding doors.
 - 3. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
 - 3. Automatic operators.
 - 4. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 01 "General Requirements".
 - 2. Division 06 Section "Rough Carpentry".
 - 3. Division 06 Section "Finish Carpentry".
 - 4. Division 08 Section "Hollow Metal Doors and Frames".

5. Division 08 Section "Pre-Hung Wood Doors".
 6. Division 08 Section "Fiberglass Doors",
 7. Division 08 Section "Automatic Door Operators".
 8. Division 26 Section "Electrical"
 9. Division 28 Section "Multi-Family Access Control Hardware Devices".
 10. Division 28 Section "Intercom Entry Systems".
 11. Division 32 Section "Decorative Metal Fences and Gates".
- D. Codes and References: Comply with the version adopted by the Authority Having Jurisdiction.
1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 2. ICC (IBC) International Building Code.
 3. NFPA 70 - National Electrical Code.
 4. NFPA 80 - Fire Doors and Windows.
 5. NFPA 101 - Life Safety Code.
 6. NFPA 105 - Installation of Smoke Door Assemblies.
 7. UL/ULC and CSA C22.2 - Standards for Automatic Door Operators Used on Fire and Smoke Barrier Doors and Systems of Doors.
 8. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
1. ANSI/BHMA Certified Product Standards - A156 Series.
 2. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
 3. ANSI/UL 294 - Access Control System Units.
 4. UL 305 - Panic Hardware.
 5. ANSI/UL 437- Key Locks.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

- C. Shop Drawings: Details of electrified access control hardware indicating the following:
 - 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
 - b. Complete (risers, point-to-point) access control system block wiring diagrams.
 - c. Wiring instructions for each electronic component scheduled herein.
 - 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:
 - 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

1.05 CLOSEOUT SUBMITTALS

- A. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.
- B. Project Record Documents: Provide record documentation of as-built door hardware sets in digital format (.pdf, .docx, .xlsx, .csv) and as required in Division 01, Project Record Documents.

1.06 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
- C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- F. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.

4. Installation of permanent keys, cylinder cores and software.
 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 3. Review sequence of operation narratives for each unique access controlled opening.
 4. Review and finalize construction schedule and verify availability of materials.
 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.08 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.09 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Hardware shall not have any visible manufacturer names on exposed materials, except cylinders, when the door is in a closed position.

2.02 BUTT HINGES

- A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 - 4. Hinge Options: Comply with the following:
 - a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for all out-swinging lockable doors.
 - 5. Manufacturers:
 - a. McKinney (MK) - TA/T4A Series, 5-knuckle.

2.03 SLIDING AND FOLDING HARDWARE

- A. Sliding and Folding Door Hardware: Hardware is to be of type and design as specified and should conform with ANSI/BHMA A156.14.

1. Provide sliding door hardware as follows:
 - a. Sliding Bi-Passing Pocket Door Hardware: Provide complete sets consisting of track, hangers, stops, bumpers, floor channel, guides, and accessories indicated.
 - b. Cascading: Provide a bi-parting or single direction telescoping system as required with a minimum 200 lb. per door capacity.
 - c. Bi-folding Door Hardware: Rated for door panels weighing up to 125 lb.
 - d. Pocket Sliding Door Hardware: Rated for doors weighing up to 200 lb.
2. Manufacturers:
 - a. Pemko (PE).

2.04 POWER TRANSFER DEVICES

- A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets with a 1-year warranty. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:
 - a. McKinney (MK) - QC (# wires) Option.

- B. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:
 - a. Pemko (PE) - EL-CEPT Series.
 - b. Securitron (SU) - EL-CEPT Series.

- C. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
1. Provide one each of the following tools as part of the base bid contract:
 - a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
 - b. McKinney (MK) - Connector Hand Tool: QC-R003.
 2. Manufacturers:
 - a. McKinney (MK) - QC-C Series.

2.05 DOOR OPERATING TRIM

- A. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
 4. Pulls shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
 5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets. When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.

6. Manufacturers:
 - a. Rockwood (RO).

2.06 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
 1. Threaded mortise cylinders with rings and cams to suit hardware application.
 2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
 4. Tubular deadlocks and other auxiliary locks.
 5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 6. Keyway: Manufacturer's Standard.
- C. Large Format Interchangeable Cores: Provide removable cores (LFIC) as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.
- D. Keying System: Each type of lock and cylinders to be factory keyed.
 1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 3. New System: Key locks to a new key system as directed by the Owner.
- E. Key Quantity: Provide the following minimum number of keys:
 1. Change Keys per Cylinder: Two (2)
 2. Master Keys (per Master Key Level/Group): Five (5).

3. Construction Keys (where required): Ten (10).
- F. Construction Keying: Provide construction master keyed cylinders.
- G. Key Registration List (Bitting List):
 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 2. Provide transcript list in writing or electronic file as directed by the Owner.

2.07 KEY CONTROL

- A. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.
 1. Manufacturers:
 - a. Medeco (MC).

2.08 CYLINDRICAL LOCKS AND LATCHING DEVICES

- A. Cylindrical Locksets, Grade 1 (Commercial Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed cylindrical locksets. Listed manufacturers shall meet all functions and features as specified herein.
 1. Electromechanical locksets shall have the following functions and features:
 - a. Universal Molex plug-in connectors that have standardized color-coded wiring and are field configurable in fail safe or fail secure and operate from 12vdc to 24vdc regulated.
 - b. Self-contained, continuous duty integral solenoid.
 - c. One-year limited warranty on electrified functions.
 2. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) 4700LN Series.

2.09 RESIDENTIAL LOCKING DEVICES

- A. Residential Locking Devices: Provide ANSI A156.2, Series 4000, Grade 2 products (knobs, levers, deadbolts, interconnected, handlesets) as specified.
 - 1. Provide residential locking devices with functions and features as follows:
 - a. Locksets, deadbolts, and handle sets designed to fit ANSI standard door preps.
 - b. Meets UL and ULC Standard 10C Positive Pressure, Fire Test of Door Assemblies.
 - c. Non-handed levers.
 - d. Provide levers of like design and style as specified.
 - 2. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) - Heritage Series.
 - b. Kwikset (KW) - Signature Series.
- B. Residential Locking Devices: Provide ANSI A156.2, Series 4000, Grade 3 products (knobs, levers, deadbolts, interconnected, handlesets) as specified.
 - 1. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) - Heritage Series.
 - b. Kwikset (KW) - Safelock Series.

2.10 STAND ALONE ACCESS CONTROL LOCKING DEVICES

- A. Stand Alone Locksets: ANSI A156.2, Series 4000, Grade 1 locking mechanism complete with integrated touchscreen or keypad as specified for access and programming. Voice-guided programming with 12-digit PIN code selection and up to 1000 user option. Locks to accept standard, small format interchangeable core, security and patented cylinders. Battery-operated, with low power indicator, or hard-wired (9 Volt external power supply) option.
 - 1. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) - nexTouch Series.

2.11 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 - 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
 - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 - 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 - 4. Dustproof Strikes: BHMA A156.16.

2.12 ELECTRIC STRIKES

- A. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes conforming to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike. Strike requires no cutting to the jamb prior to installation.
 - 1. Manufacturers:
 - a. Folger Adam (FO) - 310-4 Series.
 - b. HES (HS) - 9400/9500/9600/9700/9800 Series.

- B. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a five year warranty.

2.13 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 - 1. Exit devices shall have a five-year warranty.
 - 2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL 305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 - 3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 - 4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 - 5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 - 6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 - 7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 - 8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.

9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
 10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Commercial Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed exit devices. Listed manufacturers shall meet all functions and features as specified herein. Listed manufacturers shall meet all functions and features as specified herein.
1. Provide locksets with functions and features as follows:
 - a. Where required by code, provide knurling or abrasive coating on all levers leading to hazardous areas.
 - b. Meets UL and CUL Standard 10C Positive Pressure, Fire Test of Door Assemblies with levers that meet A117.1 Accessibility Code.
 - c. Five-year limited warranty for mechanical features.
 2. Electromechanical locksets shall have the following functions and features:
 - a. Where conventional power supplies are not sufficient, include any specific controllers required to provide the proper inrush current.
 - b. Two-year limited warranty for Electromechanical features.
 3. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) - 6000 Series.

2.14 SURFACE DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
 2. Standards: Closers to comply with UL 10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC A117.1.
 4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Commercial Duty): ANSI/BHMA 156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, institutional grade door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck, closing sweep, and latch speed control valves. Provide non-handed units standard.
1. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) - 5800 Series.
- C. Door Closers, Surface Mounted (Standard Duty): ANSI/BHMA 156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, institutional grade door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck, closing sweep, and latch speed control valves. Provide non-handed units standard.
1. Manufacturers:
 - a. ASSA ABLOY ACCENTRA (YA) - 2700 Series.

2.15 ELECTROHYDRAULIC DOOR OPERATORS

- A. Electrohydraulic Door Operators (High Traffic): Provide ANSI/BHMA A156.19 Certified Products Directory (CPD) listed low energy operators that meet ANSI/BHMA A156.4 requirements and are UL listed for use on fire rated doors and UL 10C certified that comply with requirements for the Americans with Disabilities Act (ADA). Operators shall be verified by GreenCircle to offer energy savings of 19% when compared to similar products to accommodate openings up 250 pounds and 48" wide. Provide accessories such as custom templates, special mounting brackets, spacers and drop plates as needed for proper installation. Operators shall accommodate openings up to 200 pounds and 48" wide. Listed manufacturers shall meet all functions and features as specified herein.
1. Provide operators with features as follows:
 - a. Non-handed with push and pull side mounting.
 - b. Operates as mechanical surface closer during close cycles, when door is opened manually or if power is off.
 - c. Activation by push button, hands-free or radio frequency devices.
 - d. On board electronics to collect usage and cycle count data to facilitate preventative maintenance/diagnostics.
 - e. Two-year limited warranty.
 - f. Wi-Fi interface where the operator is a secure, password protected WiFi hot spot with no connection to building's IT required.
 - 1) Simple setup with no app required.
 - 2) View status and make adjustments without removing the cover.
 - 3) Built-in logic to support single use restroom applications with no external relay boards, logic modules, position switches required.
 - g. Mounting backplate to simplify and speed up installation.
 2. Operators shall have the following functionality:
 - a. Adjustable Hold Open: Amount of time a door will stay in the full open position after an activation.

- b. Blow Open for Smoke Ventilation: Door opens when signal is received from alarm system allowing air or smoke to flow through opening. Door will stay open until signal from alarm system is stopped.
 - c. Infinite Hold Open: Door will hold open at set position until power is turned off.
 - d. Obstruction Detection: Door closes if it hits an obstruction while opening; door will reverse to open position if it hits an obstruction while closing. Door will stop once it hits an obstruction and will rest against the obstruction until removed.
 - e. Open Delay: Delays operator opening for locking hardware.
 - f. Overload Safety Shut-Off: After two minutes of receiving a door activation signal, inverter times out and door closes to prevent motor/inverter damage.
 - g. Presence Detector Input: Input for external sensor to detect presence at door open or close position only.
 - h. Push & Go: As the door is manually opened, the operator "senses" movement and opens door to the full-open position.
 - i. Selector Mode Switch: Off disables the signal inputs unless Blow Open is activated, on activates the signal inputs, hold open activates the unit (unless Blow Closed is activated) to the hold open position.
 - j. Vestibule Delay: When the wall switch is pressed, first door in vestibule will open. Second door will open once vestibule door delay has expired. Delay is adjustable.
3. Manufacturers:
- a. Norton Rixson (NO) - 6000 Series.

2.16 ARCHITECTURAL TRIM AND ACCESSORIES

- A. Door, Frame and Wall Protective Trim: ANSI/BHMA A156.6, protective products as specified in the hardware sets. Door protection plates shall be not more than 2" less than door width on stop side and 1" less door width on the pull side or on stop side of pairs of doors. Listed manufacturers shall meet all functions and features as specified herein.
- 1. Provide protective trim with functions and features as follows:
 - a. Meets ADA requirements for smooth bottom door surfaces.
 - b. UL Classified options for use on fire-rated doors up to 3 hours.

- c. Fabricated from stainless steel, brass, bronze, aluminum, or high-impact plastic.
 - d. Available in a variety of sizes, finishes, and profiles to suit aesthetic and functional requirements.
 - e. Designed to protect doors, frames, and adjacent walls from damage due to impact, abrasion, or traffic.
 - f. Fasteners included; adhesive-backed options available for select models.
 - g. Ten-year limited warranty.
2. Manufacturers:
- a. Rockwood (RO).

2.17 DOOR STOPS AND HOLDERS

- A. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
1. Manufacturers:
- a. Rockwood (RO).
- B. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
1. Manufacturers:
- a. Norton Rixson (NO).

2.18 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL 10C.
 - 1. Provide intumescent seals as indicated to meet UL 10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 - 1. Pemko (PE).

2.19 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
 - 1. Manufacturers:
 - a. Alarm Controls (AK) - CP1-1026 Series.
 - b. Securitron (SU) - DPS Series.
- B. Intelligent Switching Power Supplies: Provide the least number of power supplies at the appropriate amperage level sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.
 - 1. Manufacturers:
 - a. Life Safety Power (LP).

2.20 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.21 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.02 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.03 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Push Plates and Door Pulls: When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.
- E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.04 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.

3.05 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.06 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.07 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
 - 1. Quantities listed are for each pair of doors, or for each single door.
 - 2. The supplier is responsible for handing and sizing all products.
 - 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

HARDWARE SETS
SET: 1.0
DOORS: 100A
DESCRIPTION: EXTERIOR PAIR - VIDEO INTERCOM, CARD READER/KEYPAD, AUTO OPERATOR, EXIT DEVICES-NIGHTLATCH W/ PULLS, CLOSER, OVERHEAD STOPS

4	HINGE, FULL MORTISE, HVY WT	T4A3386 NRP	US32D	MK	
2	HINGE, FULL MORTISE, HVY WT	T4A3386 QC_	US32D	MK	⚡
1	CONCEALED VERT ROD EXIT, NIGHTLATCH	6160ED B MELR 603F LFIC TEMP CORE	630	YA	⚡
1	CONCEALED VERT ROD EXIT, EXIT ONLY	6160ED B MELR EO	630	YA	⚡
1	PERMANENT CORE	1210 GMK	626	YA	
2	OFFSET DOOR PULL	BF158	US32D	RO	
2	CONCEALED OVERHEAD HOLDER/STOP	1-X36 (IN LIEU OF A DOOR STOP)	630	NO	
1	SURFACE CLOSER	5821 (REMOVE STOP)	689	YA	
1	AUTOMATIC OPENER	6000 SERIES	689	NO	⚡
2	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
2	ASTRAGAL	29324CNB		PE	
1	GASKETING	290APK X 2891APK		PE	
2	SWEEP	315CN		PE	
1	THRESHOLD	25_X_AFG		PE	
2	ELECTROLYNX HARNESS - FRAME	QC-C1500P		MK	⚡
2	ELECTROLYNX HARNESS - DOOR	QC-CXXX (SIZE AS REQUIRED)		MK	⚡
1	VIDEO DOOR STATION	DOORBIRD D21 SERIES		DR	⚡
1	VIDEO DOOR INTERCOM STATION	DOORBIRD D31TD SERIES AS REQUIRED		DR	⚡
2	POSITION SWITCH	DPS		SU	⚡
2	WALL SWITCH	700		NO	⚡
1	CARD READER + KEYPAD / UPDATER	NTX752K-UPDTR- TS		YA	
1	POWER SUPPLY	LSP-12-24 AS REQUIRED - BY		YA	⚡

		SECURITY DIVISION 28			
1	WIRING DIAGRAM	ELEVATION AND POINT TO POINT AS SPECIFIED			
NOTES: VIDEO INTERCOM/READER AND WIRING TO ELECTRIFIED HARDWARE BY SECURITY DIVISION 28. OPERATION DESCRIPTION: DOORS ARE NORMALLY CLOSED AND SECURE. AUTHORIZED ACCESS BY VIDEO INTERCOM OR CARD READER/KEYPAD RETRACTS EXIT DEVICE LATCHES FOR PREDETERMINED TIME LIMIT. EXIT DEVICE LATCHES CAN BE ELECTRICALLY HELD RETRACTED FOR OPEN ACCESS. ADA ACCESS BY ACTUATOR SWITCH. IN LOCKED CONDITION, ACTUATOR ENERGIZED ONLY UPON VALID CARD READER PRESENTATION. EGRESS FREE FOR IMMEDIATE EXIT. ADA EGRESS BY ACTUATOR SWITCH. REX SWITCH IN PUSH RAIL ALLOWS AUTHORIZED EXIT WITHOUT ALARM CONDITION. DOOR POSITION SWITCHES MONITOR OPEN/CLOSED STATUS. EXIT DEVICE LATCHES RELEASE (FAIL SECURE) IN EVENT OF POWER LOSS. KEYED CYLINDER OVERRIDE FOR EMERGENCY ACCESS. ACCENTRA CONTROLLER AND POWER SUPPLY INCLUDED IN MISCELLANEOUS HARDWARE SET AT END OF SCHEDULE.					
SET: 2.0					
DOORS: 104A					
DESCRIPTION: EXTERIOR SINGLE - EXIT DEVICE-NIGHTLATCH W/PULL, CLOSER					
3	HINGE, FULL MORTISE, HVY WT	T4A3386 NRP	US32D	MK	
1	RIM EXIT DEVICE, NIGHTLATCH	6100ED 632F LFIC TEMP CORE	630	YA	
1	PERMANENT CORE	1210 GMK	626	YA	
1	SURFACE CLOSER	5821 (REMOVE STOP)	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	409 (OR) 441CU (AS REQUIRED)	US32D	RO	
1	GASKETING	290APK X 2891APK		PE	

1	SWEEP	315CN		PE	
1	THRESHOLD	25_X_AFG		PE	
NOTES: OVERHEAD STOP AT DOORS 101A, 109A					
SET: 3.0					
DOORS: 101A					
DESCRIPTION: EXTERIOR SINGLE - EXIT DEVICE-EXIT ONLY, CLOSER, OVERHEAD STOP, DPS					
3	HINGE, FULL MORTISE, HVY WT	T4A3386 NRP	US32D	MK	
1	RIM EXIT DEVICE, EXIT ONLY	6100ED EO	630	YA	
1	CONCEALED OVERHEAD HOLDER/STOP	1-X36 (IN LIEU OF A DOOR STOP)	630	NO	
1	SURFACE CLOSER	5821 (REMOVE STOP)	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	463-RKW	US32D	RO	
1	GASKETING	290APK X 2891APK		PE	
1	SWEEP	315CN		PE	
1	THRESHOLD	25_X_AFG		PE	
1	POSITION SWITCH	DPS		SU	⚡
SET: 4.0					
DOORS: 103A					
DESCRIPTION: EXTERIOR SINGLE - STOREROOM LOCK, CLOSER W/STOP					
3	HINGE, FULL MORTISE, HVY WT	T4A3386 NRP 5" X 4-1/2"	US32D	MK	
1	STOREROOM LOCK	UB 4705LN LFIC TEMP CORE	626	YA	
1	PERMANENT CORE	1210 GMK	626	YA	
1	SURFACE CLOSER	2731	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	

1	GASKETING	290APK X 2891APK		PE	
1	SWEEP	315CN		PE	
1	THRESHOLD	25_X_AFG		PE	
SET: 5.0					
DOORS: 104B					
DESCRIPTION: INTERIOR SINGLE - EXIT DEVICE-STOREROOM, CLOSER - RATED					
3	HINGE, FULL MORTISE, HVY WT	T4A3786- WIDETHROW NRP 4-1/2" X 5"	US26D	MK	
1	FIRE RATED RIM EXIT, NIGHTLATCH	6100FED UB627F LFIC TEMP CORE	630	YA	
1	PERMANENT CORE	1210 GMK	626	YA	
1	SURFACE CLOSER	2701	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	409 (OR) 441CU (AS REQUIRED)	US32D	RO	
1	GASKETING	S44GR (HEAD & JAMBS)		PE	
1	THRESHOLD	TO ARCHITECT DETAIL		PE	
SET: 6.0					
DOORS: 100B					
DESCRIPTION: INTERIOR PAIR - AUTO OPERATOR, EXIT DEVICES-PASSAGE, CLOSER, OVERHEAD STOPS - RATED					
6	HINGE, FULL MORTISE, HVY WT	T4A3786 NRP	US26D	MK	
2	FIRE RATED CONC VERT ROD, PASSAGE	6160FED LBR AU628F	630	YA	
1	ELECTRIC STRIKE - CVR	310-6-X	627	FO	⚡
1	SMART PAC BRIDGE RECTIFIER	2005M3		HS	⚡
2	CONCEALED OVERHEAD	1-X36 (IN LIEU OF A DOOR STOP)	630	NO	

	HOLDER/STOP				
1	SURFACE CLOSER	5821 (REMOVE STOP)	689	YA	
1	AUTOMATIC OPENER	6000 SERIES	689	NO	⚡
2	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
2	ASTRAGAL	29324CNB		PE	
1	GASKETING	S44GR (HEAD & JAMBS)		PE	
2	SWEEP	315CN		PE	
1	THRESHOLD	TO ARCHITECT DETAIL		PE	
1	ELECTROLYNX HARNESS - FRAME	QC-C1500P		MK	⚡
1	WALL SWITCH	700		NO	⚡

NOTES: OPERATION DESCRIPTION:

DOOR IS NORMALLY CLOSED AND LATCHED. ACTIVATION OF WALL SWITCH AT EITHER SIDE TO ACTIVATE AUTOMATIC OPERATOR. UPON LOSS OF POWER DOOR TO REMAIN UNLOCKED. ALWAYS FREE EGRESS.

SET: 7.0

DOORS: 101B, 109B, 201A, 209A

DESCRIPTION: INTERIOR SINGLE - EXIT DEVICE-PASSAGE, CLOSER - RATED

3	HINGE, FULL MORTISE, HVY WT	T4A3786 NRP	US26D	MK	
1	FIRE RATED RIM EXIT, PASSAGE	6100FED UB628F	630	YA	
1	SURFACE CLOSER	5801 / P5801 (MOUNTING AS REQUIRED)	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	409 (OR) 441CU (AS REQUIRED)	US32D	RO	

1	GASKETING	S44GR (HEAD & JAMBS)		PE	
1	SWEEP	315CN		PE	
1	THRESHOLD	TO ARCHITECT DETAIL		PE	
SET: 8.0					
DOORS: 103B, 110A, 202A, 221A					
DESCRIPTION: INTERIOR SINGLE - STOREROOM LOCK, CLOSER - RATED					
3	HINGE, FULL MORTISE	TA2714 NRP	US26D	MK	
1	STOREROOM LOCK	UB 4705LN LFIC TEMP CORE	626	YA	
1	PERMANENT CORE	1210 GMK	626	YA	
1	SURFACE CLOSER	5801 / P5801 (MOUNTING AS REQUIRED)	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	409 (OR) 441CU (AS REQUIRED)	US32D	RO	
1	GASKETING	S44GR (HEAD & JAMBS)		PE	
SET: 9.0					
DOORS: GATE					
DESCRIPTION: EXTERIOR GATE SINGLE - CARD READER, ELEC STRIKE, EXIT DEVICE-NIGHTLATCH, GATE CLOSER					
1	GATE HINGE-CLOSER SET	SURECLOSE READYFIT SERIES OR TYPE AS REQUIRED		DD	⚡
1	RIM EXIT DEVICE, NIGHTLATCH - EXTERIOR	7100 121NL LFIC TEMP CORE X SPAR 05454	630	YA	
1	PERMANENT CORE	1210 GMK	626	YA	
1	DOOR STOP	463-RKW	US32D	RO	

1	CARD READER	BY SECURITY DIVISION 28			
1	CARD READER + KEYPAD / UPDATER	NTX752K-UPDTR- TS		YA	
1	BALANCE OF HARDWARE	BY GATE MFR.			
NOTES: DIV 32 FENCE SECTION HAS MOUNTING HARDWARE FOR PANIC AND STRIKE ON GATES - KEEDEX GATE BOXES. CARD READER EXIT DEVICE TRIM BY SECURITY DIVISION 28. OPERATION DESCRIPTION: DOOR IS NORMALLY CLOSED AND SECURE. AUTHORIZED ACCESS BY CARD READER UNLOCKS LEVER TRIM FOR PREDETERMINED TIME LIMIT. EGRESS FREE FOR IMMEDIATE EXIT. EXIT DEVICE LEVER TRIM REMAINS LOCKED (FAIL SECURE) IN EVENT OF POWER LOSS. KEYED CYLINDER OVERRIDE FOR EMERGENCY ACCESS. ACCENTRA CONTROLLER AND POWER SUPPLY INCLUDED IN MISCELLANEOUS HARDWARE SET AT END OF SCHEDULE.					
SET: 10.0					
DOORS: 109A, 120A					
DESCRIPTION: EXTERIOR SINGLE - CARD READER, EXIT DEVICE-NIGHTLATCH, CLOSER, OVERHEAD STOP/FLOOR STOP					
2	HINGE, FULL MORTISE, HVY WT	T4A3386 NRP	US32D	MK	
1	HINGE, FULL MORTISE, HVY WT	T4A3386 QC_	US32D	MK	⚡
1	RIM EXIT DEVICE, NIGHTLATCH	6100ED B MELR 121NL LFIC TEMP CORE	630	YA	⚡
1	PERMANENT CORE	1210 GMK	626	YA	
1	OFFSET DOOR PULL	BF158	US32D	RO	
1	CONCEALED OVERHEAD HOLDER/STOP	1-X36 (IN LIEU OF A DOOR STOP)	630	NO	

1	SURFACE CLOSER	5821 (REMOVE STOP)	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	463-RKW	US32D	RO	
1	GASKETING	290APK X 2891APK		PE	
1	SWEEP	315CN		PE	
1	THRESHOLD	25_X_AFG		PE	
1	ELECTROLYNX HARNESS - FRAME	QC-C1500P		MK	⚡
1	ELECTROLYNX HARNESS - DOOR	QC-CXXX (SIZE AS REQUIRED)		MK	⚡
1	CARD READER + KEYPAD / UPDATER	NTX752K-UPDTR-TS		YA	
1	WIRING DIAGRAM	ELEVATION AND POINT TO POINT AS SPECIFIED			

NOTES: CARD READER BY SECURITY DIVISION 28.

OPERATION DESCRIPTION:

DOOR IS NORMALLY CLOSED AND SECURE. AUTHORIZED ACCESS BY CARD READER RETRACTING EXIT DEVICE LATCH FOR PREDETERMINED TIME LIMIT. EXIT DEVICE LATCH CAN BE ELECTRICALLY HELD RETRACTED FOR OPEN ACCESS. EGRESS FREE FOR IMMEDIATE EXIT. REX SWITCH IN PUSH RAIL ALLOWS AUTHORIZED EXIT WITHOUT ALARM CONDITION. DOOR POSITION SWITCH MONITORS OPEN/CLOSED STATUS. EXIT DEVICE LATCH RELEASES (FAIL SECURE) IN EVENT OF POWER LOSS. KEYED CYLINDER OVERRIDE FOR EMERGENCY ACCESS.

ACCENTRA CONTROLLER AND POWER SUPPLY INCLUDED IN MISCELLANEOUS HARDWARE SET AT END OF SCHEDULE.

SET: 11.0

DOORS: 105A, 205

DESCRIPTION: INTERIOR SINGLE - CARD READER LOCK, CLOSER - RATED

3	HINGE, FULL MORTISE	TA2714 NRP	US26D	MK	
1	ACCESS CONTROL CYL LOCK	UB NTB623-ACC LFIC TEMP CORE	626	YA	⚡
1	PERMANENT CORE	1210 GMK	626	YA	

1	SURFACE CLOSER	5801 / P5801 (MOUNTING AS REQUIRED)	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	409 (OR) 441CU (AS REQUIRED)	US32D	RO	
1	GASKETING	S44GR (HEAD & JAMBS)		PE	

NOTES: CARD READER LOCK BY SECURITY DIVISION 28.

OPERATION DESCRIPTION:

DOOR IS NORMALLY CLOSED AND SECURE. AUTHORIZED ACCESS BY CARD READER UNLOCKS LEVER TRIM FOR PREDETERMINED TIME LIMIT. EGRESS FREE FOR IMMEDIATE EXIT. LEVER TRIM REMAINS LOCKED (FAIL SECURE) IN EVENT OF POWER LOSS. KEYED CYLINDER OVERRIDE FOR EMERGENCY ACCESS.

SET: MISC - ACCESS CONTROL

DESCRIPTION: ACCENTRA - MISC COMPONENTS

300	SOFTWARE	ACC-SUB (QTY AS REQUIRED)		YA	
1	SOFTWARE	ACC-SUB-INIT		YA	
300	CREDENTIALS	NTX600-ACCFOB- 8K (QTY AS REQUIRED)		YA	
1	BATTERY	NTX700-BB-18A12V		YA	
1	CONTROLLER BOX & POWER SUPPLY	NTX700-CTLRBOX- _D		YA	⚡
1	CONTROLLER	NTX700-CTLR (SUPPORTS 2 OPENINGS)		YA	⚡

NOTES: ** CONFIGURE THE PROPER NUMBER OF NTX700-CTLR CONTROLLERS FOR YOUR PROJECT. ONE CONTROLLER FOR EVERY TWO READERS.

**** CONFIGURE THE PROPER NUMBER OF NTX700-CTLRBOX CONTROLLER BOX & POWER SUPPLIES. 4 DOOR, 8 DOOR, 16 DOOR OR COMBINATION THEREOF.**

SET: MISC.					
DESCRIPTION: KNOX BOX AND KNOX KEY SWITCHES: KNOX COMPANY, KEY PER CLALLAM 2 FIRE-RESCUE.					
1	KNOX BOX	MODEL 3270, RECESSED			
KNOX BOX SWITCH MODEL 3502, SINGLE LOCK ON PLATE FOR FIRE ONLY, SPDT. ONE FOR EACH PEDESTRIAN GATE WITH ACCESS CONTROL AND EACH VEHICLE GATE WITH ACCESS CONTROL.					
SET: U-1.0					
DOORS: 106A, 107A, 108A, 111A, 112A, 113A, 114A, 115A, 116A, 117A, 118A, 119A, 206A, 207A, 208A, 211A, 212A, 213A, 214A, 215A, 216A, 217A, 218A, 219A					
DESCRIPTION: UNIT ENTRY					
3	HINGE, FULL MORTISE	TA2714 NRP	US26D	MK	
1	ACCESS CONTROL INTERCONNECTED LOCK	V NTC623-ACC	619	YA	
1	SURFACE CLOSER	2701	689	YA	
1	KICK PLATE	K1050 10" HIGH CSK BEV	US32D	RO	
1	DOOR STOP	525 / 528 TYPE AS REQUIRED	NP	RO	
1	GASKETING	S44GR (HEAD & JAMBS)		PE	
1	DOOR BOTTOM	2113AVUN		PE	
1	THRESHOLD	TO ARCHITECT DETAIL		PE	
1	VIEWER	627	CRM	RO	
NOTES: CARD READER LOCK BY SECURITY DIVISION 28.					
OPERATION DESCRIPTION:					
DOOR IS NORMALLY CLOSED AND SECURE. AUTHORIZED ACCESS BY CARD READER UNLOCKS LEVER TRIM FOR PREDETERMINED TIME LIMIT. EGRESS FREE FOR IMMEDIATE EXIT. LEVER TRIM REMAINS LOCKED (FAIL SECURE) IN EVENT OF POWER LOSS. KEYED CYLINDER OVERRIDE FOR EMERGENCY ACCESS.					

SET: U-2.0					
DOORS: 106E, 107B, 107D, 108B, 108D, 111C, 111D, 111F, 112B, 112D, 113D, 114C, 114D, 115B, 115D, 116B, 116D, 117B, 117D, 118B, 118D, 119C, 119D, 133B, 160C, 206C, 206E, 207B, 207D, 208B, 208D, 211C, 211D, 211F, 212B, 212D, 213B, 213D, 214C, 214D, 215B, 215D, 216B, 216D, 217B, 217D, 218B, 218D, 219C, 219D					
DESCRIPTION: UNIT BEDROOM / UNIT BATHROOM					
3	HINGES	FURNISHED WITH PRE-HUNG DOOR	US26D		
1	PRIVACY LOCK	730HFL RDT 26D 6AL RCS		KW	
1	DOOR STOP	525 / 528 TYPE AS REQUIRED	NP	RO	
SET: U-3.0					
DOORS: 106B, 106D, 107C, 108C, 111B, 112C, 113C, 115C, 116C, 117C, 118C, 206B, 206D, 207C, 208C, 211B, 212C, 213C, 215C, 216C, 217C, 218C					
DESCRIPTION: UNIT CLOSET					
3	HINGES	FURNISHED WITH PRE-HUNG DOOR	US26D		
1	PASSAGE LOCK	720HFL RDT 26D 6AL RCS		KW	
1	DOOR STOP	525 / 528 TYPE AS REQUIRED	NP	RO	
SET: U-4.0					
DOORS: 114B, 119B, 214B, 219B					
DESCRIPTION: UNIT CLOSET (BI-FOLDING)					
1	BIFOLD DOOR HDWE	HF4/100A		PE	
2	PULL	853	US32D	RO	
SET: U-5.0					
DOORS: 106F, 107E, 108E, 111E, 111G, 112E, 113E, 114E, 115E, 116E, 117E, 118E, 119E, 206F, 207E, 208E, 211E, 211G, 212E, 213E, 214E, 215E, 216E, 217E, 218E, 219E					
DESCRIPTION: UNIT CLOSET (BY-PASSING)					

1	SLIDING DOOR HDWE	HBP200A		PE	
2	FLUSH PULL	872	US26D	RO	

END OF SECTION

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SECTION 087113
AUTOMATIC DOOR OPERATORS

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. BHMA A156.4 - Door Closers and Pivots; 2024.
- B. BHMA A156.18 - Standard for Materials and Finishes; 2020.
- C. BHMA A156.19 - Power Assist and Low Energy Power Operated Swinging Doors; 2019.
- D. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- G. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- H. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2025.
- I. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions.

1.02 RELATED DOCUMENTS

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

1.03 SUMMARY

- A. Section Includes:
 - 1. Low energy automatic door operators for swinging doors.
- B. Related Sections):
 - 1. Division 01 "General Requirements".
 - 2. Division 06 Section "Rough Carpentry".
 - 3. Division 06 Section "Finish Carpentry".

4. Division 08 Section "Hollow Metal Doors and Frames".
 5. Division 08 Section "Fiberglass Doors"
 6. Division 08 Section "Door Hardware".
 7. Division 26 Section "Electrical"
 8. Division 28 Section "Multi-Family Access Control Devices".
 9. Division 28 Section "Intercom Entry Systems".
- C. Codes and Standards: Comply with the version adopted by the Authority Having Jurisdiction.
1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 2. ANSI/BHMA A156.4 - Door Controls, Door Closers.
 3. ANSI/BHMA A156.19 - Power Assist and Low-Energy Power Operated Doors.
 4. ICC (IBC) International Building Code.
 5. NFPA 70 - National Electrical Code.
 6. NFPA 80 - Fire Doors and Windows.
 7. NFPA 101 - Life Safety Code.
 8. NFPA 105 - Installation of Smoke Door Assemblies.
 9. UL/ULC and CSA C22.2 - Standards for Automatic Door Operators Used on Fire and Smoke Barrier Doors and Systems of Doors.
 10. UL 325 - Door, Drapery, Gate, Louver, and Window Operators and Systems.
 11. State Building Codes, Local Amendments.

1.04 PERFORMANCE REQUIREMENTS

- A. Automatic door operators to be used on interior or exterior doors; up to 200 pounds (91 kg) weight and maximum door width of 48" 47.99 inch.
1. Auto door operator capable of operating within temperature ranges of -22°F (-30°C) and 122°F (50°C).

1.05 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, and finishes for automatic door operators, including activation devices. Include operating characteristics, electrical characteristics, and furnished accessories.
- B. Shop Drawings: Include details and attachments to other work.
 - 1. Include locations and elevations of each unique entrance showing activation devices.
 - 2. Indicate required clearances, components, and location and size of field connections.
 - 3. Wiring Diagrams: For power, signal, and activation wiring.
- C. Qualification Data: Provide copy of manufacturer's official certification or accreditation document indicating proof of status as a qualified and authorized installer of automatic door operators and accessories.
- D. Operating and Maintenance Manuals: Provide manufacturer's operating and maintenance manual for each item comprising the automatic door operator installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturer and Installer providing the operators and installation. The final copies delivered after completion of the installation test to include "as built" modifications made during installation, checkout, and acceptance.
- E. Warranties and Maintenance: Special warranties and maintenance agreements specified in this Section.

1.06 COORDINATION

- A. Electrical Systems Coordination: Coordinate the layout and installation of scheduled automatic door operators and related activation devices, with required connections to source power junction boxes, remote power supplies, access control equipment, detection and monitoring hardware, and fire alarm system.
- B. Templates: Obtain and distribute to the parties involved, templates for doors, frames, operators, and other work specified to be factory prepared and reinforced for installing automatic door operators. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing automatic door operators to comply with indicated requirements.

- C. Door and Frame Preparation: Related Division 08 Sections (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified automatic door operators without additional in-field modifications.

1.07 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Warranty: Written warranty, executed by manufacturer, agreeing to repair or replace components of automatic door operators that fail in materials or workmanship within specified warranty period after final acceptance by Owner. Failures include, but are not limited to, the following:
 - 1. Faulty or sporadic operation of automatic door operator, including activation and safety devices.
 - 2. Deterioration of metals, metal finishes, and other materials beyond normal weathering or use.
- C. Special Warranty Period: Two years from date of Substantial Completion.
- D. Provide extended warranty from defects in material or workmanship under normal use for a period of 3 years from the date of substantial completion for units installed by a certified ASSA ABLOY Power Operator Preferred Installer in accordance with the manufacturer's written warranty certificate.

1.08 MAINTENANCE SERVICE

- A. Maintenance Service: Beginning at Substantial Completion, and running concurrent with the specified warranty period, provide continuous (6) months full maintenance by skilled employees of automatic door operator Installer. Include planned and preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door operation. Provide parts and supplies the same as those used in the manufacture and installation of original equipment.

- B. Extended Maintenance Support and Service Agreement: Submit for Owner's consideration an optional extended Service Agreement for the installed automatic door operator system. The extended Service Agreement is considered elective and is without manufacturer's requirement stipulating mandatory coverage for owner and/or vendor system support.
 - 1. A published copy of this agreement to be included with the submittal package
 - 2. Support for the installed automatic door operator system is provided through the vendor under a specified, limited 24 hour support program.
 - 3. Automatic door operators and components are to be available on a one-day turn around time frame from the vendor.

PART 2 PRODUCTS

2.01 ELECTROHYDRAULIC DOOR OPERATORS

- A. General: Provide low energy operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for compliance with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices.
 - 1. Fire-Rated Doors: Provide door operators for fire-rated door assemblies that comply with NFPA 80 for fire-rated door components and are listed and labeled by a qualified testing agency.
- B. Standard: Certified ANSI/BHMA A156.19.
- C. Performance Requirements:
 - 1. Opening Force if Power Fails: Not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
 - 2. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.
- D. Configuration: Surface mounted or in-ground as required. Door operators to control single swinging and pair of swinging doors.
- E. Operation: Power opening and spring closing operation capable of meeting ANSI A117.1 accessibility guideline. Provide time delay for door to remain open before initiating closing cycle as required by ANSI/BHMA A156.19. When not in automatic mode, door operator to function as manual door closer with fully adjustable opening and closing forces, with or without electrical power.

- F. Features: Operator units to have full feature adjustments for door opening and closing force and speed, backcheck, motor assist acceleration from 0 to 30 seconds, time delay, vestibule interface delay, obstruction recycle, and hold open time from 0 up to 30 seconds.
- G. Provide outputs and relays on board the operator to allow for coordination of exit device latch retraction, electric strikes, magnetic locks, card readers, safety and motion sensors and specified auxiliary contacts.
- H. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.
- I. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Norton Rixson (NO) - 6000 Series.

2.02 ACTIVATION DEVICES

- A. General: Provide activation devices in accordance with ANSI/BHMA A156.19 standard, for condition of exposure indicated and for long term, maintenance free operation under normal traffic load operation. Coordinate activation control with electrified hardware and access control interfaces. Activation switches are standard SPST, with optional DPDT availability.
- B. Touch Less Wall Switch: Momentary contact door control switch with movement required activation. Single or double gang box junction box mounting.
 - 1. Doppler radar sensor.
 - 2. Mounting Location: As indicated on Drawings.
 - 3. Manufacturers:
 - a. Norton Rixson (NO) – 700 Series.
- C. Bollard Switch Post: Manufacturer's standard. Surface Mounted (above ground). Prepared for indicated switch types.
 - 1. Where required, prepare bollard posts for card readers.
 - 2. Manufacturers:
 - a. Norton Rixson (NO) – 500POST Series.

2.03 ACCESSORIES

- A. Relay Logic Modules: Module containing 3 relays allowing the operator to be used with external locking hardware (exits or locks) or access controls that require dry contact inputs.
 - 1. Manufacturers:
 - a. Norton Rixson (NO) – 5900RLM Series.
- B. Signage: As required by cited ANSI/BHMA A156.19 standard for the type of operator.

2.04 FINISHES

- A. Standard: Designations used to indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware. Units will be sprayed with a combination of waterborne acrylic and polyester powder coat.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

2.05 OPENING LABELS

- A. Provide 1"W x 2"H gloss polyester label imprinted with door mark and QR-type code readable via IR and visible light scan. QR code links to a security credential protected site displaying the installed door opening information. Label constructed with a high-performance, permanent acrylic adhesive resistant to chemicals, smear and scratch, and repeated freeze and thaw cycles. Face stock of label to be white or clear coated, 2.0 mil thickness with tensile strength meeting or exceeding 18,000 psi.
 - 1. Approved Manufacturer: Openings Studio™ Smart Tags (AA).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances, door and frame preparation and reinforcements, power connections, electrical systems interfaces, and other conditions affecting performance of automatic door operators.

- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.02 INSTALLATION

- A. General: Install complete automatic door operators according to manufacturer's written instructions and ANSI/BHMA A156.19 standard, including activation devices, control wiring, remote power units if any, connection to the building's fire alarm system, and required signage.
- B. Power Connection: Reference Division 26 "Electrical" Sections for connection to electrical power distribution system.
- C. Access Control System: Coordinate connections and operation with access control system
- D. Signage: Apply signage as required by ANSI/BHMA A156.19 standard for type of door operator and direction of pedestrian travel.

3.03 FIELD QUALITY CONTROL

- A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
 - 1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.
 - 2. Submit documentation of incomplete items in the following formats:
 - a. PDF electronic file.
 - b. Electronic formatted file integrated with the Openings Studio™ door opening management software platform.

3.04 ADJUSTING

- A. Comply with requirements of ANSI/BHMA A156.19 standard. Adjust automatic door operators to function smoothly, and lubricate as recommended by manufacturer.

3.05 DEMONSTRATION

- A. Certified Installer's representative to provide eight (8) hours of training to Owner's maintenance personnel in the proper adjustment, operation, and maintenance of automatic door operators.

END OF SECTION

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SECTION 088000
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 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. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2026).
- E. ASTM C1036 - Standard Specification for Flat Glass; 2025.
- F. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- G. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- H. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- I. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- J. GANA (GM) - GANA Glazing Manual; 2022.
- K. GANA (SM) - GANA Sealant Manual; 2008.
- L. IGMATM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (Reaffirmed 2016).

- M. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- N. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.
- O. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.
- P. NGA (LGRM) - Laminated Glazing Reference Manual; 2019.

1.03 SUBMITTALS

- A. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- B. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- C. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with GANA (GM), GANA (SM), IGMA TM-3000, and NGA (LGRM) for glazing installation methods.

1.05 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Design Pressure: Calculated in accordance with ASCE 7.

2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
 3. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 4. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
1. In conjunction with weather barrier related materials described in other sections, as follows:
 - a. Water-Air Resistive Barriers: See Section 072500.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
 3. Solar Optical Properties: Comply with NFRC 300 test method.

2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
 2. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

2.03 INSULATING GLASS UNITS

- A. Insulating Glass Units: Types as indicated.
1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.

3. Spacer Color: Black.
 4. Edge Seal:
 - a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
 - b. Color: Black.
 5. Purge interpane space with dry air, hermetically sealed.
 6. Pre-Equalized Insulated Glazing Units: Provide glazing units sealed at manufacturing plant with internal pressure matching pressure of the installation location.
- B. Insulating Glass Units: Vision glass, double glazed.
1. Applications: Exterior glazing unless otherwise indicated.
 2. Space between lites filled with argon.
 3. Outboard Lite: Annealed or Tempered as scheduled, 1/8 inch thick, minimum.
 - a. Tint: Clear.
 - b. Coating: Low-E (passive type), on #2 surface.
 4. Inboard Lite: Annealed or Tempered as scheduled float glass, 1/8 inch thick, minimum.
 - a. Tint: Clear.
 5. Thermal Transmittance (U-Value), Summer - Center of Glass: R or U Value as indicated on drawings, Energy Calculations sheets.
 6. Visible Light Transmittance (VLT): , As indicated on drawings..
 7. Shading Coefficient: As indicated on drawings.
 8. Solar Heat Gain Coefficient (SHGC): As indicated on drawings.
 9. Glazing Method: Dry glazing method, gasket glazing.

2.04 GLAZING UNITS

- A. Monolithic Interior Vision Glazing:

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

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 of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch 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.
- D. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

3.02 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 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.

3.03 CLEANING

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove nonpermanent labels immediately after glazing installation is complete.
- C. Clean glass and adjacent surfaces after sealants are fully cured.
- D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

END OF SECTION

SECTION 092116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Acoustic insulation.
- C. Cementitious backing board.
- D. Gypsum wallboard.
- E. Joint treatment and accessories.
- F. Textured finish system.

1.02 REFERENCE STANDARDS

- A. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2023.
- B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- C. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).
- D. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).
- E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2023.
- F. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.
- G. 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.
- H. 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.

- I. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- J. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2018.
- K. ASTM C1288 - Standard Specification for Fiber-Cement Interior Substrate Sheets; 2023.
- L. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2024.
- M. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- N. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.
- O. GA-600 - Fire Resistance and Sound Control Design Manual; 2024.
- P. UL (FRD) - Fire Resistance Directory; Current Edition.
- Q. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. Product Data:
 - 1. Provide data on gypsum board, accessories, and joint finishing system.

1.04 QUALITY ASSURANCE

- A. Comply with the following:
 - 1. Drywall Finishing Council: Recommended Specification For Preparation of Gypsum Board Surfaces Prior to Texture.
- B. SURFACES PRIOR TO TEXTURE
 - 1. GA-214 Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels.

1.05 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.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Seismic Performance: Ceiling systems designed to withstand the effects of earthquake motions in accordance with ASCE 7 for Seismic Design Category D, E, or F and complying with the following:
 - 1. Local authorities having jurisdiction.
- C. Fire-Resistance-Rated Assemblies: Provide completed assemblies with the following characteristics:
 - 1. Fire-Resistance-Rated Partitions: UL or GA Assembly number and rating as indicated on drawings.
 - 2. Gypsum Association File Numbers: Comply with requirements of GA-600 for the particular assembly.
 - 3. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL (FRD).

2.02 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. PABCO Gypsum: www.pabco gypsum.com/#sle.
 - 6. 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, unless otherwise indicated.

2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - a. Mold resistant board is required kitchens, laundry rooms, and restroom walls and ceilings.
 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.
 - b. Ceilings: 5/8 inch.
- C. ASTM Cement-Based Board: Non-gypsum-based, cementitious board complying with ASTM C1288 for exterior sheathing over Z girts as backing for exterior cladding materials.
1. Thickness: 5/8 inch.

2.03 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness 2 inches.
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
 1. Corner Beads: Low profile, for 90 degree outside corners.
 2. Control/Expansion Joints:
 - a. Fire-Resistance Rated: 1 hour when joint system tested in accordance with UL 2079.
 - b. Type: V-shaped PVC with tear away fins.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 1. Paper Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.

2. Joint Compound: Drying type, vinyl-based, ready-mixed.
- E. Textured Finish Materials: Latex-based compound; plain.
 1. Products:
 - a. CertainTeed Corporation; Extreme Texture Coat/Acrylic Texture with M2Tech: www.certainteed.com/#sle.
 - b. Sherwin-Williams; Tuff Surface Premium Texture Finish: www.sherwin-williams.com/#sle.
- F. Resilient Channel - Double leg.
 1. Steel, 33 ksi min, 25 gauge.
 2. Size: 2-1/2 inch overall width x 1/2 inch deep, with 1-1/4 inch face.
 3. Finish: G40EQ
- G. Screws for Fastening of Gypsum Panel Products to Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- H. Screws for Fastening of Cement Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant. Size and spacing per delegated design requirements; see section 054000.
- I. Adhesive for Attachment to Metal:
 1. Products:
 - a. Franklin International, Inc; Titebond Drywall Construction Adhesive: www.titebond.com/#sle.
 - b. Liquid Nails, a brand of PPG Architectural Coatings: www.liquidnails.com/#sle.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 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. Resilient Channel: Screw fasten to studs and floor framing 16 inches on center maximum or as indicated on drawings.
- C. Acoustic Sealant: Install in accordance with manufacturer's instructions.

3.03 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. ____ Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
- D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- E. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.
- F. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108.11 and manufacturer's instructions. Provide full, continuous beads of construction adhesive. Provide screws of size and spacing per delegated design requirements,

3.04 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as follows:
 - 1. Not more than 30 feet apart on walls and ceilings over 50 feet long.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.05 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 3: Walls to receive textured wall finish.
 - 3. Level 2: In mechanical/electrical rooms, behind cabinetry, and on backing board to receive tile finish.
 - 4. 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.

3.06 TEXTURE FINISH

- A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample.
- B. Texture: Light orange peel all locations where GWB is visible in completed construction.
- C. Prior to texture application, treat entire board surface to minimize absorption differential by one of the following methods:
 - 1. Apply a thin skim coat of gypsum board joint compound to the entire surface as defined by GA-214 Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels.
 - 2. Apply a primer material recommended by the texture or paint manufacturer for this purpose. Allow to dry.

3.07 TOLERANCES

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

END OF SECTION

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SECTION 095100
ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.02 REFERENCE STANDARDS

- A. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
- B. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

1.03 SUBMITTALS

- A. Product Data: Provide data on suspension system components and acoustical units.
- B. Evaluation Service Reports: Show compliance with specified requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
 - 1. Armstrong World Industries, Inc; Basis of Design: Cirrus High NRC Item No. 563: www.armstrongceilings.com/#sle.
 - 2. Certainteed Architectural: www.certainteed.com/ceilings-and-walls/#sle.
 - 3. USG Corporation: www.usg.com/ceilings/#sle.
- B. Suspension Systems:
 - 1. Same as for acoustical units.

2.02 ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Panels: Painted mineral fiber, with the following characteristics:
 - 1. Classification: ASTM E1264 Type III.

- a. Form: 1.2.
2. Panel Edge: Square.
3. Color: White.
4. Suspension System: Exposed grid.

2.03 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, stabilizer bars, clips, and splices as required.
 1. Materials:
- B. Exposed Suspension System: Hot-dip galvanized steel grid and cap.
 1. Application(s): Seismic.
 2. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
 3. Profile: Tee; 15/16 inch face width.
 4. Finish: Baked enamel.
 5. Color: White.

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 galvanized steel wire.
- C. Perimeter Moldings: Same metal and finish as grid.
 1. Size: As required for installation conditions and specified Seismic Design Category.

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. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
- D. Seismic Suspension System, Seismic Design Categories D, E, F: Hang suspension system with grid ends attached to the perimeter molding on two adjacent walls; on opposite walls, maintain a 3/4 inch clearance between grid ends and wall.
- E. 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.
- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.

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. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.

3.03 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.04 EXTRA STOCK

- A. Provide (1) carton, (24) tiles, in sealed, un-opened carton as extra stock. Additional surplus material to be turned over to Owner or removed from site as directed by Owner..

END OF SECTION

SECTION 096433
LAMINATED WOOD FLOORING

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- B. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2025a.
- C. ASTM F970 - Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading; 2022.

1.02 SUBMITTALS

- A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, wood species and colors available; and installation instructions.
- B. Shop Drawings: Indicate floor joint pattern and termination details.
- C. Samples: Submit two samples 3 by 8 inch in size illustrating floor finish, color, and sheen.
- D. Up to three colors/finishes may be selected. At a minimum, hallways and residential units will be different color/finish.
- E. Installer's Qualification Statement.

1.03 PERFORMANCE REQUIREMENTS

- A. All flooring shall be compliant with the California Department of Public Health Standard (CDPH) Method V1.1 (2010), using CA Section 01350, for school or residential exposure scenarios or v1.2 (2017).

1.04 FIELD CONDITIONS

- A. Do not install wood flooring until wet construction work is complete and ambient air at installation space has moisture content stabilized at maximum moisture content of 40 percent.

- B. Maintain minimum room temperature of 65 degrees F and relative humidity in accordance with adhesive manufacturer's instructions for a minimum period of 48 hours prior to delivery of materials to installation space, during installation, and after installation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Laminated Wood Flooring:
 - 1. Basis of Design: Evoke LVP
 - 2. Construction: Tongue and groove, self-locking, 5-ply laminated wood planks.
 - 3. Installation Method: Glued down.
 - 4. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
 - 5. Surface Burning Characteristics: Flame Spread Index of 200, maximum; Smoke Developed Index of 450, maximum; when tested in accordance with ASTM E84.
 - 6. Static Load Resistance: 250 psi minimum, when tested in accordance with ASTM F970.
 - 7. Species: species appearance TBD.
 - 8. Color: As schedule on drawings.
 - 9. Thickness: 3/8 inch.
 - 10. Face Width: 3 inch.
 - 11. Edge Profile: Beveled.
 - 12. Length: Random, minimum of 9 inches.
 - 13. Treatment: Acrylic impregnated.
 - 14. Finish: Smooth, factory applied, UV cured urethane.

2.02 ACCESSORIES

- A. Adhesives: Water-resistant; types recommended by flooring manufacturer for project substrates.
- B. Transition Strip: Same species and finish as flooring material; profiles indicated.

PART 3 EXECUTION

3.01 INSTALLATION

A. Wood Flooring:

1. Install flooring in accordance with manufacturer's and NWFA installation instructions.
2. Within two (2) hours of adhesive applied flooring installation, roll work thoroughly in both directions with 100 lb roller.

3.02 EXTRA STOCK

- A. Provide (2) cartons, in sealed, un-opened carton as extra stock. Additional surplus material to be turned over to Owner or removed from site as directed by Owner..

END OF SECTION

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**SECTION 096500
RESILIENT FLOORING**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- B. Shop Drawings: Indicate seaming plans.
- C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- D. Verification Samples: Submit two samples, 6 by 6 inch in size illustrating color and pattern for each resilient flooring product specified.
- E. Installer's Qualification Statement.

1.02 PERFORMANCE REQUIREMENTS

- A. All flooring shall be compliant with the California Department of Public Health Standard (CDPH) Method V1.1 (2010), using CA Section 01350, for school or residential exposure scenarios or v1.2 (2017).

1.03 QUALITY ASSURANCE

- A. Installer Certification: Installer shall be certified by flooring manufacturer to field form and install heat welded seams and cove base.
- B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience including integral cove base.

PART 2 PRODUCTS

2.01 SHEET FLOORING

- A. Vinyl Sheet Flooring: Homogeneous without backing, with color and pattern throughout full thickness.
 - 1. Manufacturers: As scheduled on drawings.
 - 2. Minimum Requirements: Comply with ASTM F1913.

3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
4. Thickness: 0.080 inch nominal.
5. Sheet Width: 72 inch minimum.
6. Static Load Resistance: 250 psi minimum, when tested as specified in ASTM F970.
7. Integral coved base with cap strip.
8. Pattern: As scheduled on drawings.
9. Color: As indicated on drawings.
10. Finish: Smooth.
11. Basis of Design Manufacturer: As scheduled on drawings.

2.02 STAIR COVERING

- A. Stair Treads: Rubber; full width and depth of stair tread in one piece; tapered thickness.
 1. Minimum Requirements: Comply with ASTM F2169, Type TP, rubber, thermoset.
 2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
 3. Nominal Thickness: 0.1875 inch.
 4. Nosing: Round.
 5. Striping: 2 inch wide contrasting color abrasive strips.
 6. Texture: Smooth.
 7. Manufacturer and Color: As scheduled on drawings.
- B. Stair Risers: Full height and width of tread in one piece, matching treads in material and color.
 1. Thickness: 0.080 inch.

2.03 ACCESSORIES

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

- B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.
- C. Moldings, Transition and Edge Strips: Rubber and Metal.
 - 1. Transition Strips: As needed to match flooring thicknesses. Color to match sheet flooring. As indicated on drawings.
 - 2. Cove Base Cap: Basis of design Johnsonite SCC-XX-D for 0.080 material, or as needed to match flooring thickness. Color to match sheet flooring.
- D. Filler for Coved Base: Plastic.
- E. Sealer and Wax: Types recommended by flooring manufacturer.
- F. Cove Strip: 1-inch radius provided or approved by resilient sheet manufacturer.
- G. Heat-Welding Bead: Manufacturer's solid-strand product for heat welding seams. Color to match flooring.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive integral cove base.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

- A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI (RWP).
- B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- C. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

- D. Prohibit traffic until filler is fully cured.

3.03 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Scribe flooring to walls, cabinets, and other appurtenances to produce tight joints.

3.04 INSTALLATION - SHEET FLOORING

- A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns at seams.
- B. Provide heat welded seams and cove base interior corners all locations.
- C. Cove Base: Install where indicated on drawings, using coved base filler as backing at floor to wall junction. Extend sheet flooring vertically to height indicated, with cove base cap.
- D. Transition Strips: Provide where sheet flooring transitions to other flooring materials.

3.05 INSTALLATION - STAIR COVERINGS

- A. Adhere over entire surface. Fit accurately and securely.

3.06 CLEANING AND SEALING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean and seal in accordance with manufacturer's written instructions.
- C. Provide manufacturer's recommended sealer. Provide minimum number of coats as recommended by flooring manufacturer for heavy-duty use.

3.07 PROTECTION

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

END OF SECTION

SECTION 099113
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.
- 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. Glass.
 - 8. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

- A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.
- B. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

1.03 SUBMITTALS

- A. 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.
- B. Samples: Submit two paper chip samples, 4x4 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Paints:
 - 1. Base Manufacturer: Glidden.
 - 2. Acceptable Manufacturers:
 - a. Behr Paint Company
 - b. Benjamin Moore
 - c. Cloverdale Paint
 - d. Pittsburgh Paints
 - e. Rodda Paint Company
 - f. Sherwin Williams Company

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless required 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. 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. Colors: As indicated in Color Schedule.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including primed wood and primed metal.
1. Two top coats and one coat primer.
 2. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
 3. Top Coat Sheen:
 - a. Velvet: MPI gloss level 2; use this sheen at all locations.

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
1. Alkali-Resistant Water-Based Primer; MPI #3.
 2. Water Based Primer for Galvanized Metal; MPI #134.
 3. Stain Blocking Primer; MPI #136.

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. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- 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. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION

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SECTION 099123
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.
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Mechanical and Electrical:
 - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. Paint interior surfaces of air ducts and convectors and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
 - c.
- 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. Concealed pipes, ducts, and conduits.
9. Pipes, ducts, conduit, electrical, brackets, equipment, or supports within enclosed mechanical or electrical rooms.

1.02 REFERENCE STANDARDS

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

1.03 SUBMITTALS

- A. See Section 013000 - 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.
- C. Samples: Submit two paper chip samples, 4x4 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Performance Requirements: Coatings shall comply with one of the following.
 1. All products must have been tested and found compliant with the California Department of Public Health Standard (CDPH) Method V1.1 (2010), using CA Section 01350, for school or residential exposure scenarios. Compliance with v1.2 (2017) also acceptable.

2. Certification by UL GreenGuard Gold, or SCS Indoor Advantage Gold are evidence of compliance; credible laboratory test.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer to the greatest extent possible.
- B. Paints:
 1. Base Manufacturer: Glidden.
 2. Acceptable Manufacturers:
 - a. Behr Paint Company
 - b. Benjamin Moore
 - c. Cloverdale Paint
 - d. Pittsburgh Paints
 - e. Rodda Paint Company
 - f. Sherwin williams Company

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. Supply each paint material in quantity required to complete entire project's work from a single production run.
 4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Colors: As indicated on drawings.

1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted.

2.03 PAINT SYSTEMS - INTERIOR

A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board and wood except restrooms and laundry rooms.

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.
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 walls.

B. Medium Duty Door/Frames/Trim: For surfaces subject to frequent contact by occupants, including metals:

1. Two top coats and one coat primer.
2. Top Coat(s): Interior Alkyd, Water Based; MPI #157, 167, 168, or 169.
3. Top Coat Sheen:
 - a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.

C. Epoxy - All Restrooms and Laundry Rooms

1. Water-borne single component pre-catalyzed acrylic epoxy with mildew resistant biocide and mildewcide additives.
2. Two top coats and one coat primer.
3. Top Coat(s): Epoxy meeting; MPI 139 or 151.
4. Top Coat Sheen - Eggshell: MPI gloss level 3 all locations.

2.04 PRIMERS

A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.

1. Alkali Resistant Water Based Primer; MPI #3.
2. Interior Institutional Low Odor/VOC Primer Sealer; MPI #149.
 - a. Provide PVA Primer all exterior walls and roof/ceilings.
3. Primer for Epoxy Paint: As specifically recommended by epoxy top coat manufacturer.

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. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 1. Gypsum Wallboard: 12 percent.
 2. Plaster and Stucco: 12 percent.
 3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
 4. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Concrete:
- F. Masonry:
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

- H. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high-alkali surfaces.
- I. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
- J. Galvanized Surfaces:
- K. 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.
- L. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. 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. Sand wood and metal surfaces lightly between coats to achieve required finish.
- 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.

END OF SECTION

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SECTION 099300
STAINING AND TRANSPARENT FINISHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Field application of stains.
- B. Field application of transparent finishes.

1.02 REFERENCE STANDARDS

- A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.
- B. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

1.03 SUBMITTALS

- A. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and catalog number, and general product category.
 - 2. Manufacturer's installation instructions.
- B. Samples: Two samples on actual wood substrate to be finished, 4 by 8 inch in size, indicating selected colors and sheens for each system, with specified coats cascaded.

1.04 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 stain or transparent finish, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Stain and Transparent Finish Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.05 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by manufacturer of stains and transparent finishes.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

PART 2 PRODUCTS

2.01 STAINS AND TRANSPARENT FINISHES - GENERAL

- A. Finishes:
 - 1. Provide finishes 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 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. Supply each finish material in quantity required to complete entire project's work from a single production run.
 - 4. Do not reduce, thin, or dilute finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

2.02 EXTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS

- A. Basis of Design Manufacturer/System: Sikkens Exterior Coatings by AkzoNobel.
- B. Finish on Wood:
 - 1. 1-coat sanding sealer/primer Cetrol 1.
 - 2. 1-coat Cetrol stain
 - 3. 1-mid-coat CETOL 23 Plus
 - 4. 2-topcoats CETROL 23 Plus
 - 5. Stain: Exterior semi-transparent stain for wood, water based.
 - 6. Mid-coat and Sealer: Exterior water based, clear.

7. Top Coat Sheen:

- a. Satin: MPI gloss level 4; use this sheen at all locations.

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 effect proper application.
- C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 1. Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Apply sanding sealer/primer and apply stain within the time period recommended by sealer/primer manufacturer.
- 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. Sand wood surfaces lightly between coats to achieve required finish.
- F. Reinstall items removed prior to finishing.

END OF SECTION

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**SECTION 101200
DISPLAY CASES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface-mounted display cases.

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

1.03 SUBMITTALS

- A. Product Data: Submit complete printed data and installation details indicating products to be provided as specified.
- B. Provide chart of manufactures standard tackboard fabrics.

PART 2 PRODUCTS

2.01 DISPLAY CASES

- A. Surface-Mounted Display Case: Factory-fabricated aluminum-framed display case with adjustable glass shelves, finished interior.
 - 1. Width: 4 feet.
 - 2. Height: 24 inches.
 - 3. Depth: 4 inches.
 - 4. Components:
 - a. Glazed Doors: Sliding,
 - 1) Number of Doors: One pair.
 - b. Back Panel: Tackable.

2.02 COMPONENTS

- A. Wood Case Construction: 3/4 inch factory finished plywood or MDF.
- B. Glazed Sliding Doors:

1. 3/16 inch clear tempered glass with plastic finger pulls.
 2. Door track: Extruded aluminum glass shoe with bottom rollers and top plastic guide.
 3. Lock: Glass door cylinder lock.
- C. Tackable Back Panel: Fabric laminated to cork on hardboard.
1. Cork Thickness: 1/8 inch.
 2. Fabric: Vinyl fabric; minimum fabric weight: 13 oz/sq yd.
 3. Color, Texture, Weave, and Pattern: As selected from manufacturer's full range.
 4. Surface Burning Characteristics: Flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.02 DISPLAY CASE SCHEDULE

- A. Quantity: One, first floor near main entry, where indicated on drawings.

END OF SECTION

SECTION 101419
DIMENSIONAL LETTER SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Dimensional letter signage.
- B. Monument Sign with Concrete Foundation - See Allowances.
- C. Illumination system.

1.02 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL 879 - Electric Sign Components; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's product literature for each type of dimensional letter sign, indicating style, font, colors, locations, and overall dimensions of each sign.
- B. Shop Drawings:
 - 1. Include dimensions, locations, elevations, materials, text and graphic layout, and attachment details.
 - 2. Show locations of electrical service connections.
 - 3. Include diagrams for power, signal, and control wiring.
- C. Selection Samples: Where materials, colors, and finishes are not specified, submit two sets of selection charts or chips.
- D. Manufacturer's Installation Instructions: Include installation templates and attachment devices.

PART 2 PRODUCTS

2.01 DIMENSIONAL LETTERS

- A. Applications: Building mounted individual letters/numbers and Monument Sign with logos, names, PHA phone number, address numbers.
 - 1. Use individual plastic letters and numbers, and custom logo.
 - 2. Mounting Location: Exterior on building and monument sign as indicated on drawings.
- B. Plastic Letters and numbers:
 - 1. Material: Injection molded plastic. UV resistant for exterior exposure.
 - 2. Thickness: Manufacturer's standard for letter size.
 - 3. Letter Height: As indicated on drawings.
 - 4. Text and Typeface:
 - a. Character Font: Helvetica, Arial, or other sans serif font.
 - 5. Finish: Semi-gloss.
 - 6. Color: As selected.
 - 7. Mounting: Concealed screws or studs. For halo-lit letters, provide studs of sufficient length for letter illumination.
 - 8. Illumination System: Halo-lit reverse channel letters.
- C. Logo: Custom panel with color logo. Electronic file for logo provided by owner.
 - 1. Provide products that are listed and labeled as complying with UL 879, where applicable.
 - 2. Power: 120 V, 60 Hz, 1 phase, 15 A.
- D. Channel Letters: Channel letters and numbers where indicated to be rear-illuminated.
 - 1. Channel letters to be plastic letters and numbers mounted on channel of sufficient depth to conceal illumination system.

2.02 ACCESSORIES

- A. Concealed Screws: Noncorroding metal; stainless steel or studs..
- B. Halo-lit reverse channel letters to be stud mounted, depth to show halo-lit lighting on building face.
- C. Lighting: LED string light fixtures to continuously backlight individual letters on buidling, integral to individual letters, with local disconnect switch and one point of connection per set of letters. 110VAC/Maximum 20 amp circuit.
- D. Electrical Components and Devices: Listed and labeled as defined in NFPA 70 by a qualified testing agency.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install with horizontal edges level.
- C. Monument Sign; Provide concrete foundation with anchor bolts as recommended by manufacturer to meet wind and seismic loads indicated on structural drawings.

END OF SECTION

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SECTION 101423 PANEL SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Panel signage.

1.02 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's product literature for each type of panel sign, indicating styles, font, foreground and background colors, locations, and overall dimensions of each sign.
- B. Shop Drawings:
 - 1. Include dimensions, locations, elevations, materials, text and graphic layout, attachment details, and schedules.
- C. Selection Samples: Where colors, materials, and finishes are not specified, submit two sets of color selection charts or chips.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Accessibility Requirements: Comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most restrictive requirements.

2.02 PANEL SIGNAGE

- A. Panel Signage:
 - 1. Application: Room and door signs.
 - 2. Description: Flat signs with applied character panel media, tactile characters and braille.

3. Sign Size: As required by text
4. Total Thickness: 1/8 inch.
5. Sign Edges: Squared.
6. Color and Font, unless otherwise indicated:
 - a. Character Font: Helvetica, Arial, or other sans serif font.
 - b. Character Case: Upper and lower case (title case).
 - c. Background Color: As selected.
 - d. Character Color: Contrasting color.
7. Material: Acrylic plastic base with applied plastic letters and braille.
8. Tactile Letters: Raised 1/32 inch minimum.
9. Braille: Grade II, ADA-compliant.

2.03 SIGNAGE APPLICATIONS

- A. Room and Door Signs:
 1. Residential Units: Three digit room letters/numbers to be determined later, not the numbers indicated on drawings.
 2. Service Rooms: Identify with room names and numbers to be determined later, not those indicated on drawings: Laundry, Janitorial, Mechanical, Electrical, Plumbing, Stairs, and Storage. Janitorial, Mechanical and Electrical room signs to include "Staff Only."
 3. Tactile Exit signs reading "Exit" in raised letters and braille at all doors leading to stairwells and all doors opening to the exterior.
 4. Fire Alarm: Provide sign on all doors of room with main FACP reading "FIRE ALARM PANEL" in 1-1/2 inch high red UV resistant letters; no braille.
 5. Fire Sprinkler Room: Provide sign on all doors of room with main fire sprinkler riser reading "FIRE SPRINKLER RISER" in 1-1/2 inch high red UV resistant letters; no braille.

2.04 ACCESSORIES

- A. Tape Adhesive: Double-sided tape, permanent adhesive.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions, ICC A117.1, and IBC Chapter 11 with Washington State Amendments..
- B. Install with horizontal edges level.
- C. Locate panel signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1.
- D. Protect from damage until mm-dd-yyyy; repair or replace damaged items.

END OF SECTION

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SECTION 102800
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2022.
- B. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- C. ASTM B86 - Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings; 2023.
- D. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017 (Reapproved 2022).
- E. ASTM C1036 - Standard Specification for Flat Glass; 2025.
- F. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2024.
- G. ASTM D4802 - Standard Specification for Poly(Methyl Methacrylate) Acrylic Plastic Sheet; 2016.

1.02 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide products of each category type by single manufacturer as scheduled on drawings.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Stainless Steel Sheet: ASTM A666/A666M, Type 304.

- C. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
- D. Zinc Alloy: Die cast, ASTM B86.
- E. Acrylic Plastic Sheet: ASTM D4802.
- F. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, SC 2, brushed finish, unless otherwise noted.
- C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Grab Bars: Stainless steel, smooth surface.
 - 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force, minimum.
 - b. Dimensions: 1-1/4 inch outside diameter, minimum 0.05 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Finish: Satin.
 - d. Length and Configuration: As indicated on drawings.

2.05 RESIDENTIAL TOILET, SHOWER, AND BATH ACCESSORIES

- A. Manufacturers, model numbers, and finishes as scheduled on drawings.

2.06 UNDER-LAVATORY PIPE AND SUPPLY COVERS

- A. Specified in 224000 - Plumbing Fixtures.

2.07 UTILITY ROOM ACCESSORIES

- A. Combination Utility Shelf/Mop and Broom Holder: 0.05 inch thick stainless steel, Type 304, with 1/2 inch returned edges, 0.06 inch steel wall brackets.

1. Drying rod: Stainless steel, 1/4 inch diameter.
2. Hooks: Two, 0.06 inch stainless steel rag hooks at shelf front.
3. Mop/broom holders: Three spring-loaded rubber cam holders at shelf front.
4. Length: Manufacturer's standard length for number of holders/hooks.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

END OF SECTION

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SECTION 104400
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. FM (AG) - FM Approval Guide; Current Edition.
- B. NFPA 10 - Standard for Portable Fire Extinguishers; 2022.
- C. UL (DIR) - Online Certifications Directory; Current Edition.

1.02 SUBMITTALS

- A. Product Data: Provide extinguisher operational features.
- B. Shop Drawings: Indicate cabinet physical dimensions.

PART 2 PRODUCTS

2.01 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
 - 1. Provide extinguishers labeled by UL (DIR) or FM (AG) for purpose specified and as indicated.
- B. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
 - 1. Class: A:B:C type.
 - 2. Size: 5 pound: 2A-10B:C.
 - 3. Finish: Baked polyester powder coat, red color.

2.02 FIRE EXTINGUISHER CABINETS

- A. Fire Rated Cabinet Construction: 1/2 hour rated.
 - 1. Steel; outer and inner boxes.
- B. Cabinet Configuration: Semi-recessed type.
 - 1. Trim: Flat square edge.

- C. Door: 0.036 inch metal thickness, reinforced for flatness and rigidity with lock and breakable window access. Hinge doors for 180 degree opening with two butt hinges.
- D. Door Glazing: Acrylic plastic, clear, 1/8 inch thick, flat shape and set in resilient channel glazing gasket.
- E. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.
- F. Finish of Cabinet Exterior Trim and Door: Red enamel.
- G. Finish of Cabinet Interior: White colored enamel.

2.03 ACCESSORIES

- A. Extinguisher Brackets: Formed steel, chrome-plated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install within ICC A117.1 reach range or height as indicated on drawings..
- C. Place extinguishers in cabinets.
- D. Provide minimum (3) per floor to meet IFC 75 foot travel distance.

END OF SECTION

**SECTION 105500
POSTAL SPECIALTIES**

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ICC A117.1 Accessible and Usable Buildings and Facilities, 2017.
- B. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- C. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

1.02 SUBMITTALS

- A. Product Data: Provide manufacturer's specifications and descriptive literature, installation instructions, maintenance information, and current USPS approval documentation.

PART 2 PRODUCTS

2.01 CENTRAL MAIL DELIVERY BOXES

- A. Basis of Design: Vital cluster box units by National Mailboxes, division of NMHP Inc.
- B. Central Mail Delivery Boxes: Provide products approved for United States Postal Service (USPS) delivery cluster box unit "F."
 - 1. Materials: Aluminum with stainless steel hardware.
 - 2. Finish: Powder coat in color selected by Architect from manufacturer's standard colors.
- C. Cluster Box Units (CBU): Pedestal-mounted, mail receptacle with weather-resistant cabinet for outdoor installation; front-loading, double-column design.
 - 1. Unit A: 24 customer compartments (3 inch high), 1 outgoing mail receptacle, and 1 parcel compartment.
 - 2. Accessibility: Provide minimum of two customer compartments and one parcel compartment within ICC ANSI A117.1 accessibility reach ranges.

2.02 COMPONENTS

- A. Locking - Front Loading Master Door: Three-point latching mechanism with USPS master lock furnished and installed by postmaster.

- B. Locking - Customer Compartment Doors: USPS approved cam lock, 3 keys each lock.
- C. Locking - Parcel Compartment Doors: Double-lock arrangement with USPS approved cam lock for customer access, and USPS master lock furnished and installed by postmaster.
- D. Pedestals: Standard aluminum pedestal with rubber mounting pad designed to meet USPS and height requirements of ADA Standards.
- E. Identification - Customer and Parcel Compartments: Sequential numerical or alphabetic characters, top to bottom, left to right; factory-installed.
 - 1. Silver adhesive decals, 3/4 inch high black characters centered on 1-1/2 inch high by 1-3/4 inch long decal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install postal specialties in accordance with approved shop drawings, manufacturer's instructions, and USPS requirements.
- B. Adjust and lubricate door hardware to operate properly.

END OF SECTION

SECTION 105723
CLOSET AND UTILITY SHELVING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Laminated wood storage systems.

1.02 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, with installation instructions.
- C. Shop Drawings: Provide drawings prepared specifically for this project; show dimensions of shelving or storage system and attachment to substrates.

PART 2 PRODUCTS

2.01 LAMINATED WOOD STORAGE SYSTEMS

- A. Applications:
 - 1. Closet Storage System: Wall bracket-supported thermally fused laminate clad shelving with attached components and accessories, as indicated on drawings.
 - a. Storage System Nominal Dimensions: Unless otherwise indicated, provide shelves and hanging areas of widths and heights indicated on drawings.
 - b. System Depth: ____ inches, Varies, as indicated on drawings.
- B. Laminated Storage Components:
 - 1. Particleboard with thermal-fused melamine surfaces.
 - 2. Edge Finish: Hot-melt PVC edge banding, matching color.
 - 3. Substrate Thickness: 3/4 inch, nominal.
 - 4. Color: White.
- C. Cabinet Hardware: As selected from manufacturer's standard types, styles and finishes.
 - 1. Hanging Rod: Tubular steel, 1 inch diameter, with end caps on open ends. Finish: Chrome. Wall Thickness: 20 gauge, 0.035 inch.

- D. Mounting Hardware for Laminated Wood Storage System: Provide manufacturer's standard mounting rail, mounting fasteners, shelf hardware, hanging rod assembly, and other accessories for a complete installation of the storage system.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install laminated wood storage system in accordance with drawings. Position units level, plumb, and at proper location relative to adjoining units and related work.

END OF SECTION

**SECTION 113013
RESIDENTIAL APPLIANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Kitchen appliances.

1.02 REFERENCE STANDARDS

- A. UL (DIR) - Online Certifications Directory; Current Edition.

1.03 SUBMITTALS

1.04 QUALITY ASSURANCE

- A. Electric Appliances: Listed and labeled by UL (DIR) and complying with NEMA Standards (National Electrical Manufacturers Association).

PART 2 PRODUCTS

2.01 KITCHEN APPLIANCES

- A. Provide Equipment Energy Star Rated.
- B. Models and Features: See equipment schedule on drawings.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Anchor built-in equipment in place.

END OF SECTION

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SECTION 122113
HORIZONTAL LOUVER BLINDS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Horizontal slat louver blinds.
- B. Operating hardware.

1.02 SUBMITTALS

- A. Product Data: Provide data indicating physical and dimensional characteristics.
- B. Samples: Submit color chart showing manufacturer's full range of standard colors/finishes for initial selection. Submit two samples, 4 inch long of up to three selected colors illustrating selected slat materials and finish. cord

PART 2 PRODUCTS

2.01 BLINDS WITHOUT SIDE GUIDES

- A. Description: Horizontal slat louvers hung from full-width headrail with full-width bottom rail.
- B. Manual Operation: Control of raising and lowering by cordless push-up/pull down; blade angle adjustable by control wand.
- C. Plastic Slats: PVC, Class A Fire Rated, square slat corners.
 - 1. Width: one inch.
 - 2. Color: As selected by Architect.
- D. Slat Support: Woven polypropylene cord, ladder configuration.
- E. Head Rail: Pre-finished, formed plastic box, with end caps; internally fitted with hardware, pulleys, and bearings for operation; same depth as width of slats.
- F. Headrail Attachment: Wall brackets.

2.02 FABRICATION

- A. Determine sizes by field measurement.
- B. Fabricate blinds to fit within openings with uniform edge clearance of 1/2 inch.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install blinds in accordance with manufacturer's instructions.
- B. Secure in place with flush countersunk fasteners.

3.02 SCHEDULE

- A. All windows of all residential units.
- B. All windows of laundry rooms.

END OF SECTION

SECTION 123200
MANUFACTURED WOOD CASEWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured standard and custom casework, with cabinet hardware.

1.02 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- C. BHMA A156.9 - Cabinet Hardware; 2020.
- D. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2024.
- E. PS 1 - Structural Plywood; 2023.

1.03 SUBMITTALS

- A. Product Data: Component dimensions, configurations, construction details, joint details, attachments.
- B. Shop Drawings: Indicate casework types, sizes, and locations, using large scale plans, elevations, and cross sections. Include rough-in and anchors and reinforcements, placement dimensions and tolerances, clearances required, and keying information.
- C. Samples for Finish Selection: Fully finished, for color selection. Minimum sample size: 2 inches by 3 inches.
 - 1. Wood samples for color and species selection.
- D. Maintenance Data: Manufacturer's recommendations for care and cleaning.
- E. Finish touch-up kit for each type and color of materials provided.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of experience.

- B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of ____ experience and approved by manufacturer.

PART 2 PRODUCTS

2.01 CASEWORK, GENERAL

- A. Quality Standard: AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Wood Veneer Faced Cabinets: Custom Grade.

2.02 FABRICATION

- A. Assembly: Shop assemble casework items for delivery to site in units easily handled and to permit passage through building openings.
- B. Construction: As required for selected grade.
- C. Seismic Performance: Casework, including attachments to other work, able to withstand the effects of earthquake motions determined according to ASCE/SEI 7.
 - 1. Component Importance Factor: 1.0.
- D. Fittings and Fixture Locations: Cut and drill components for fittings and fixtures.
- E. Hardware Application: Factory-machine casework members for hardware that is not surface applied.
- F. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- G. Scribes and Fillers: Panels of matching construction and finish, for locations where cabinets do not fit tight to adjacent construction.
- H. Matching Wood Grain: Comply with requirements of quality standard for specified grade.

2.03 WOOD-VENEER-FACED CASEWORK

- A. Wood-Veneer-Faced Casework: Solid wood and wood panel construction; each unit self-contained and not dependent on adjacent units or building structure for rigidity; in sizes necessary to avoid field cutting except for scribes and filler panels. Include adjustable levelers for base cabinets.
 - 1. Style: Reveal overlay. Ease doors and drawer fronts slightly at edges.

2. Cabinet Nominal Dimensions: Unless otherwise indicated, provide cabinets of widths and heights indicated on drawings, and with following front-to-back dimensions:
 - a. Base Cabinets: 24 inches.
 - b. Tall Cabinets: 24 inches.
 - c. Wall Cabinets: 13 inches.
3. Finishes:
 - a. Exposed Exterior Surfaces: HPVA HP-1 Grade A, Birch, plain sliced, random-matched.
 - b. Exposed Interior Surfaces: HPVA HP-1 Grade A, Birch, plain sliced, random-matched.
 - c. Exposed Interior Surfaces: Thermally fused laminate.
 - 1) Color: White.
 - d. Semi-Exposed Surfaces: HPVA HP-1 Grade B, Birch, plain sliced, random-matched.
 - e. Concealed Surfaces: Manufacturer's option.
 - f. Factory-finish all exposed and semi-exposed surfaces with the same finish.
 - 1) Preparation: Wood sanded smooth, free from dust and mill marks.
 - 2) Stain: Single application of clean, manufacturer-recommended stain of selected color; tinted coating not acceptable.
 - 3) Coating: Clear, superior-quality, chemical-resistant acyclic urethane; applied in accordance with manufacturer instructions, force-dried, sanded and wiped clean.
 - 4) Coats: Multiple coats as required to achieve minimum 1.5 mil dry film thickness.
 - 5) Appearance: Clear satin gloss; not cloudy or muddy.

2.04 COUNTERTOPS

- A. Countertops: See Section 123600.

2.05 CABINET HARDWARE

- A. Comply with BHMA A156.9 requirements.
 - 1. Acceptable base materials for plated finishes include brass, bronze, and steel.
 - 2. Satin brushed chrome/nickel plated finish.
- B. Shelves in Cabinets:
 - 1. Shelf Standards and Rests: Two rows of pre-drilled holes each end with adjustable metal shelf brackets, brackets to have holes to accept screws..
- C. Swinging Doors: Hinges, pulls, and catches.
 - 1. Hinges: Concealed, number as required by referenced standards for width, height, and weight of door.
 - a. Concealed Hinges: Installed in cabinet edge, and on door back, satin chromium plated over nickel on base material.
 - 1) European-Style Hinges for Overlay Doors: 120 degree opening angle.
 - 2. Pulls: Wire pulls, 4 inches wide or as required to meet ADA.
 - 3. Catches: Magnetic.
- D. Drawers: Pulls to meet ADA.
- E. Drawer Slides: Ball-bearing full extension slides. Drawers up to 4 inches high medium duty, 70-120 lb class. Drawers greater than 4 inches high, heavy duty 125-200 lb class.
 - 1. Pulls: Brushed nickel wire pulls, 4 inches wide.
 - 2. Slides: Steel, full extension arms, ball bearings; self-closing; capacity as recommended by manufacturer for drawer height and width.

2.06 MATERIALS

- A. Wood-Based Materials:
 - 1. Solid Wood: Air-dried to 4.5 percent moisture content, then tempered to 6 percent moisture content before use.
- B. Semi-Exposed Solid Wood: Dry, sound, plain sawn, no appearance defects, any species similar in color and grain to exposed portions.

- C. Hardwood Plywood: Veneer core; HPVA HP-1 Grade as indicated; same species as exposed solid wood, clear, compatible grain and color, no defects. Band exposed edges with solid wood of same species as veneer.
- D. Concealed Solid Wood or Plywood: Any species and without defects affecting strength or utility.
- E. Hardwood Edgebanding: Use solid hardwood edgebanding matching species, color, grain, and grade for exposed portions of cabinetry.
- F. Toe Kicks: Plywood for toekicks: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick. Provide for all toekicks.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Verification of Environmental Conditions:
 - 1. Do not deliver casework until the following conditions have been met:
 - a. Building has been enclosed (windows and doors sealed and weather-tight).
 - b. An operational HVAC system that maintains temperature and humidity at occupancy levels has been put in place.
 - c. Ceiling, overhead ductwork, piping, and lighting have been installed.
 - d. Installation areas do not require further "wet work" construction.
- B. Finishes: Confirm floor and wall finishes scheduled to be installed prior to casework is complete, finished, and extended under/behind casework where indicated.
- C. Verify adequacy of support framing and anchors.
- D. Verify that service connections are correctly located and of proper characteristics.

3.02 INSTALLATION

- A. Perform installation in accordance with manufacturer's instructions.
- B. Use anchoring devices to suit conditions and substrate materials encountered. Use concealed fasteners to the greatest degree possible. Use exposed fasteners only where allowed by approved shop drawings, or where concealed fasteners are impracticable.
- C. Set casework items plumb and square, securely anchored to building structure.

- D. Align cabinets to adjoining components, install filler and/or scribe panels where necessary to close gaps.
- E. Fasten together cabinets in continuous runs, with joints flush, uniform and tight. Misalignment of adjacent units not to exceed 1/16 inch. In addition, do not exceed the following tolerances:
 - 1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet.
 - 2. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet.
 - 3. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
 - 4. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.
- F. Base Cabinets: Fasten cabinets to service space framing and/or wall substrates, with fasteners spaced not more than 16 inches on center. Bolt adjacent cabinets together with joints flush, tight, and uniform.
- G. Install hardware uniformly and precisely.
- H. Removable Casework: Where casework is indicated to be removable, install with screws accessible after installation by removing drawers or opening doors. Do not strip screws or screw heads. Do not fasten removable casework to adjoining, non-removable casework.

3.03 CLEANING

- A. Clean casework and other installed surfaces thoroughly.

3.04 PROTECTION

- A. Do not permit finished casework to be exposed to continued construction activity.
- B. Protect casework and countertops from ongoing construction activities. Prevent workmen from standing on, or storing tools and materials on casework or countertops.
- C. Repair damage, including to finishes, that occurs prior to Date of Substantial Completion, using methods prescribed by manufacturer; replace units that cannot be repaired to like-new condition.

END OF SECTION

SECTION 123600 COUNTERTOPS

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- E. PS 1 - Structural Plywood; 2023.

1.02 SECTION INCLUDES

- A. Plastic laminate faced countertops.
- B. Plastic laminate faced window sills.

1.03 SUBMITTALS

- A. 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.
- B. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.
- C. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

PART 2 PRODUCTS

2.01 COUNTERTOPS AND SILLS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Plastic Laminate Countertops and sills: High-pressure decorative laminate (HPDL) sheet bonded to substrate.
 - 1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.
 - a. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
 - b. Finish: As indicated on drawings..
 - c. Surface Color and Pattern: As indicated on drawings.
 - 2. Countertop Exposed Edge Treatment: Postformed laminate; front edge substrate built up to minimum 1-1/4 inch thick with raised radiused edge, integral coved backsplash with radiused top edge and metal trim.
 - 3. Sill Exposed Edge Treatment: Plastic laminate with square edge.
 - 4. Back and End Splashes: Same material, same construction.
 - 5. Fabricate countertops and sills in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Custom Grade.

2.02 MATERIALS

- A. Plywood for Supporting Substrate of Countertops, End and Backsplashes, and Sills: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.
- B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

2.03 ACCESSORIES

- A. Chrome trim for backsplash and endsplash, U shape.

2.04 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 - 1. Join lengths of tops using best method recommended by manufacturer.
 - 2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
 - 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
- C. Fabricate individual back/end splashes in one piece.
 - 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
 - 2. Height: 4 inches, unless otherwise indicated.
- D. Wall-Mounted Counters: Provide brackets as indicated on drawings.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.
- C. Removable casework: Where removable casework is indicated, do not fasten countertops to removable casework.
- D. Seal joint between back/end splashes and vertical surfaces.
- E. Install trim on backsplashes and endsplashes.
- F. Securely attach window sills using concealed fasteners or construction adhesive. Make flat surfaces level; shim where required. Seal joints.

3.02 TOLERANCES

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

3.03 CLEANING

- A. Clean countertops 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