



## **PROJECT MANUAL**

### **PROJECT:**

## **GRACIOUS MANOR**

**1038 SALEM AVE.  
DAYTON OHIO 43215**

### **OWNER:**

**NATIONAL CHURCH RESIDENCES  
5475 RINGS ROAD, SUITE 300  
DUBLIN, OH 43017**

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| <b><u>ARCHITECT:</u></b>          | <b><u>STRUCTURAL ENGINEERING:</u></b> |
| pH7 ARCHITECTS, INC.              | SCHAEFER ENGINEERING                  |
| 448 W. NATIONWIDE BLVD., LOFT 100 | 937 W. 3RD AVE                        |
| COLUMBUS, OHIO 43215              | COLUMBUS, OHIO 43212                  |
| (614) 459-2955                    | (614) 428-4400                        |
|                                   |                                       |
| <b><u>MEP ENGINEERING:</u></b>    | <b><u>TECHNOLOGY:</u></b>             |
| PE SERVICES                       | KORDA                                 |
| 9 NORTH BROADWAY                  | 1650 WATERMARK DR.                    |
| LEBANON, OHIO 45036               | COLUMBUS, OHIO 43215                  |
| (513) 836-3810                    | (614) 487-1650                        |
|                                   |                                       |
| <b><u>CIVIL ENGINEERING:</u></b>  | <b><u>LANDSCAPE ARCHITECT:</u></b>    |
| THE KLEINGERS GROUP               | EDGE                                  |
| 350 WORTHINGTON RD., SUITE B      | 330 W. SPRING ST., SUITE 350          |
| WESTERVILLE, OHIO 43082           | COLUMBUS, OHIO 43215                  |
| (614) 882-4311                    | (614) 486-3343                        |
|                                   |                                       |

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

PROJECT # 2025-21  
3/26/2026

**TABLE OF CONTENTS**

**PROCUREMENT AND CONTRACTING REQUIREMENTS**

**Division 00 -- Procurement and Contracting Requirements**

00 01 10 - Table of Contents

00 73 00 - Supplementary Conditions

**SPECIFICATIONS**

**Division 01 -- General Requirements**

01 00 00 - General Requirements

01 10 00 - Summary

01 20 00 - Applications for Payment

01 20 50 - Modification Procedures

01 21 00 - Allowances

01 22 00 - Unit Prices

01 23 00 - Alternates

01 25 00 - Substitution Procedures

01 25 01 - Substitution Form

01 30 00 - Administrative Requirements

01 30 05 - Waiver Agreement for Electronic files

01 30 10 - Request for Information

01 31 00 - Project Meetings

01 31 50 - Submittals

01 42 16 - Definitions

01 45 00 - Quality Requirements

01 50 00 - Temporary Facilities and Controls

01 60 00 - Product Requirements

01 73 00 - Project Closeout

01 74 00 - Warranties

01 81 13 - Sustainability Design Requirements

**Division 02 -- Existing Conditions (NOT USED)**

**Division 03 -- Concrete See Structural Drawings**

03 54 00 - Cast Underlayment

**Division 04 -- Masonry**

04 72 00 - Cast Stone Masonry

04 73 00 - Manufactured Stone Masonry

**Division 05 -- Metals See Structural Drawings**

**Division 06 -- Wood, Plastics, and Composites**

06 10 00 - Rough Carpentry

06 20 00 - Finish Carpentry

**Division 07 -- Thermal and Moisture Protection**

07 11 13 - Bituminous Dampproofing

07 21 00 - Thermal Insulation

07 21 26 - Blown Insulation  
07 26 00 - Vapor Retarders  
07 27 00 - Air Barriers  
07 31 13 - Asphalt Shingles  
07 46 46 - Fiber-Cement Siding  
07 53 00 - Elastomeric Membrane Roofing  
07 62 00 - Sheet Metal Flashing and Trim  
07 71 00 - Roof Specialties  
07 72 00 - Roof Accessories  
07 81 00 - Applied Fire Protection  
07 84 00 - Firestopping  
07 92 00 - Joint Sealants

**Division 08 -- Openings**

08 11 13 - Hollow Metal Doors and Frames  
08 14 16 - Flush Wood Doors  
08 31 00 - Access Doors and Panels  
08 53 13 - Vinyl Windows  
08 71 00 - Door Hardware  
08 88 13 - Fire-Rated Glazing

**Division 09 -- Finishes**

09 05 61 - Common Work Results for Flooring Preparation  
09 21 16 - Gypsum Board Assemblies  
09 30 00 - Tiling  
09 51 00 - Acoustical Ceilings  
09 54 23 - Linear Metal Ceilings  
09 65 00 - Resilient Flooring  
09 68 13 - Tile Carpeting  
09 91 13 - Exterior Painting  
09 91 23 - Interior Painting

**Division 10 -- Specialties**

10 14 23 - Panel Signage  
10 28 00 - Toilet, Bath, and Laundry Accessories  
10 31 00 - Manufactured Fireplaces  
10 44 00 - Fire Protection Specialties  
10 55 00 - Postal Specialties  
10 75 00 - Flagpoles

**Division 11 -- Equipment**

11 30 13 - Residential Appliances

**Division 12 -- Furnishings**

12 24 00 - Window Shades  
12 35 30 - Residential Casework



12 36 00 - Countertops

**Division 13 -- Special Construction**

**Division 14 -- Conveying Equipment**

14 24 00 - Hydraulic Elevators

14 91 00 - Facility Chutes

**Division 21 -- Fire Suppression - See Volume 2**

**Division 22 -- Plumbing - See Volume 2**

**Division 23 -- Heating, Ventilating, and Air-Conditioning (HVAC) - See Volume 2**

**Division 25 -- Integrated Automation (NOT USED)**

**Division 26 -- Electrical - See Volume 2**

**Division 27 -- Communications - See**

**Division 28 -- Electronic Safety and Security - See Volume 2**

**Division 31 -- Earthwork (NOT USED)**

31 31 16 - Termite Control

**Division 32 -- Exterior Improvements (NOT USED)**

**Division 33 -- Utilities (NOT USED)**

**Division 34 -- Transportation (NOT USED)**

**Division 40 -- Process Integration (NOT USED)**

**DIVISION 46 -- WATER AND WASTEWATER EQUIPMENT**

**APPENDICES**

A - Geotechnical Report

B - AIA A201 - General Conditions of the Contract for Construction

C - HUD 92554M Supplementary Conditions of the Construction Contract

D - Current Davis-Bacon Wage Rate Determination

**END OF SECTION**

This Page is Intentionally Left Blank

## **SECTION 00 73 00 - SUPPLEMENTARY CONDITIONS**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 72 00 - General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

#### **1.2 Related Requirements**

- A. Section 01 42 16 - Definitions.

#### **1.3 REFERENCE STANDARDS**

- A. AIA A503 - Guide for Supplementary Conditions, including Amendments to AIA Documents A201, the 2017 Owner-Contractor Agreements, and the 2019 Owner-Construction Manager as Constructor Agreements; 2019.

#### **1.4 MODIFICATIONS TO GENERAL CONDITIONS**

- A. This project is subject to the requirements of the Build America, Buy America (BABA) Act. The Contractor must ensure compliance with all materials not covered by a Waiver or the De Minimis clause.

### **PART 2 PRODUCTS - NOT USED**

### **PART 3 EXECUTION - NOT USED**

**END OF SECTION**

This Page is Intentionally Left Blank

## **SECTION 01 00 00 - GENERAL REQUIREMENTS**

### **PART 1 GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### **1.2 SUMMARY:**

- A. Work performed shall comply with the following, but not limited to:
  - 1. The 2024 Ohio Building Code (O.B.C.).
  - 2. All applicable local and State codes, Life Safety, NFPA 101, ordinances and regulations.
  - 3. UFAS, FHADM and HUDMPS.
  - 4. Energy Star, WaterSense and NGBS New Construction v2020.
  - 5. The owner is responsible for obtaining and paying permits relating to the general building permit and any tap fees. The Owner/Architect will apply for the building permit after the bid process.
  - 6. The subcontractors (such as sprinkler, fire alarm, plumbing, etc.) are responsible for obtaining and paying for required permits and fees as required for the local jurisdiction.
  - 7. The Contractor should be responsible to paying for any contractor licensing requirements and re-inspection fees.

#### **1.3 VERIFICATION**

- A. Verification of all dimensions and conditions shall be the responsibility of the Contractor and his Sub-Contractors. Noted no hand scaling should be done in the field. The Contractor to request clarification from the Architect.

#### **1.4 DISCREPANCIES**

- A. The Contractor shall compare and coordinate all drawings and verify all dimensions. When in the opinion of the Contractor a discrepancy exists, he/she shall promptly report it to the Architect for proper adjustment before proceeding with the work.
- B. The general notes and typical details apply throughout the job unless otherwise noted or shown.
- C. In the event certain elements of the construction are not fully shown on the drawings, construction shall match existing features (if applicable) and be of the same character throughout the project. Notify the Architect during the bidding process if additional information is required. Construction shall include all service connections required for a complete and operational product or system. When existing items are removed in order to accommodate the new construction, items which can be reused at a savings to the Owner are to be identified and referred to the Architect for action as to potential use in the project.

### **PART 2 PRODUCTS (NOT APPLICABLE)**

### **PART 3 EXECUTION**

#### **3.1 SAFE USE OF PRODUCTS**

- 1. All manufacturer's and fabricators printed warnings for handling of products must be strictly observed.

3.2 FIRE RESISTANCE ASSEMBLIES

- A. See the Appendix for reference of the listed assemblies in the Construction Documents.

END OF SECTION

## SECTION 01 10 00 - SUMMARY

### PART 1 GENERAL

#### 1.1 PROJECT IDENTIFICATION

- A. PROJECT NAME: Gracious Manor, located at:
  - 1038 Salem Ave..
  - Dayton, Ohio 43215.
- 1. Architect's Project Number: 2025-21.
- B. OWNER:
  - 1. Name: National Church Residences
    - a. Address Line 1: 5475 Rings Rd..
    - b. Address Line 2: Suite 300.
    - c. City: Dublin.
    - d. State: Ohio.
    - e. Zip Code: 43017.
    - f. Telephone: 800-388-2151.
  - 2. Primary Contact: All correspondence from the Contractor to the Architect will be direct, with copies to this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
  - 3. Primary Contact:
    - a. Title: Senior Director of Pre-Construction.
    - b. Name: Jon Holway.
    - c. Email: JHolway@nationalchurchresidences.org.
- C. ARCHITECT
  - 1. Company Name: pH7 Architects.
    - a. Address Line 1: 448 W. Nationwide Blvd.
    - b. Address Line 2: Loft 100.
    - c. City: Columbus.
    - d. State: Ohio.
    - e. Zip Code: 43215.
    - f. Telephone: 614-459-2955.
    - g. Website: www.ph7architects.com.
  - 2. Architect: Design Professional of Record. All correspondence from the Contractor regarding construction documents authored by Architect's consultants will be through this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
  - 3. Primary Contact:
    - a. Title: Project Executive.
    - b. Name: Ian Andersen.
    - c. Email: iandersen@ph7architects.com.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
  - 1. A new 75 unit affordable apartment building. The building is three stories high and is wood framed in type VA construction over slab on grade. The exterior is clad in manufactured stone and fiber cement siding and trim. The roof will be asphalt shingles with some low sloped EPDM. .
- B. Type of Contract.
  - 1. Project will be constructed under a single prime contract.
- C. ACCESS TO SITE
  - 1. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

D. WORK RESTRICTIONS

1. Work Restrictions, General: Comply with restrictions on construction operations.
  - a. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
2. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor-air intakes.
3. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

E. SPECIFICATION AND DRAWING CONVENTIONS

1. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - a. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - b. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
2. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
3. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - a. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - b. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
  - c. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

F. MATERIAL SOURCING

1. This Project is funded in whole or in part by the U.S. Department of Housing and Urban Development (HUD) and is subject to the Build America, Buy America Act (BABA) requirements, including applicable HUD implementation guidance. Requirements apply to all iron and steel products, manufactured products, and construction materials incorporated into the Work, except where a written waiver or statutory exception has been approved by HUD.
  - a. Where conflicts occur, BABA requirements shall govern over individual specification sections, product data, or supplier representations.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION



## **SECTION 01 20 00 - APPLICATIONS FOR PAYMENT**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, List of Subcontracts, and Submittal Schedule.
- C. The Contractor's Construction Schedule and Submittal Schedule are included in Section "Submittals".

#### **1.2 SCHEDULE OF VALUES**

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Submit Schedule of Values within 15 days after the Owner-Contractor Agreement.
- C. Coordinate preparation of the Schedule of Values with the Contractor's Construction Schedule.
- D. Correlate line items in the Schedule of Values with other schedules and forms, including:
  - 1. Contractor's Construction Schedule.
  - 2. Application for Payment form.
  - 3. List of subcontractors.
  - 4. List of products.
  - 5. List of principal suppliers and fabricators.
  - 6. Schedule of submittals.
    - a. Submit the Schedule of Values to the Architect at the earliest date.
    - b. Format and Content: Use the Cost Development Spread Sheet as a guide to establish the format.
      - 1) Identification: Include the following identification:
        - a) Project name and location.
        - b) Name of the Architect.
        - c) Project number.
        - d) Contractor's name and address.
        - e) Date of submittal.
  - c. Break Contract Sum down in enough detail to facilitate evaluation of Applications for Payment. Break subcontract amounts down into logical material or installation line items. Round amounts off to the nearest dollar; the total shall equal the Contract Sum.
  - d. Show line items for indirect costs, and margins on costs, to extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including total cost and share of overhead and profit.
  - e. Temporary facilities and items that are not direct cost of Work-in-place may be shown as separate line items or distributed as general overhead expense.
  - f. Change Orders will be listed as a separate line item on the Schedule of Values.

#### **1.3 APPLICATIONS FOR PAYMENT:**

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.
- B. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- C. Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work covered by each Application or Payment is the period indicated in the Agreement.

- D. Payment Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for the application or other form acceptable to Owner and Architect.
- E. Application Preparation: Complete every entry, including notarization and execution by person authorized to sign on behalf of the Owner. Incomplete applications will be returned without action.
- F. Entries shall match data on the Schedule of Values.
- G. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the period covered by the application.
- H. Waivers of Mechanics Lien: With each Application for Payment submit waivers of mechanics liens from subcontractors or subcontractors and suppliers for the construction period covered by the previous application.
  - 1. Submit partial waivers on each item for amount requested.
  - 2. When an application shows completion of an item, submit final or full waivers.
  - 3. The Owner reserves the right to designate which entities involved in the Work must submit waivers.
  - 4. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include:
  - 1. Schedule of Values.
  - 2. Contractor's Construction Schedule (preliminary if not final).
  - 3. Submittal Schedule (preliminary if not final).
  - 4. Copies of building permits.
  - 5. Copies of licenses from governing authorities.
  - 6. Certificates of insurance and insurance policies.
  - 7. Bonds if required by the owner.
- J. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions. Administrative actions and submittals that precede or coincide with this application include:
  - 1. Occupancy permits and similar approvals.
  - 2. Warranties (guarantees) and maintenance agreements.
  - 3. Test/adjust/balance records.
  - 4. Maintenance instructions.
  - 5. Meter readings.
  - 6. Change-over information related to Owner's occupancy, use, operation and maintenance.
  - 7. Final cleaning.
  - 8. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.
- K. Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment application include:
  - 1. Evidence of completion of Project closeout requirements.
  - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  - 3. Updated final statement, accounting for final changes to the Contract Sum.
  - 4. AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
  - 5. AIA Document G706A-1994, "Contractor's Affidavit of Release of Liens."
  - 6. AIA Document G707-1994, "Consent of Surety to Final Payment."
  - 7. Evidence that claims have been settled.
  - 8. 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.
  - 9. Final liquidated damages settlement statement.

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 01 20 50 - MODIFICATION PROCEDURES**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections: The following sections contain requirements that relate to this section:
  - 1. "Submittals" for requirements for the Contractor's Construction Schedule.
  - 2. 01 20 00 - APPLICATIONS FOR PAYMENT for administrative procedures governing applications for payment.
  - 3. Division 0 Section "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract.

#### **1.2 MINOR CHANGES IN THE WORK**

- A. Supplemental instructions authorizing minor changes in the Work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Architect on AIA form G708, Architect's Field Order.

#### **1.3 CHANGE ORDER PROPOSAL REQUESTS**

- A. Owner-Initiated Proposal Requests: Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the Owner Representative, and facilitated by the Architect as Bulletins, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.
- B. Proposal requests issued by the Architect are for information only. Do not consider information given as formal instruction to either to stop work in progress, or to execute the proposed change.
- C. Unless otherwise indicated in the proposal request, within 10 days of receipt of the proposal request, submit for Owner's review an estimate of cost necessary to execute the proposed change.
- D. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
- E. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- F. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- G. Contractor-Initiated Change Order Proposal Requests: When latent or other unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
- H. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
- I. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
- J. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- K. Comply with requirements in Section "Product Substitutions" if the proposed change in the Work requires the substitution of one product or system for a product or system specified.

1.4 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Change Order Proposal Request, the Architect will issue a Change Order for signatures of the Owner, Architect and Contractor on the form that shall be provided by the Architect.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

## **SECTION 01 21 00 - ALLOWANCES**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Lump-sum allowances.
  - 2. Unit-cost allowances.
  - 3. Contingency allowances.
- C. Related Requirements:
  - 1. Section 01 22 00 "Unit Prices" for procedures for using unit prices.
  - 2. Section 01 40 00 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

#### **1.2 SELECTION AND PURCHASE**

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

#### **1.3 ACTION SUBMITTALS**

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

#### **1.4 INFORMATIONAL SUBMITTALS**

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

#### **1.5 COORDINATION**

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

#### **1.6 LUMP-SUM ALLOWANCES**

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

#### 1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

#### 1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
  1. Include installation costs in purchase amount only where indicated as part of the allowance.
  2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
  3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
  4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
  1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
  2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

#### PART 2 PRODUCTS (NOT USED)

#### PART 3 EXECUTION

##### 3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

##### 3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

#### END OF SECTION



## **SECTION 01 22 00 - UNIT PRICES**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Section 01 20 50 "Modification Procedures" for procedures for submitting and handling Change Orders.

#### **1.2 DEFINITIONS**

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

#### **1.3 PROCEDURES**

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

### **PART 2 PRODUCTS (NOT USED)**

### **PART 3 EXECUTION**

#### **3.1 SCHEDULE OF UNIT PRICES**

- A. None currently established.

**END OF SECTION**

This Page is Intentionally Left Blank

## **SECTION 01 23 00 - ALTERNATES**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. Section includes administrative and procedural requirements for alternates.

#### **1.2 DEFINITIONS**

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

#### **1.3 PROCEDURES**

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

### **PART 2 PRODUCTS (NOT USED)**

### **PART 3 EXECUTION**

#### **3.1 SCHEDULE OF ALTERNATES**

- A. To be communicated separately by the Owner.

**END OF SECTION**

This Page is Intentionally Left Blank

## **SECTION 01 25 00 - SUBSTITUTION PROCEDURES**

### **PART 1 GENERAL**

#### **1.1 DEFINITIONS**

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
  - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
  - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.

### **PART 2 PRODUCTS - NOT USED**

### **PART 3 EXECUTION**

#### **3.1 GENERAL REQUIREMENTS**

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
  - 5. Bear the costs engendered by proposed substitution of:
    - a. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
    - b. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
- B. A Substitution Request for specified installer constitutes a representation that the submitter:
  - 1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
  - 1. Note explicitly any non-compliant characteristics.
  - 2. Conditions: The Contractor's substitution request will be received and considered by the Owner Representative & Architect when one or more of the following conditions are satisfied, as determined by the Owner Representative & Architect; otherwise requests will be returned without action except to record noncompliance with these requirements.
    - a. Extensive revisions to Contract Documents are not required.
    - b. Proposed changes are in keeping with the general intent of Contract Documents.
    - c. The request is timely, fully documented and properly submitted.
    - d. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
    - e. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
    - f. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
    - g. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be

required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar considerations.

- h. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
- i. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
- j. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provides the required warranty.

### 3.2 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
  - 1. Instructions to Bidders specifies time restrictions and the documents required for submitting substitution requests during the bidding period.

### 3.3 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- B. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
  - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
  - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
- C. Substitutions will not be considered under one or more of the following circumstances:
  - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
  - 2. Without a separate written request.

### 3.4 SUBMITTALS

- A. Submit substitution requests by completing the form attached to this section. See this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
- C. Limit each request to a single proposed substitution item.
  - 1. Submit an electronic document, combining the request form with supporting data into single document.
- D. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
  - 1. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
  - 2. Samples, where applicable or requested.
  - 3. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.

4. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.
5. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
6. Cost information, including a proposal of the net change, if any in the Contract Sum.
7. Certification by the Contractor that the substitution proposed is an equal too or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
8. Architect's Action: Within one week of receipt of the request for substitution, the Architect will request additional information or documentation if necessary for evaluation of the request.
  - a. Within 2 weeks of receipt of the request, or one week of receipt of the additional information or documentation, which ever is later, the Architect will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of a Change Order.

### 3.5 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

### 3.6 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.
- B. The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

### 3.7 ATTACHMENTS

- A. A facsimile of the Substitution Request Form (During Construction) required to be used on the Project is included after this section.

END OF SECTION

This Page is Intentionally Left Blank



**SECTION 01 25 01 - SUBSTITUTION SHEET**

REQUEST No. \_\_\_\_\_

REFER TO "SUBSTITUTIONS", IN THE INSTRUCTIONS TO BIDDERS AND SECTION 01 25 00 REGARDING THE USE OF MATERIALS OR METHODS OTHER THAN "STANDARDS".

BIDDER/CONTRACTOR IS TO LIST HERE ANY "SUBSTITUTIONS" FOR WHICH CONSIDERATION IS DESIRED.

BRAND OR MAKE SPECIFIED:

PROPOSED SUBSTITUTION:

COST CHARGE / DEDUCT TO USE PROPOSED SUBSTITUTION:

CONTRACTOR'S REASON FOR PROPOSING SUBSTITUTION:

IT IS UNDERSTOOD AND AGREED THAT THE PROPOSAL SUBMITTED IS BASED ON FURNISHING ONLY APPROVED ITEMS AND ENTITLES THE OWNER TO REQUIRE THAT SUCH NAMED MATERIALS AND METHODS BE INCORPORATED IN THE WORK.

SIGNED: \_\_\_\_\_

BIDDER / CONTRACATOR

\_\_\_\_\_

DATE

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

This Page is Intentionally Left Blank

**WAIVER AGREEMENT FOR USE OF ELECTRONIC DESIGN FILES**

Project Name: PH7 Master

Client: XYZ Corporation

- A) The undersigned acknowledges receipt of associated electronic formatted files including, but not limited to; REVIT/CAD, PDF and or JPEG files for the above referenced project. The user agrees that these files are for uses related to the above project only and that files and the information contained within are the property of pH7 Architects, Inc. and XYZ Corporation. This information may not be reproduced or used in any format except in conjunction with the above project.
- B) The Drawings, Specifications and other documents, or data prepared by pH7 Architects, Inc. are to be used solely for the purpose of executing the construction of the new facility on this site. It shall not be used for the construction of other projects on other sites.
- C) The user acknowledges that the information provided in these files is not a substitution or replacement for the official Contract Documents. The user acknowledges that pH7 Architects, Inc., its consultants or the project owner, make any warranty or representation that the information contained in these files reflect the final contract Documents as information may be added through other media or tools which may not translate to the electronic file(s) being provided.
- D) The user assumes full responsibility in the use of these files. Confirmation that all manual modifications -- Addenda, Bulletins, Clarifications and Change Orders to the Project drawings executed as a part of the Contract Documents or from As-Built Information shall fall on the responsibility of the user of these files. The user acknowledges that the Contract Documents for this project are the dated, signed, and sealed hard copy, of drawings and specifications. If a conflict exists between the electronic file and hard copies, the hard copies shall take precedence. The user agrees to the fullest extent permitted by law to indemnify and hold harmless pH7 Architects, Inc., against any claims resulting from the use of the provided electronic files.
- E) Supply of electronic data or other items shall not in any manner change or alter the requirements of any Contract or Subcontract Documents, or the responsibilities or liabilities of the Contractor(s) or user.
- F) The Drawings, Specifications and other documents of data prepared by pH7 Architects, Inc. are instruments of pH7 Architects, Inc.'s service. The user shall not own or claim a copyright in the Drawings, Specifications and other documents or data prepared by pH7 Architects, Inc. pH7 Architects, Inc. shall be deemed the author of the Contract Documents and will retain all common law, statutory and other reserved rights, in addition to the copyright.
- G) Any data or documents used (other than for general building permit) shall not include or use pH7 Architects, Inc.'s name except as otherwise agreed upon in writing.
- H) This Agreement represents the entire agreement between User and pH7 Architects, Inc. with respect to items provided

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

herein and shall supersede any prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both pH7 Architects, Inc. and user. Nothing in this Agreement shall create a contractual relationship with, or duties, obligations, or causes of action in favor of any third party against either Owner or pH7 Architects, Inc.

- I) This agreement shall be governed by the laws of the State of **Ohio**. The person signing below represents that he/she has full authority to bind the user.

User: \_\_\_\_\_

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Files transmitted:

**REQUEST FOR INFORMATION**

**RFI NO.** \_\_\_\_\_

Project: Ph7 Master Project Number

**RFI DESCRIPTION:** (Fully Describe the question or type of information requested)

1.

**SUBMITTER'S RECOMMENDATION:** (Provide Recommended Solution, including indication of  
cost or schedule considerations)

1.

SUBMITTED: \_\_\_\_\_ DATE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ PHONE/FAX/EMAIL: \_\_\_\_\_

**RFI RESPONSE:**

**DATE:** \_\_\_\_\_

1.

BY: \_\_\_\_\_

pH7 Architects/Representative

Note: This reply is not an authorization to proceed with work involving additional cost, time or both. If any reply requires a change to the Contract Documents, a Change Order, Construction Change Directive or a Minor Change in the Work must be executed in accordance with the



Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

Contract Documents.

This Page is Intentionally Left Blank

## SECTION 01 31 00 - PROJECT MEETINGS

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:
  - 1. Pre-Construction Conference.
  - 2. Pre-Installation Conferences.
  - 3. Coordination Meetings.
  - 4. Owner/Architect/Contractor Progress Meetings.

#### 1.2 GENERAL

- A. Schedule and conduct 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.
  - 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/representative, within 3 days of the meeting.

#### 1.3 PRE-CONSTRUCTION CONFERENCE

Contractor, shall Schedule and Conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 30 days after execution of the Agreement.

- A. Contractor, shall Schedule and Conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 30 days after execution of the Agreement.
- B. Attendees: Authorized representatives of Owner, Architect, and their consultants; 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.
- C. Agenda: Discuss items of significance that could affect progress, including the following:
  - 1. Tentative construction schedule.
  - 2. Phasing.
  - 3. Critical work sequencing and long-lead items.
  - 4. Designation of key personnel and their duties.
  - 5. Procedures for processing field decisions and Change Orders.
  - 6. Procedures for RFIs.
  - 7. Procedures for testing and inspecting.
  - 8. Procedures for processing Applications for Payment.
  - 9. Distribution of the Contract Documents.
  - 10. Submittal procedures.
  - 11. Sustainable design requirements.
  - 12. Preparation of record documents.
  - 13. Work restrictions.
  - 14. Working hours.
  - 15. Owner's occupancy requirements.
  - 16. Responsibility for temporary facilities and controls.
  - 17. Procedures for moisture and mold control.
  - 18. Procedures for disruptions and shutdowns.
  - 19. Construction waste management and recycling.
  - 20. Parking availability.
  - 21. Office, work, and storage areas.

22. Equipment deliveries and priorities.
23. First aid.
24. Security.
25. Progress cleaning.

D. Minutes: Contractor shall be responsible for conducting meeting will record and distribute meeting minutes.

#### 1.4 PRE-INSTALLATION CONFERENCES

- A. Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
- B. 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, and Owner's Commissioning Authority of scheduled meeting dates.
- C. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
  1. Contract Documents.
  2. Options.
  3. Related RFIs.
  4. Related Change Orders.
  5. Purchases.
  6. Deliveries.
  7. Submittals.
  8. Review of mockups.
  9. Possible conflicts.
  10. Compatibility problems.
  11. Time schedules.
  12. Weather limitations.
  13. Manufacturer's written recommendations.
  14. Warranty requirements.
  15. Compatibility of materials.
  16. Acceptability of substrates.
  17. Temporary facilities and controls.
  18. Space and access limitations.
  19. Regulations of authorities having jurisdiction.
  20. Testing and inspecting requirements.
  21. Installation procedures.
  22. Coordination with other work.
  23. Required performance results.
  24. Protection of adjacent work.
  25. Protection of construction and personnel.
- D. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
- E. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
- F. 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.

#### 1.5 CONTRACTOR COORDINATION MEETINGS

- A. Conduct progress meetings at weekly intervals.
- B. Architect/Representative shall be available by phone conference as needed.

1.6 OWNER/ARCHITECT/CONTRACTOR (OAC) PROJECT MEETINGS

- A. Conduct Project progress meetings at monthly intervals- including Construction Administrators.
- B. Attendees: In addition to representatives of Owner and Owner's Commissioning Authority, 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.
- C. 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.
- D. 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.
  - 2. Review present and future needs of each entity present, including the following:
    - a. Interface requirements.
    - b. Sequence of operations.
    - c. Status of submittals.
    - d. Deliveries.
    - e. Off-site fabrication.
    - f. Access.
    - g. Site utilization.
    - h. Temporary facilities and controls.
    - i. Progress cleaning.
    - j. Quality and work standards.
    - k. Status of correction of deficient items.
    - l. Field observations.
    - m. Status of RFIs.
    - n. Status of proposal requests.
    - o. Pending changes.
    - p. Status of Change Orders.
    - q. Pending claims and disputes.
    - r. Documentation of information for payment requests.
- E. Minutes: Contractor shall be responsible for conducting the meeting will record and distribute the meeting minutes no later than 3 days after each progress meeting date to each party present and to parties requiring information.
  - 1. 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 APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 01 31 50 - SUBMITTALS**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
  - 1. Submittal schedule.
  - 2. Shop Drawings.
  - 3. Product Data.
  - 4. Samples.

### **PART 2 PRODUCTS (NOT APPLICABLE).**

### **PART 3 EXECUTION**

#### **3.1 ELECTRONIC DOCUMENT SUBMITTAL SERVICE**

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
  - 1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
  - 2. Contractor and Architect are required to use this service.
  - 3. It is Contractor's responsibility to submit documents in allowable format.
  - 4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
  - 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, [www.adobe.com](http://www.adobe.com), or Bluebeam PDF Revu, [www.bluebeam.com](http://www.bluebeam.com)), unless such software capability is provided by the service provider.
  - 6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
  - 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Cost: The cost of the service is to be paid by Contractor; include the cost of the service in the Contract Sum.
- C. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of Architect and Contractor participating; further training is the responsibility of the user of the service.
  - 1. Representatives of Owner are scheduled and included in this training.
- D. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

#### **3.2 SUBMITTAL SCHEDULE**

- A. Submit to Architect for review a schedule for submittals in tabular format.
  - 1. Coordinate with Contractor's construction schedule and schedule of values.

2. Format schedule to allow tracking of status of submittals throughout duration of construction.
3. Arrange information to include scheduled date for initial submittal and specification number and title.
4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.

### 3.3 SUBMITTAL PROCEDURES

- A. Coordination: Contractor shall coordinate preparation and processing of submittals with performance of construction activities.
- B. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- C. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
- D. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals
  1. until related submittals are received.
- E. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals.
- F. Allow 10 working days for reprocessing each submittal.
- G. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- H. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
- I. Provide a space approximately 3" x 5" on the label or beside the title block on Shop Drawings to record the Construction Manager's review and approval markings and the action taken.
  1. Include the following information on the label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Number and title of appropriate Specification Section.
    - i. Drawing number and detail references, as appropriate.
- J. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to CM using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.
  1. On the transmittal record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

### 3.4 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings. The Contractor shall verify all dimensions and co-ordinate with other trades to assure fit of all required components within the structure.



- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
  - 1. Dimensions.
  - 2. Identification of products and materials included.
  - 3. Compliance with specified standards.
  - 4. Notation of coordination requirements.
  - 5. Notation of dimensions established by field measurement.
  - 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2"x 11" but no larger than 30" x 42".
  - 7. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

### 3.5 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
- B. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
  - 1. Manufacturer's printed recommendations.
  - 2. Compliance with recognized trade association standards.
  - 3. Compliance with recognized testing agency standards.
  - 4. Application of testing agency labels and seals.
  - 5. Notation of dimensions verified by field measurement.
  - 6. Notation of coordination requirements.
- C. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
- D. Contractor shall distribute shop drawings to all subcontractors after approval.

### 3.6 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
- B. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Architect's Sample. Include the following:
  - 1. Generic description of the Sample.
  - 2. Sample source.
  - 3. Product name or name of manufacturer.
  - 4. Compliance with recognized standards.
  - 5. Availability and delivery time.
- C. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
- D. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.
- E. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques and details of assembly, connections, operation and similar construction characteristics.

- F. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 2 sets; one will be returned marked with the action taken. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.
- G. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- H. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
- I. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.
- J. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

### 3.7 ARCHITECT'S/DESIGN CONSULTANT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Architect will review each submittal, mark to indicate action taken, and return promptly.
- B. Compliance with specified characteristics is the Contractor's responsibility.
- C. Action Stamp: The Architect/Engineer will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
  - 1. Approved: Where submittals are marked "Approved," that part of the Work covered by the submittal may precede provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
  - 2. Approved as noted: When submittals are marked "Approved as Noted," that part of the Work covered by the submittal may precede provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
  - 3. Rejected - Revise and Resubmit: When submittal is marked "Rejected, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
    - a. Do not permit submittals marked "Rejected, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
  - 4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Reviewed and or Action Not Required".

END OF SECTION

## SECTION 01 42 16 - DEFINITIONS

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Other definitions are included in individual specification sections.

#### 1.2 DEFINITIONS

- A. Furnish: To supply, deliver, unload, and inspect for damage.
- B. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.
- C. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.
- D. Provide: To furnish and install.
- E. Supply: Same as Furnish.
- F. Build America, Buy America Act (BABAA) – Requirements instituted by the Bipartisan Infrastructure Law of 2021 mandating domestic preference that all iron and steel, manufactured products, and construction materials are produced in the United States.
- G. Construction Materials – Those articles, materials, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives – that are or consist primarily of: non-ferrous metals, plastic and polymer-based products, glass, lumber or drywall.
- H. Manufactured Product – Items assembled out of components, or otherwise made or processed from raw materials into finished products. Manufactured products must be manufactured (assembled) in the United States, and the cost of components that were mined, produced, or manufactured in the United States must be greater than 55 percent of the total cost of all components of the project.
- I. Manufacturer's Certification – Documentation provided by a Manufacturer, certifying that the items provided by Manufacturer meet the domestic preference requirements of BABAA.

### PART 2 PRODUCTS - NOT USED

### PART 3 EXECUTION - NOT USED

END OF SECTION

This Page is Intentionally Left Blank

## SECTION 01 45 00 - QUALITY REQUIREMENTS

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting 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. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner or authorities having jurisdiction are not limited by provisions of this Section.

#### 1.2 DEFINITIONS

- A. 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.
- B. 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. Services do not include contract enforcement activities performed by Architect.
- C. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. 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, and similar operations.
  - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of 5 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.

#### 1.3 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be 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.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
  - 1. Seismic-force resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by the Architect.
  - 2. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.
- B. 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.

#### 1.5 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following: NOTE: Owner requests that any concrete pour under 25 yards does not require testing.
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number 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 inspecting.
  - 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 re-inspecting.
- B. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections. Include the following:
  - 1. Name, address, and telephone number of representative making report.
  - 2. Statement on condition of substrates and their acceptability for installation of product.
  - 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  - 4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 5. Other required items indicated in individual Specification Sections.
- C. Permits, Licenses, and Certificates: For Owner's records, 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.

#### 1.6 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.

- B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
  - 1. Temporary sheeting, shoring, or supports.
  - 2. Temporary scaffolding.
  - 3. Temporary bracing.
  - 4. Temporary foundation underpinning.
  - 5. Temporary stairs or steps required for construction access only.
  - 6. Temporary hoist(s) and rigging.

#### 1.7 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
  - 1. Submit a Request for Interpretation to Architect if the criteria indicated are not sufficient to perform required design services.
- C. Scope of Contractor's Professional Design Services: Provide for the following items of work:
  - 1. Structural Design of Wood Trusses: As described in Section 06 17 53 - Shop-Fabricated Wood Trusses
  - 2. System Design: Coordinate with ceiling installation, detailed pipe layout, and hydraulic calculations as described in Section 21 13 00 - Fire-Suppression Sprinkler Systems.
  - 3. System Design: As described in Section 28 46 00 - Fire Alarm Systems.

#### 1.8 QUALITY ASSURANCE

- A. General: 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.
- 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, 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. Professional Engineer Qualifications: 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 products that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
  - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329 and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
  - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
  - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

- H. Manufacturer's 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. Contractor's Quality Control (CQC) Plan:
  - 1. Prior to start of work, submit a comprehensive plan describing how contract deliverables will be produced. Tailor CQC plan to specific requirements of the project. Include the following information:
    - a. Management Structure: Identify personnel responsible for quality. Include a chart showing lines of authority.
    - b. Management Approach: Define, describe, and include in the plan specific methodologies used in executing the work.
      - 1) Management and control of documents and records relating to quality.
      - 2) Coordination procedures.
      - 3) Resource management.
      - 4) Inspection and testing procedures and scheduling.
      - 5) Control of noncomplying work.
      - 6) Tracking deficiencies from identification, through acceptable corrective action, and verification.
    - c. Owner will not make a separate payment for providing and maintaining a Quality Control Plan. Include associated costs in Bid price.
- 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 responsibilities include the following:
    - 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. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
    - d. When testing is complete, remove test specimens, assemblies, 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 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.

#### 1.9 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 inspecting they are engaged to perform.
  - 2. Costs for retesting and re-inspecting 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 required to verify that the Work complies with requirements, whether specified or not.
  - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  - 2. Notify testing agencies at least 36 hours in advance of time when Work that requires testing or inspecting will be performed.
  - 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.



- C. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.
- D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Determine the location 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 releases, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  - 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies 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 inspecting. 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 inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - 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 to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner 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 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 with copy to Contractor and to authorities having jurisdiction.
  - 4. Submitting a final report of special tests and inspections at Substantial Completion, this includes a list of unresolved deficiencies.
  - 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 re-inspecting corrected work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 CONTROL OF INSTALLATION

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

3.2 MOCK-UPS

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.
- C. Integrated Exterior Mock-ups: Construct integrated exterior mock-up as indicated on drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mock-up materials as necessary.
- D. Room Mock-ups: Construct room mock-ups as indicated on drawings. Coordinate installation of materials, products, and assemblies as required in specification sections; finish according to requirements. Provide required lighting and any supplemental lighting where required to enable Architect to evaluate quality of the mock-up.
- E. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.
- F. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- G. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- H. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
  - 1. Architect will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
  - 2. Make corrections as necessary until Architect's approval is issued.
- I. Architect will use accepted mock-ups as a comparison standard for the remaining Work.
- J. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.3 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, 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 Division 01 Section "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

This Page is Intentionally Left Blank

## **SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. Section includes requirements for support facilities, and security and protection facilities.

#### **1.2 USE CHARGES**

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

#### **1.3 INFORMATIONAL SUBMITTALS**

- A. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.

#### **1.4 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 ICC/ANSI A117.1.

#### **1.5 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**

#### **2.1 TEMPORARY FACILITIES**

- A. 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.
- B. When permanent facilities are enclosed with operable utilities, relocate offices into building, with written agreement of Owner, and remove temporary buildings.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

#### **2.2 EQUIPMENT**

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, 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. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 01 77 00 "Closeout Procedures". Replace filters used during construction with new.

### PART 3 EXECUTION

#### 3.1 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.
  - 1. Locate facilities to limit site disturbance as specified in Section 01 10 00 "Summary."
- 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.

#### 3.2 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.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Sanitary Facilities: Provide temporary toilets, wash 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.
- E. Heating: Provide temporary heating 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.
- F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- G. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
- H. 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.

#### 3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
  - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. 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. Locate temporary roads and paved areas within construction limits indicated on Drawings.
    1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
  - C. Temporary Use of 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 according to Civil Documents.
    3. Recondition base after temporary use, including removing contaminated material, regrading, proof rolling, 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 according to Civil Documents.
  - 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 temporary parking areas for construction personnel.
  - F. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
    1. Identification Signs: Provide Project identification signs as indicated on Drawings.
    2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
      - a. Provide temporary, directional signs for construction personnel and visitors.
    3. Maintain and touchup signs so they are legible at all times.
  - G. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 01 73 00 "Execution."
  - H. 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.
- 3.4 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.
  - 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.
  - C. Temporary Erosion and Sedimentation Control: 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, according to erosion- and sedimentation-control Drawings.
  - 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. 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 work day.
- F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- G. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- H. 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 not complete, insulate temporary enclosures.
- I. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
  - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
  - 2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  - 3. Insulate partitions to control noise transmission to occupied areas.
  - 4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
  - 5. Protect air-handling equipment.
  - 6. Provide walk-off mats at each entrance through temporary partition.
- J. 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.
  - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to 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.

### 3.5 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. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 01 60 00 - PRODUCT REQUIREMENTS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. General product requirements.\
- B. Build America, Buy America Act (BABA) Requirements.
- C. Re-use of existing products.
- D. Transportation, handling, storage and protection.
- E. Product option requirements.
- F. Substitution limitations.
- G. Maintenance materials, including extra materials, spare parts, tools, and software.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 01 25 00 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 40 00 - Quality Requirements: Product quality monitoring.
- C. This Project is funded in whole or in part by the U.S. Department of Housing and Urban Development (HUD) and is subject to the Build America, Buy America Act (BABA) requirements, including applicable HUD implementation guidance. Requirements apply to all iron and steel products, manufactured products, and construction materials incorporated into the Work, except where a written waiver or statutory exception has been approved by HUD.
  - 1. Where conflicts occur, BABA requirements shall govern over individual specification sections, product data, or supplier representations.

#### **1.3 REFERENCE STANDARDS**

- A. Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58
- B. Build America, Buy America Act (BABAA), Title IX
- C. OMB Memorandum M-22-11
- D. Applicable HUD and MTM Public Housing Agency guidance

#### **1.4 SUBMITTALS**

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

- D. Submit BABA Compliance Documentation for each applicable product, including:
  - 1. Manufacturer certification of U.S. production.
  - 2. Identification of manufacturing location(s).
  - 3. Iron/steel mill certifications where applicable.
  - 4. Component cost certification for manufactured products when required.
  - 5. Submittals shall clearly identify the BABA category.
  - 6. Submittals shall accompany product shop drawings.

## PART 2 PRODUCTS

### 2.1 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 01 40 00 - Quality Requirements, for additional source quality control requirements.

### 2.2 PRODUCT OPTIONS

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

### 2.3 BABA COMPLIANCE

- A. All BABAA-covered products shall be produced in the United States unless covered by an approved waiver or identified as a De Minimis cost.

### 2.4 MAINTENANCE MATERIALS

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

## PART 3 EXECUTION

### 3.1 SUBSTITUTION LIMITATIONS

- A. See Section 01 25 00 - Substitution Procedures.
- B. Substitution requests shall include full BABA compliance documentation. Substitutions that reduce or compromise compliance will not be approved.
- C. Waivers or exceptions shall be requested only by the Owner through HUD. The Architect is not authorized to approve BABA waivers.

### 3.2 BABA COMPLIANCE

- A. Noncompliant materials shall be removed and replaced at no additional cost to the Owner.
- B. Installation of materials or products that are not compliant with BABAA requirements shall be considered defective work. Contractor should ensure that Engineer/Architect has an approved Manufacturer's Certification or waiver prior to items being delivered to the project site.

- C. By submitting an application for payment, based in whole or in part on furnishing equipment or materials, Contractor certifies that such equipment and materials, to contractor's knowledge, are compliant with BABAA requirements.

### 3.3 TRANSPORTATION AND HANDLING

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

### 3.4 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

3.5 RECORD KEEPING AND CLOSEOUT

- A. Provide a consolidated BABA Compliance Summary at Project closeout identifying each covered product and its compliance basis.

END OF SECTION

## **SECTION 01 73 00 - PROJECT CLOSEOUT**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
  - 1. Test Results.
  - 2. Project Record Document Submittal.
  - 3. Operating and Maintenance Manual Submittal.
  - 4. Submittal of Warranties.
  - 5. Final Cleaning.
  - 6. Closeout Requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 28.

#### **1.2 SUBSTANTIAL COMPLETION**

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
- B. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
  - 1. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
- C. Advise Owner of pending insurance change-over requirements.
- D. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
- E. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, signed inspection certificates, operating certificates and similar releases.
- F. Submit record 'AS-BUILT' drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
- G. Deliver tools, spare parts, extra stock, and similar items.
- H. Make final change-over of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of change-over in security provisions.
- I. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
- J. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.
- K. Field Observation Procedures: On receipt of a request field observation, the Architect will either proceed with field visit or advise the Contractor of unfulfilled requirements. The Architect will prepare the Certificate of Substantial Completion following field visit, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
  - 1. The Architect will repeat field observation when requested and assured that the Work has been substantially completed. Results of the completed field visit will form the basis of requirements for final acceptance.

1.3 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
- B. Submit record 'AS-BUILT' drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
- C. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
- D. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
- E. Submit a certified copy of the Architect's final 'punch' list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by the Architect.
- F. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for corresponding elements of the Work.
- G. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- H. Re-inspection Procedure: At the Contractor's expense, per paragraph 9.8.2 in the Supplementary Conditions, the Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.
- I. Upon completion of re-inspection, the Architect will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

1.4 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
- C. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
- D. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
- E. Note related Change Order numbers where applicable.
- F. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- G. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.



- H. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.
- I. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.
- J. Upon completion of mark-up, submit complete set of record Product Data to the Architect for the Owner's records.
- K. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Architect and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.
- L. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's records.
- M. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable or larger size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
  - 1. Emergency instructions.
  - 2. Spare parts list.
  - 3. Copies of warranties.
  - 4. Wiring diagrams.
  - 5. Recommended "turn around" cycles.
  - 6. Inspection procedures.
  - 7. Shop Drawings and Product Data.
  - 8. Fixture lamping schedule.
  - 9. Names and telephone numbers of product manufacturers and suppliers or installers.

## PART 2 PRODUCTS (NOT APPLICABLE)

## PART 3 EXECUTION

### 3.1 CLOSEOUT PROCEDURES

- A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
  - 1. Maintenance manuals.
  - 2. Record documents.
  - 3. Spare parts and materials.
  - 4. Tools.
  - 5. Lubricants.
  - 6. Fuels.
  - 7. Identification systems.
  - 8. Control sequences.
  - 9. Hazards.
  - 10. Cleaning.
  - 11. Warranties and bonds.
  - 12. Maintenance agreements and similar continuing commitments.

- B. As part of instruction for operating equipment, demonstrate the following procedures:
  - 1. Start-up.
  - 2. Shutdown.
  - 3. Emergency operations.
  - 4. Noise and vibration adjustments.
  - 5. Safety procedures.
  - 6. Economy and efficiency adjustments.
  - 7. Effective energy utilization.
- C. In the case of systems requiring summer/winter change over, instruct Owners personnel in change over procedures, and assist Owner on site in the first seasonal change over after final completion.

### 3.2 FINAL CLEANING

- A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
- C. Complete the following cleaning operations after Substantial Completion Inspection but before Final Inspection.
  - 1. Remove labels that are not permanent labels, DO NOT REMOVE DOOR OR FRAME LABELS
  - 2. Clean transparent materials, including mirrors and glass in doors and windows.
    - a. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
  - 3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances.
    - a. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
  - 4. Wipe surfaces of mechanical and electrical equipment.
    - a. Remove excess lubrication and other substances.
    - b. Clean plumbing fixtures to a sanitary condition.
    - c. Clean light fixtures and lamps.
- D. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances.
  - a. Sweep paved areas broom clean; remove stains, spills and other foreign deposits.
  - b. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- E. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- F. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
- G. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

### 3.3 RADON TESTING

- A. Post-construction testing is required prior to final completion inspection in accordance with ANSI/AARST MAMF (Protocol for Conducting Radon Decay Product Measurement in Multifamily Buildings). If post-construction test results are above the threshold ( $\geq 4.0$  pCi/L), retrofit of mitigation systems or conversion from passive to fan-powered mitigation systems is required followed by post-mitigation testing to confirm the systems are functioning correctly and radon concentrations have been reduced to below the EPA action level.

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

- B. All testing and mitigation required as a result of this testing must be performed by, or under the direct supervision of a Radon Professional, in accordance with ANSI-AARST CC-1000-2018, Soil Gas Control Systems in New Construction of Buildings.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 01 74 00 - WARRANTIES**

### **PART 1 GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
- B. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
- C. General closeout requirements are included in Section "Project Closeout."
- D. Specific requirements for warranties for the Work and products and installations that are specified to be warranted are included in the individual Sections of Divisions-2 through -28.
- E. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- F. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

#### **1.3 DEFINITIONS**

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

#### **1.4 WARRANTY REQUIREMENTS**

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefitted from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties in conflict with requirements of the Contract Documents.
- F. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

- A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.

1.6 Refer to individual Sections of Divisions-2 through -35 for specific content requirements, and particular requirements for submittal of special warranties.

- A. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- B. Bind warranties and bonds in heavy-duty, commercial quality, 3-ring binder, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper. Identify binder as to contents with name of the product, and the name, address and telephone number of the installer.
- C. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 (NOT APPLICABLE).

PART 3 (NOT APPLICABLE).

END OF SECTION

## **SECTION 01 81 13 - SUSTAINABILITY DESIGN REQUIREMENTS**

### **SALEM AVE SENIOR COMMUNITY**

#### **PART 1 GENERAL**

##### **2.1 REFERENCE STANDARDS**

- A. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres; 2020.
- B. BIFMA e3 - Furniture Sustainability Standard; Business and Institutional Furniture Manufacturers Association; 2019.
- C. GreenSeal GS-11 - Standard for Paints, Coatings, Stains, and Sealers; 2025, with Editorial Revision (2026).
- D. GreenSeal GS-36 - Standard for Adhesives for Commercial Use; 2025, with Editorial Revision (2026).
- E. ISO 14044 - Environmental Management - Life Cycle Assessment - Requirements and Guidelines; 2006, with Amendment (2020).

##### **2.2 GENERAL CONDITIONS**

- A. The General Conditions, Modifications to General Conditions, Supplementary or Special Conditions and any Instructions to Bidders shall apply to all Divisions of work.
- B. The requirements of State, Local or appropriate codes applicable to the work, whichever is the most stringent is a requirement of all Divisions of work.

##### **2.3 WORK OF THIS SECTION**

- A. Section includes:
  - 1. Sustainable Project Goals:
- B. Applicants must obtain a sustainable building certification - National Green Building Standard (NGBS), meeting Silver level or higher for single and multifamily buildings, both new and renovation.
- C. Contractor shall coordinate work and requirements with Owner Contracted Green Rater/Verifier for Green certifications. Pertinent to green certifications the role of the Green Rater/Verifier is to guide the construction team with certification process; review documentation, verify green requirements are met; and to perform third-party testing.

##### **2.4 REFERENCES**

- A. American Society of Heating, Refrigerating and Air-Conditioning Engineers:
  - 1. ASHRAE 52.2 - Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.
  - 2. ASHRAE 62 - Ventilation for Acceptable Indoor Air Quality.
  - 3. ASHRAE 90.1 - Energy Efficient Design of New Buildings except Low-Rise Residential Buildings.
  - 4. ASHRAE 129 - Measuring Air-Change Effectiveness.
- B. ASTM International:
  - 1. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
  - 2. ASTM E903 - Standard Test Method for Solar Absorption, Reflectance, and Transmittance of Materials Using Integrating Spheres.

- C. Bay Area Air Quality Management District: BAAQMD Regulation 8, Rule 51 - Adhesive and Sealant Products.
- D. Carpet and Rug Institute: CRI Green Label Testing Program.
- E. Forest Stewardship Council: FSC Guidelines- Forest Stewardship Council Guidelines.
- F. Green Seal: GS-11 - Product Specific Environmental Requirements.
- G. Sheet Metal and Air Conditioning Contractors: SMACNA IAQ - IAQ Guidelines for Occupied Buildings under Construction.
- H. South Coast Air Quality Management District: SCAQMD Rule 1168 - Adhesive and Sealant Applications.
- I. U.S. Environmental Protection Agency:
  - 1. EPA 832-R-92-005 - Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.
  - 2. EPA Baseline IAQ - Testing for Indoor Air Quality, Baseline IAQ, and Materials Section 01445.
  - 3. EPA 402-K-01-002 – A Step-by-Step Guide on how to Build Radon-Resistant Homes
- J. Home Innovation Research Lab's (HIRL)'s
  - 1. ICC/ASHRAE 700 National Green Building Standard (NGBS)
- K. ENERGY STAR Qualified Homes Program Requirements
  - 1. [https://www.energystar.gov/sites/default/files/ES%20NPR%20v85%202018-05-16\\_clean.pdf](https://www.energystar.gov/sites/default/files/ES%20NPR%20v85%202018-05-16_clean.pdf)

## 2.5 SUBMITTALS

- A. The contractor shall submit the following items directly to the Green Rater/Verifier.
  - 1. Inspection reports of stormwater best management practices.
  - 2. Hazardous Waste Management Plan.
  - 3. Construction Waste Diversion Rate (Calculation and/or Waste Tickets)
  - 4. The contractor shall submit cut-sheets of products intended to comply with Sustainability Material requirements. See NGBS Checklist chapter 6 and 9 for list of products intended to meet this requirement. Criteria are as follows:
    - a. Recycled Content and Ingredient Transparency Requirement – Minimum 25%
    - b. Biobased Products
    - c. Regional Materials Requirement – Originated, produced, grown naturally, or occurred naturally within 500-mile of the site.
    - d. Product LCA – ISO 14044 LCA
    - e. Chemical Hazard Optimization Requirement – Third-party verification of optimization to 100 ppm.
    - f. Environmental Product Declarations – Type III Industry-wide or product-wide declarations in accordance with ISO Standard 14025 and 21930
    - g. Floor materials, wall coverings – Compliance with CDPH/EHLB Standard Method v1.1
    - h. Interior architectural coatings – Zero VOC, GreenSeal GS-11, or CARB Suggested Control Measure for Architectural Coatings.
    - i. Interior adhesives and sealants – CDPH/EHLB Standard Method v1.1, GreenSeal GS-36, or SCAQMD Rule 1168.
    - j. Furniture – ANSI/BIFMA e3-Furniture Sustainability Standard sections 7.6.1 and 7.6.2

## 2.6 QUALITY ASSURANCE

- A. Perform work in accordance with ICC/ASHRAE 700 National Green Building Standard
- B. Maintain one copy of NGBS Builder Resource Guide on site. Document is available for download at [https://www.homeinnovation.com/services/national\\_standards/ngbs\\_green\\_certification](https://www.homeinnovation.com/services/national_standards/ngbs_green_certification)
- C. Perform storm water management and erosion control Work in accordance with EPA Best Management Practices or local erosion and sedimentation control standards whichever is more stringent.



- D. Perform ventilation Work in accordance with ASHRAE 62.

## PART 2 PRODUCTS

### 3.1 PRODUCT SUBSTITUTION

- A. Thoroughly review any requests for substitution for products that are related to National Green Building Standard mandatory and optional practices. Any substitutions may jeopardize the project's ability to obtain certification.

## PART 3 EXECUTION

### 4.1 NATIONAL GREEN BUILDING STANDARD (NGBS)

- A. Perform work in accordance with ICC/ASHRAE 700 National Green Building Standard for mandatory and optional practices pertinent to this project listed in NGBS worksheet included at the end of this section.
- B. Thoroughly review any requests for substitution for products that are related to NGBS prerequisites and credits. Any substitutions may jeopardize projects' ability to obtain certification.

### 4.2 PERFORMANCE TESTING & INSPECTIONS

- A. Minimum envelope leakage – where applicable: the following areas of building envelope and demising walls shall be sealed, caulked, gasketed, or weather-stripped to minimize envelope leakage:
1. Joints around exterior doors and windows.
  2. Joints between walls and foundation; between conditioned spaces and attics, demising walls, crawl spaces and garage.
  3. Top plates and bottom plates shall be sealed at all locations.
  4. All mechanical, plumbing and electrical penetrations in exterior and demising walls. Mechanical chase shall be sealed at crawl space ceiling.
  5. Exterior sheathing and house wrap.
  6. Minimize entry of air from outside, attic, garage, and crawl space into exterior wall and interior wall cavities to ensure passing of air infiltration test. Also minimize air transfer from unit to unit, and unit to corridor.
  7. Batt insulation shall be stapled to face of stud to ensure full contact of insulation with face of drywall. Cut insulation around all mechanical, plumbing and electrical work.
  8. Seal all duct boots in floors to subfloors and seal all duct boots in walls to drywall.
  9. Seal gaps between drywall and all duct penetrations in ceilings, including exhaust fans.
- B. Thermal Bypass Inspection - The Green Rater will conduct a visual Thermal Bypass Inspection to inspect proper installation and continuity of thermal insulation and air-tightness of envelope. This inspection must take place after exterior envelope insulation has been installed, but prior to and installation of any drywall. One inspection per floor shall be conducted. If additional inspections are deemed necessary due construction sequencing, Contractor shall notify the Architect and Green Verifier immediately. Contractor shall schedule the inspection with no less than two week notice to the Green Verifier. Contractor shall provide access to each unit and cooperate with conducting of the test. Additional inspections necessary due to incomplete work shall be back-charged to the Contractor.
- C. Final Inspections - Upon substantial completion and prior to occupancy, the Green Verifier will conduct a visual Final Inspection to verify green requirements incorporated in the project. The contractor shall notify the Green Rater at least four (4) weeks prior to the anticipated date for such inspection. Contractor shall provide access to each unit and cooperate with conducting of the test. Additional inspections necessary due to incomplete work shall be back-charged to the Contractor.
- D. Third-Party Testing - Third-party Testing is to be scheduled and conducted in conjunction with the final inspection. The contractor shall notify the Green Verifier at least four (4) weeks prior to the anticipated date for such inspection. Contractor shall provide access to each unit and cooperate with conducting of the test.
1. Following tests shall be conducted by Green Verifier:

2. Air Infiltration Test (Blower door Test) – Mandatory – Measures air leakage through unit enclosure such as exterior walls, demising walls, ceilings, chases, etc.
3. Distribution Loss Test (Duct Blaster Test) – Mandatory – Measures leakage through the mechanical distribution system

ENCLOSURES

- A. National Green Building Standard (NGBS) worksheet

END OF SECTION

## **SECTION 03 54 00 - CAST UNDERLAYMENT**

### **PART 1 GENERAL**

- 1.1 Section Includes
  - A. Liquid-applied self-leveling floor underlayment.
    - 1. Use gypsum-based type below interior floor coverings.
- 1.2 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; 2026a.
- 1.3 Submittals
  - A. See Section 0, for submittal procedures.
  - B. Buy America Compliance: Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
  - C. Product Data: Provide manufacturer's data documenting physical characteristics and product limitations.
  - D. Shop Drawings: Include plans indicating substrates, locations, and average depths of underlayment based on survey of substrate conditions.
  - E. Manufacturer's Instructions: Indicate information on surface preparation, mixing instructions, environmental limitations, and installation instructions.
- 1.4 Quality Assurance
  - A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.
  - B. Product Compatibility: Manufacturers of underlayment and floor-covering systems certify in writing that products are compatible.
  - C. Fire-Resistance Ratings: Where indicated, provide gypsum-cement underlayment systems identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
    - 1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.
  - D. Sound Transmission Characteristics: Where indicated, provide gypsum-cement underlayment systems identical to those of assemblies tested for STC and IIC ratings per ASTM E 90 and ASTM E 492 by a qualified testing agency.
- 1.5 Field Conditions
  - A. Do not install underlayment until floor penetrations and peripheral work are complete.
  - B. Maintain minimum ambient temperatures of 50 degrees F 24 hours before, during, and 72 hours after installation of underlayment.

- C. During curing process, ventilate spaces to remove excess moisture.

## 1.6 COORDINATION

- A. Coordinate application of underlayment with requirements of floor-covering products and adhesives, to ensure compatibility of products.

## PART 2 PRODUCTS

### 2.1 Manufacturers

- A. Gypsum Underlayment:
  - 1. Basis of Design Product: Subject to compliance with requirements, provide Maxxon Corporation; Gyp-Crete 2000/3.2k or comparable product by one of the following:
    - a. Arcosa Specialty Products; Accucrete: [www.arcosaspecialtymaterials.com/#sle](http://www.arcosaspecialtymaterials.com/#sle).
    - b. ARDEX Engineered Cements; ARDEX K 22 F: [www.ardexamericas.com/#sle](http://www.ardexamericas.com/#sle).
    - c. Hacker Industries, Inc; Firm-Fill 2010+: [www.hackerindustries.com/#sle](http://www.hackerindustries.com/#sle).
    - d. USG; Levelrock Series 2500 Floor Underlayment: [www.usg.com/#sle](http://www.usg.com/#sle).

### 2.2 Materials

- A. Cast Underlayments, General:
  - 1. Comply with applicable code for combustibility or flame spread requirements.
- B. Gypsum-Based Underlayment: Gypsum-based mix, producing self-leveling underlayment with the following properties when mixed with water in accordance with manufacturer's directions:
  - 1. Compressive Strength: Minimum 3,000 psi, tested in accordance with ASTM C472.
  - 2. Density: Maximum 120 pounds per cubic foot.
  - 3. Final Set Time: 1 to 2 hours, maximum.
  - 4. Thickness: 3/4 inch to maximum 1 1/4" inches.
  - 5. Surface Burning Characteristics: Flame spread index of 0 and smoke developed index of 0 when tested in accordance with ASTM E84.
- C. Aggregate: Dry, well-graded, washed silica aggregate, approximately 1/8 inch in size and acceptable to underlayment manufacturer.
- D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to underlayment mix materials.
- E. Primer: Manufacturer's recommended type for substrate, conditions, and application indicated.
  - 1. Primer shall have a VOC content of 200 g/L or less when calculated according to 40 CFR 59, Subpart D.
  - 2. Primer shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- F. Joint and Crack Filler: Latex-based filler, as recommended by manufacturer.

## PART 3 EXECUTION

### 3.1 Examination

- A. Examine and verify, with installer present, that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.
  - 1. Proceed with application only after unsatisfactory conditions have been corrected.

### 3.2 Preparation

- A. General: Prepare and clean substrate according to manufacturer's written instructions.

1. Treat nonmoving substrate cracks according to manufacturer's written instructions to prevent cracks from telegraphing (reflecting) through underlayment.
  2. Fill substrate voids to prevent underlayment from leaking.
- B. Concrete: Mechanically remove, according to manufacturer's written instructions, laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants that might impair underlayment bond.
1. Moisture Testing: Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates do not exceed a maximum moisture-vapor-emission rate of 3 lb. of water/1000 sq. ft. in 24 hours.
- C. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.
- D. Vacuum clean surfaces.
- E. Prime substrate in accordance with manufacturer's instructions. Allow to dry.
- F. Adhesion Tests: After substrate preparation, test substrate for adhesion with underlayment according to manufacturer's written instructions.

### 3.3 Application

- A. Apply underlayment in accordance with manufacturer's instructions.
1. Close areas to traffic during underlayment application and for time period after application recommended in writing by manufacturer.
  2. Coordinate application of components to provide optimum underlayment-to-substrate and intercoat adhesion.
  3. At substrate expansion, isolation, and other moving joints, allow joint of same width to continue through underlayment.
- B. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
- C. Pump or pour material onto substrate. Do not retemper or add water.
1. Pump, move, and screed while material is still highly flowable.
  2. Be careful not to create cold joints.
  3. Wear spiked shoes while working in wet material to avoid leaving marks.
- D. Where additional aggregate is used, add top layer of mix without aggregate, if needed, to level and smooth surface.
- E. If fine, feathered edge is desired, steel trowel edge after initial set, but before edge completely hardens.

### 3.4 Curing

- A. Once underlayment starts to set, prohibit foot traffic until final set is reached.
- B. Air cure in accordance with manufacturer's instructions.
- C. Do not install floor coverings over underlayment until after time period recommended in writing by underlayment manufacturer.
- D. Remove and replace underlayment areas that evidence lack of bond with substrate, including areas that emit a "hollow" sound when tapped.

### 3.5 Protection

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

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

- C. Protect underlayment from concentrated and rolling loads for remainder of construction period.

END OF SECTION

## **SECTION 04 72 00 - CAST STONE MASONRY**

### **PART 1 GENERAL**

- 1.1 Section Includes
  - A. Architectural cast stone.
- 1.2 Related Requirements
  - A. Section 04 73 00 - Manufactured Stone Masonry: Installation of cast stone in conjunction with manufactured stone masonry.
  - B. Section 07 92 00 - Joint Sealants: Sealing joints indicated to be left open for sealant.
- 1.3 Reference Standards
  - A. ACI CODE-318 - Building Code for Structural Concrete—Code Requirements and Commentary; 2025.
  - B. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2026.
  - C. ASTM A767/A767M - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement; 2024.
  - D. ASTM A884/A884M - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement; 2025.
  - E. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2024.
  - F. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2024a.
  - G. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2026.
  - H. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2024.
  - I. ASTM C642 - Standard Test Method for Density, Absorption, and Voids in Hardened Concrete; 2021.
  - J. ASTM C1364 - Standard Specification for Architectural Cast Stone; 2025.
  - K. ASTM C150/C150M - Standard Specification for Portland Cement; 2024.
- 1.4 Submittals
  - A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
  - B. Product Data: Test results of cast stone components made previously by the manufacturer.
  - C. Shop Drawings: Include elevations, dimensions, layouts, profiles, cross sections, reinforcement, exposed faces, arrangement of joints, anchoring methods, anchors, and piece numbers.
  - D. Mortar Color Selection Samples.
  - E. Verification Samples: Pieces of actual cast stone components not less than 6 inches square, illustrating range of color and texture to be anticipated in components furnished for the project.
  - F. Source Quality Control Test Reports.
  - G. Manufacturer's Qualification Data: Documentation showing compliance with specified requirements.

1.5 Quality Assurance

- A. Manufacturer Qualifications:
  - 1. Manufacturer's production facility currently holds a Plant Certification from the Cast Stone Institute or the Architectural Precast Association.
  - 2. Adequate plant capacity to furnish quality, sizes, and quantity of cast stone required without delaying progress of the work.

1.6 Delivery, Storage, and Handling

- A. Deliver cast stone components secured to shipping pallets and protected from damage and discoloration. Protect corners from damage.
- B. Number each piece individually to match shop drawings and schedule.
- C. Store cast stone components and installation materials in accordance with manufacturer's instructions.
- D. Store cast stone components on pallets with nonstaining, waterproof covers. Ventilate under covers to prevent condensation. Prevent contact with dirt.
- E. Protect cast stone components during handling and installation to prevent chipping, cracking, or other damage.
- F. Store mortar materials where contamination can be avoided.
- G. Schedule and coordinate production and delivery of cast stone components with unit masonry work to optimize on-site inventory and to avoid delaying the work.

PART 2 PRODUCTS

2.1 Manufacturers

- A. Architectural Cast Stone:
  - 1. Cultured Stone by Westlake.
  - 2. Continental Cast Stone.
  - 3. Arriscraft.

2.2 Architectural Cast Stone

- A. Cast Stone: Architectural concrete product manufactured to simulate appearance of natural granite, complying with ASTM C1364.
  - 1. Compressive Strength: As specified in ASTM C1364; calculate strength of pieces to be field cut at 80 percent of uncut piece.
  - 2. Freeze-Thaw Resistance: Demonstrated by laboratory testing in accordance with ASTM C1364.
  - 3. Surface Texture: Fine grained texture, with no bugholes, air voids, or other surface blemishes visible from distance of 20 feet.
  - 4. Color: Selected by Architect from manufacturer's full range.
  - 5. Remove cement film from exposed surfaces before packaging for shipment.
- B. Shapes: Provide shapes indicated on drawings.
  - 1. Variation from Any Dimension, Including Bow, Camber, and Twist: Maximum of plus/minus 1/8 inch or length divided by 360, whichever is greater, but not more than 1/4 inch.
  - 2. Unless otherwise indicated on drawings, provide:
    - a. Wash or slope of 1:12 on exterior horizontal surfaces.
    - b. Drips on projecting components, wherever possible.
    - c. Raised fillets at back of sills and at ends to be built in.
- C. Reinforcement: Provide reinforcement as required to withstand handling and structural stresses; comply with ACI CODE-318.



## 2.3 Materials

- A. Portland Cement: ASTM C150/C150M.
  - 1. For Mortar: Type I or II, except Type III may be used in cold weather.
- B. Coarse Aggregate: ASTM C33/C33M, except for gradation; granite, quartz, or limestone.
- C. Fine Aggregate: ASTM C33/C33M, except for gradation; natural or manufactured sands.
- D. Admixtures: ASTM C494/C494M.
- E. Water: Potable.
- F. Reinforcing Bars: ASTM A615/A615M, Grade 40 (40,000 psi), deformed bars, galvanized.
  - 1. Galvanized in accordance with ASTM A767/A767M, Class I.
- G. Steel Welded Wire Reinforcement: ASTM A1064/A1064M, galvanized or ASTM A884/A884M, epoxy coated.
- H. Embedded Anchors, Dowels, and Inserts: Type 304 stainless steel, of type and size as required for conditions.
- I. Mortar: Portland cement-lime, as specified in Section 04 05 11 ; do not use masonry cement.
- J. Cleaner: General-purpose cleaner designed for removing mortar and grout stains, efflorescence, and other construction stains from new masonry surfaces without discoloring or damaging masonry surfaces; approved for intended use by cast stone manufacturer and by cleaner manufacturer for use on cast stone and adjacent masonry materials.

## 2.4 Source Quality Control

- A. Test compressive strength and absorption of specimens selected at random from plant production.
  - 1. Test in accordance with ASTM C642.
  - 2. Select specimens at rate of 3 per 500 cubic feet, with a minimum of 3 per production week.
  - 3. Submit reports of tests by independent testing agency, showing compliance with requirements.

# PART 3 EXECUTION

## 3.1 Examination

- A. Examine construction to receive cast stone components. Notify Architect if construction is not acceptable.
- B. Do not begin installation until unacceptable conditions have been corrected.

## 3.2 Installation

- A. Install in accordance with manufacturer's instructions.
- B. Mechanically anchor cast stone units indicated; set remainder in mortar.
- C. Setting:
  - 1. Drench cast stone components with clear, running water immediately before installation.
  - 2. Set units in a full bed of mortar unless otherwise indicated.
  - 3. Fill vertical joints with mortar.
  - 4. Fill dowel holes and anchor slots completely with mortar or non-shrink grout.

## 3.3 Tolerances

- A. Joints: Make all joints 3/8 inch, except as otherwise detailed.
  - 1. Rake mortar joints 3/4 inch for pointing.
  - 2. Remove excess mortar from face of stone before pointing joints.

3. Point joints with mortar in layers 3/8 inch thick and tool to a slight concave profile.
4. Leave the following joints open for sealant:
  - a. Head joints in top courses, including copings, parapets, cornices, sills, and steps.
  - b. Joints in projecting units.
  - c. Joints between rigidly anchored units, including soffits, panels, and column covers.
  - d. Joints below lugged sills and stair treads.
  - e. Joints below ledge and relieving angles.
  - f. Joints labeled "expansion joint".

B. Installation Tolerances:

1. Variation from Plumb: Not more than 1/8 inch in 10 feet or 1/4 inch in 20 feet or more.
2. Variation from Level: Not more than 1/8 inch in 10 feet or 1/4 inch in 20 feet, or 3/8 inch maximum.
3. Variation in Joint Width: Not more than 1/8 inch in 36 inches or 1/4 of nominal joint width, whichever is less.
4. Variation in Plane Between Adjacent Surfaces (Lipping): Not more than 1/16 inch difference between planes of adjacent units or adjacent surfaces indicated to be flush with units.

3.4 Repair

- A. Repair chips and other surface damage noticeable when viewed in direct daylight at 20 feet.
- B. Repair with matching touch-up material provided by the manufacturer and in accordance with manufacturer's instructions.
- C. Repair methods and results subject to Architect 's approval.

3.5 Cleaning

- A. Keep cast stone components clean as work progresses.

3.6 Protection

- A. Protect completed work from damage.
- B. Clean, repair, or restore damaged or mortar-splashed work to condition of new work.

END OF SECTION

## **SECTION 04 73 00 - MANUFACTURED STONE MASONRY**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Adhered manufactured stone masonry veneer (AMSMV).
- B. Installation materials.
- C. Accessories.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 04 20 00 - Unit Masonry: Through-wall masonry flashings.
- B. Section 06 10 00 - Rough Carpentry: Wood stud backup for AMSMV; plywood and OSB sheathing.
- C. Section 07 25 00 - Weather Barriers: Water-resistive barrier over sheathing.
- D. Section 07 62 00 - Sheet Metal Flashing and Trim: Through-wall masonry flashings.
- E. Section 07 92 00 - Joint Sealants: Sealing control and expansion joints.
- F. Section 09 22 36 - Lath: Lathing and accessories for scratch coat.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM C926 - Standard Specification for Application of Portland Cement-Based Plaster; 2026.
- B. ASTM C1714/C1714M - Standard Specification for Preblended Dry Mortar Mix for Unit Masonry; 2026.
- C. ASTM C1780 - Standard Practice for Installation Methods for Cement-Based Adhered Masonry Veneer; 2026.
- D. ICC-ES AC511 - Acceptance Criteria for Adhered Manufactured Stone Masonry Veneer; 2018, with Editorial Revision (2021).
- E. NCMA (AMSV) - Installation Guide and Detailing Options for Compliance with ASTM C1780 for Adhered Manufactured Stone Veneer; Current Edition, Including All Revisions.
- F. NCMA TEK 20-01 - Key Installation Checkpoints for Manufactured Stone Veneer; 2014.
- G. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

#### **1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for AMSMV units, mortar, and lath, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Verification Samples: For each finish product specified, two samples, minimum size 12 inches square, representing actual product, color, patterns and texture.
- D. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.5 MOCK-UPS

- A. Construct mock-up panel 8 feet long by 6 feet high; include AMSMV, mortar, accessories, substrate, and representative wall openings.
- B. Locate where directed.
- C. Mock-up may remain as part of the work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Prevent mechanical damage and contamination by other materials.
- C. Protect products from precipitation combined with freezing temperatures. Do not install products with visible frozen moisture.

1.7 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

1.8 WARRANTY

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

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Adhered Manufactured Stone Masonry Veneer (AMSMV):
  - 1. Any current producer member of the Masonry Veneer Manufacturers Association.

2.2 MORTAR APPLICATIONS

- A. Use only factory premixed packaged dry materials for mortar, with addition of water only at project site.
  - 1. Exception: If a specified mix design is not available in a premixed dry package, provide equivalent mix design using standard non-premixed materials.
- B. Mortar Color: Natural gray unless otherwise indicated.
- C. Scratch Coat Mortars: Scratch coat mortars for application directly to metal lath.
  - 1. Prepackaged/Preblended: ASTM C1714/C1714M, Type N.
- D. Setting Bed Mortars: Setting bed used to adhere AMSMV units to scratch coat mortar or to bondable concrete or concrete masonry.
  - 1. Prepackaged/Preblended: ASTM C1714/C1714M, Type S.
- E. Pointing Mortars: Pointing or grouting mortars used to fill the joints between individual AMSMV units once the setting bed mortar has sufficiently cured.
  - 1. Prepackaged/Preblended: ASTM C1714/C1714M, Type N.

2.3 ACCESSORIES

- A. Lath: See Section 09 22 36.
- B. Water-Resistive Barrier: See Section 07 27 00.
- C. Flashings: See Section 04 20 00.

- D. Cleaning Solution: Non-acidic, not harmful to AMSMV work or adjacent materials, approved by AMSMV manufacturer.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that backup wall system construction complies with AMSMV manufacturer's instructions, NCMA (AMSV), NCMA TEK 20-01, ASTM C1780 and ICC-ES AC51.
- B. Verify that related items provided under other sections are properly sized and located.

#### 3.2 PREPARATION

- A. Dampen masonry surfaces to reduce excessive suction.

#### 3.3 INSTALLATION - WATER-RESISTIVE BARRIER

- A. Where required by AMSMV manufacturer's instructions, NCMA (AMSV), NCMA TEK 20-01, ASTM C1780 or ICC-ES AC51, install 1 layers of water-resistive barrier over the top of the water-resistive barrier integral to the exterior sheathing in accordance with water-resistive barrier manufacturer's instructions. Integrate water-resistive barrier with all flashing accessories, adjacent water-resistive barriers, doors, windows, penetrations, and cladding transitions.
- B. Lap water-resistive barrier minimum 6 inches at vertical joints.
- C. Lap water-resistive barrier minimum 16 inches past the corner in both directions at inside and outside corners.

#### 3.4 INSTALLATION - SCRATCH COAT

- A. Apply mortar scratch coat of 1/2 inch nominal to cover metal lath in accordance with ASTM C926. Scratch surface when somewhat firm. If scratch coat dries before applying setting bed mortar and AMSMV, moisten scratch coat by misting it with water.

#### 3.5 INSTALLATION - AMSMV

- A. Install AMSMV with a cementitious mortar setting bed to a scratch coat backing surface, in accordance with AMSMV manufacturer's instructions, NCMA (AMSV), NCMA TEK 20-01, ASTM C1780 and ICC-ES AC51.
- B. Mortar Joints: Concave.
- C. Sills: Install sills where located on drawings.
- D. Caps: Install capstones where located on drawings.
- E. Seal all joints at wall openings and penetrations with sealant approved for use with AMSMV.

#### 3.6 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 AMSMV 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.

3.7 CONTROL AND EXPANSION JOINTS

- A. Form joints as detailed on drawings.

3.8 TOLERANCES

- A. Maximum Variation from Unit to Adjacent Unit: 1/16 inch.
- B. Maximum Variation from Plane of Wall: 1/4 inch in 10 feet and 1/2 inch in 20 feet or more.
- C. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
- D. Maximum Variation from Level Coursing: 1/8 inch in 3 feet and 1/4 inch in 10 feet; 1/2 inch in 30 feet.

3.9 CUTTING AND FITTING

- A. Cut and fit for pipes and conduit. Coordinate with other sections of work to provide correct size, shape, and location.

3.10 CLEANING

- A. Remove excess mortar and mortar smears as work progresses.
- B. Replace defective mortar. Match adjacent work.
- C. Clean AMSMV in accordance with manufacturer's installation instructions.
- D. Clean soiled surfaces with cleaning solution.
- E. Use non-metallic tools in cleaning operations.

3.11 PROTECTION

- A. Protect finished work from rain during and for 48 hours following installation.
- B. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION

## **SECTION 06 10 00 - ROUGH CARPENTRY**

### **PART 1 GENERAL**

#### **1.1 Section Includes**

- A. Structural dimension lumber framing.
- B. Nonstructural dimension lumber framing.
- C. Rough opening framing for doors, windows, and roof openings.
- D. Sheathing.
- E. Subflooring.
- F. Underlayment.
- G. Roof-mounted curbs.
- H. Roofing nailers.
- I. Roofing cant strips.
- J. Preservative treated wood materials.
- K. Fire retardant treated wood materials.
- L. Communications and electrical room mounting boards.
- M. Concealed wood blocking, nailers, and supports.

#### **1.2 Related Requirements**

- A. Section 07 62 00 - Sheet Metal Flashing and Trim: Sill flashings.

#### **1.3 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; 2025a.
- B. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2026).
- C. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2025.
- D. ASTM D3498 - Standard Specification for Adhesives for Field-Gluing Wood Structural Panels (Plywood or Oriented Strand Board) to Wood Based Floor System Framing; 2019a.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- F. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- G. ASTM E2357 - Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies; 2025.
- H. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2024, with Errata.
- I. ICC-ES AC310 - Acceptance Criteria for Water-Resistive Membranes Factory-Bonded to Wood-Based Structural Sheathing, Used as Water-Resistive Barriers; 2008, with Editorial Revision (2021).

- J. PS 1 - Structural Plywood; 2023.
- K. PS 2 - Performance Standard for Wood Structural Panels; 2019.
- L. PS 20 - American Softwood Lumber Standard; 2025.
- 1.4 Submittals
  - A. See Section 01 31 50 - Submittals for submittal procedures.
  - B. Product Data: Provide technical data on wood preservative materials and application instructions.
  - C. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.
- 1.5 Delivery, Storage, and Handling
  - A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
  - B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, and installation.
- 1.6 Warranty
  - A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

## PART 2 PRODUCTS

- 2.1 General Requirements
  - A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
    - 1. Species: Southern Pine, unless otherwise indicated.
    - 2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
    - 3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at [www.alsc.org](http://www.alsc.org), and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- 2.2 Dimension Lumber For Concealed Applications
  - A. Sizes: Nominal sizes as indicated on drawings, S4S.
  - B. Moisture Content: S-dry or MC19.
  - C. Stud Framing (2 by 2 through 2 by 6 ):
    - 1. Species: Southern Pine.
    - 2. Grade: No. 1.
  - D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 ):
    - 1. Species: Southern Pine.
    - 2. Grade: No. 1 and Better.
  - E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
    - 1. Lumber: S4S, No. 2 or Standard Grade.
    - 2. Boards: Standard or No. 3.
- 2.3 Construction Panels
  - A. Subfloor/Underlayment Combination: Rated single floor.
    - 1. Plywood: PS 1.
    - 2. Oriented Strand Board: PS 2.



3. Bond Classification: Exposure 1.
  4. Span Rating: 48.
  5. Edges: Tongue and groove.
- B. Subflooring: Oriented strand board wood structural panel; PS 2, rated Single Floor.
1. Bond Classification: Exterior.
  2. Performance Category: 19/32 PERF CAT.
  3. Span Rating: 24.
  4. Edges: Tongue and groove.
  5. Exposure Time: Sheathing will not delaminate or require sanding due to moisture absorption from exposure to weather for up to 200 days.
  6. Warranty: Manufacturer's standard lifetime limited warranty against manufacturing defects and that panels will not delaminate or require sanding due to moisture absorption damage from exposure to weather for up to the stated period.
- C. Roof Sheathing: PS 2 type, rated Structural I Sheathing.
1. Bond Classification: Exposure 1.
  2. Span Rating: 20.
  3. Performance Category: 3/4 PERF CAT.
- D. Wall Sheathing: PS 2 type.
1. Bond Classification: Exterior.
  2. Grade: Structural I Sheathing.
  3. Span Rating: 24.
  4. Performance Category: 5/16 PERF CAT.
  5. Edge Profile: Square edge.
- E. Wall Sheathing: Oriented strand board structural wood panel with factory laminated rigid plastic insulation board, and water-resistive barrier layer.
1. Sheathing Panel: PS 2, Exposure 1.
  2. Thickness: 1 inch.
  3. Thermal Resistance, R-Value: 3.6, minimum.
  4. Insulation Board: Polyisocyanurate (ISO) insulation board; comply with ASTM C1289, Type II, Class 2 - Faced with coated polymer-bonded glass fiber mat facers on both major surfaces of the core foam.
  5. Integral Water-Resistive Barrier: Sheet material qualifying as a Grade D water-resistive barrier; complying with ICC-ES AC310.
  6. Water Vapor Permeance of Water-Resistive Barrier: 12 to 16 perms, minimum, when tested in accordance with ASTM E96/E96M Procedure B.
  7. Maximum Allowable Air Leakage of Assembly: Complying with ASTM E2357, 0.04 cfm/sq ft at a pressure differential of 1.57 psf.
  8. Edge Profile: Square.
  9. Seam Tape: Manufacturer's standard pressure-sensitive, self-adhering, cold-applied, seam tape.
  10. Products:
    - a. Huber Engineered Woods, LLC; ZIP System R-Sheathing: [www.huberwood.com/#sle](http://www.huberwood.com/#sle).
- F. Communications and Electrical Room Mounting Boards: PS 1 A-D plywood, or medium density fiberboard; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
- G. Other Applications:
1. Plywood Concealed From View But Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.
  2. Plywood Exposed to View But Not Exposed to Weather: PS 1, A-D, or better.
  3. Other Locations: PS 1, C-D Plugged or better.
- 2.4 Accessories
- A. Metal and Finish of Fasteners:
1. Fire-Retardant-Treated Wood:

- a. Comply with manufacturer's recommendations.
- 2. Untreated Wood: Unfinished steel.
- B. Die-Stamped Connectors: 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. 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.
- D. Sill Gasket on Top of Foundation Wall: 3/8 inch thick, closed-cell plastic foam.
  - 1. Width: 3-1/2 inches.
  - 2. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 30 days of weather exposure.
- E. Sill Flashing: See Section 07 62 00.
- F. Subfloor Adhesives: Gap-filling construction adhesive for bonding wood structural panels to wood-based floor system framing; complying with ASTM D3498.
- G. Seam, Perimeter and Membrane Flashing Tape: Polyethylene-faced material with acrylic adhesive.
  - 1. Thickness: 12 mils, 0.012 inch.
  - 2. Compliant with AAMA 711-13
  - 3. Products:
    - a. Huber Engineered Woods, LLC; ZIP System Flashing Tape: [www.huberwood.com/#sle](http://www.huberwood.com/#sle).

### PART 3 EXECUTION

#### 3.1 Preparation

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches and seal.
- B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.
- C. Coordinate installation of rough carpentry members specified in other sections.

#### 3.2 Installation - General

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

#### 3.3 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 AWC (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.

### 3.4 Blocking, Nailers, and Supports

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

### 3.5 Roof-Related Carpentry

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
- B. Provide wood curb at each roof opening except where specifically indicated otherwise; form corners by alternating lapping side members.

### 3.6 Installation of Construction Panels

- A. Subflooring/Underlayment Combination: Glue and nail to framing; staples are not permitted.
- B. Roof Sheathing: Secure 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: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.
- D. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
  - 1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
  - 2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
  - 3. Install adjacent boards without gaps.
  - 4. Size: 48 by 96 inches, installed horizontally at ceiling height.

3.7 Site-Applied Wood Treatment

- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
- B. Allow preservative to dry prior to erecting members.

3.8 Tolerances

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.
- C. Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

END OF SECTION

## **SECTION 06 20 00 - FINISH CARPENTRY**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Finish carpentry items.
- B. Hardware.
- C. Shop finishing.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 09 91 23 - Interior Painting.

#### **1.3 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. PS 1 - Structural Plywood; 2023.

#### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate the work with plumbing rough-in, electrical rough-in, and installation of associated and adjacent components.
- B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

#### **1.5 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data:
  - 1. Provide manufacturer's product data, storage and handling instructions for factory-fabricated units.
  - 2. Provide data on wood treatment.
  - 3. Provide instructions for attachment hardware and finish hardware.
- C. 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).
  - 2. Include certification program label.

#### **1.6 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
  - 1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.
- B. Quality Certification:
  - 1. Provide labels or certificates indicating that work complies with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade or grades specified.
  - 2. Provide designated labels on shop drawings as required by certification program.
  - 3. Provide designated labels on installed products as required by certification program.
  - 4. Submit certifications upon completion of installation that verifies this work is in compliance with specified requirements.

1.7 MOCK-UPS

- A. Provide column wrap mock-up, full size, illustrating finish, construction, and \_\_\_\_\_.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver factory-fabricated units to project site in original packages, containers or bundles bearing brand name and identification.
- B. Store finish carpentry items under cover, elevated above grade, and in a dry, well-ventilated area not exposed to heat or sunlight.
- C. Protect from moisture damage.
- D. Handle materials and products to prevent damage to edges, ends, or surfaces.

PART 2 PRODUCTS

2.1 FINISH CARPENTRY ITEMS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Surface Burning Characteristics: Provide materials having fire and smoke properties as required by applicable code.
- C. Exterior Woodwork Items:
  - 1. Window Casings and Moldings: Softwood; prepare for paint finish.
  - 2. Brackets, Finials, and Pediments: Prepare for paint finish.
- D. Interior Woodwork Items:
  - 1. Moldings, Bases, Casings, and Miscellaneous Trim: Clear white pine; prepare for paint finish.
  - 2. Door, Glazed Light, and Pocket Door Frames: White birch; prepare for paint finish.
  - 3. Window Sills: Clear fir; prepare for transparent finish.
  - 4. Stairs, Balustrades, and Handrails: Clear fir; prepare for stained finish.
  - 5. Loose Shelving: Birch plywood; prepare for paint finish.

2.2 SHEET MATERIALS

- A. Softwood Plywood, Not Exposed to View: Any face species, medium density fiberboard core; PS 1 Grade A-B, glue type as recommended for application.

2.3 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Lumber for Shimming and Blocking: Softwood lumber of indicated species.
- C. Wood Filler: Solvent base, tinted to match surface finish color.

2.4 HARDWARE

- A. Vanity Brackets: Fixed, ADA-Compliant, face-of-stud mounting.
  - 1. Material: Steel; formed compound shapes.
- B. Countertop Brackets: Fixed, Flat, top of knee wall mounting.
  - 1. Material: Steel plates.
  - 2. Finish: Manufacturer's standard, factory-applied, textured powder coat.
  - 3. Color: Black.
  - 4. Support Length: 15 inches.
  - 5. Plate Thickness and Width: 3/8 inch by 2-1/2 inches.

- 6. Products:
  - a. Centerline Brackets; Standard Bracket SB4H: [www.countertopbracket.com/#sle](http://www.countertopbracket.com/#sle).
- C. Vanity Brackets: Fixed, cantilevered support leg, face-of-stud mounting.
  - 1. Materials: Steel L-shapes.
  - 2. Finish: Manufacturer's standard, factory-applied, textured powder coat.
  - 3. Color: Black.
  - 4. Angle Depth: 2 inches.
  - 5. Width: 28 inches.
  - 6. Support Length: 18 inches.

## 2.5 SITE-FINISHING MATERIALS

## 2.6 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. Fit exposed sheet material edges with 3/8 inch matching hardwood edging. Use one piece for full length only.
- C. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

## 2.7 SHOP FINISHING

- A. Sand work smooth and set exposed nails and screws.
- B. Apply wood filler in exposed nail and screw indentations.
- C. On items to receive transparent finishes, use wood filler that matches surrounding surfaces and is of type recommended for the applicable finish.
- D. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:
  - 1. Transparent:
    - a. System - 1, Lacquer, Nitrocellulose.
    - b. Sheen: Flat.
  - 2. Opaque:
    - a. System - 1, Lacquer, Nitrocellulose.
    - b. Color: As selected by Architect.
    - c. Sheen: Flat.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

### 3.2 INSTALLATION

- A. Install custom fabrications in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Install factory-fabricated units in accordance with manufacturer's printed installation instructions.
- C. Set and secure materials and components in place, plumb and level.

- D. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

### 3.3 PREPARATION FOR SITE FINISHING

- A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

END OF SECTION



## **SECTION 07 11 13 - BITUMINOUS DAMPPROOFING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Bituminous dampproofing.
- B. Protection boards.
- C. Drainage panels.

#### **1.2 REFERENCE STANDARDS**

- A. ASTM D41/D41M - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011 (Reapproved 2016).
- B. ASTM D1187/D1187M - Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal; 1997 (Reapproved 2018).
- C. ASTM D1227/D1227M - Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing; 2013, with Editorial Revision (2019).

#### **1.3 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Provide properties of primer, bitumen, and mastics.

#### **1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing the work of this section with at least three years of documented experience.

#### **1.5 FIELD CONDITIONS**

- A. Maintain ambient temperatures above 40 degrees F for 24 hours before and during application until dampproofing has cured.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Bituminous Dampproofing Manufacturers:
  - 1. BASF Corporation: [www.basf.com](http://www.basf.com).
  - 2. Euclid Chemical Company; an RPM company: [www.euclidchemical.com](http://www.euclidchemical.com).
  - 3. Henry Company: [www.henry.com](http://www.henry.com).
  - 4. Karnak Corporation: [www.karnakcorp.com/#sle](http://www.karnakcorp.com/#sle).
  - 5. W. R. Meadows, Inc: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).

#### **2.2 BITUMINOUS DAMPPROOFING**

- A. Bituminous Dampproofing: Cold-applied water-based emulsion; asphalt with mineral colloid or chemical emulsifying agent; with or without fiber reinforcement; asbestos-free; suitable for application on vertical and horizontal surfaces.
  - 1. Asphalt-Base Emulsion for Metal Protective Coating: ASTM D1187/D1187M, Type I - Continuous water exposure within few days after drying or Type II - Continuous weather exposure after drying.

2. Emulsified Asphalt for Roofing Protective Coating: ASTM D1227/D1227M, Type II, Class 1 - Mineral colloid emulsifying agents with non-asbestos fibers.
3. VOC Content: Not more than permitted by local, State, and federal regulations.
4. Applied Thickness: 1/16 inch, minimum, wet film.

- B. Primers, Mastics, and Related Materials: Type as recommended by dampproofing manufacturer.

## 2.3 BITUMEN MATERIALS

- A. Cold Asphaltic Type:
1. Bitumen: Emulsified asphalt, ASTM D1227/D1227M, without fibrous reinforcement, Type III, Class 1 or 2.
  2. Asphalt Primer: ASTM D41/D41M, compatible with substrate.

## 2.4 ACCESSORIES

- A. Drainage Panel: 1/4-inch thick formed plastic, hollowed sandwich.
- B. Protection Board: 1/4-inch thick polystyrene foam sheet.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions are acceptable prior to starting this work.
- B. Verify substrate surfaces are durable, free of matter detrimental to adhesion or application of dampproofing system.
- C. Verify that items penetrating surfaces to receive dampproofing are securely installed.

### 3.2 PREPARATION

- A. Protect adjacent surfaces not designated to receive dampproofing.
- B. Clean and prepare surfaces to receive dampproofing in accordance with manufacturer's instructions.
- C. Do not apply dampproofing to surfaces unacceptable to manufacturer.
- D. Apply mastic to seal penetrations, small cracks, or minor honeycombs in substrate.

### 3.3 APPLICATION

- A. Foundation Walls: Apply two coats of asphalt dampproofing.
- B. Apply bitumen with roller.
- C. Apply bitumen at a temperature limited by equiviscous temperature (EVT) plus or minus 25 degrees F; do not exceed finish blowing temperature for four hours.
- D. Apply from 2 inches below finish grade elevation down to top of footings.
- E. Seal items watertight with mastic, that project through dampproofing surface.
- F. Place drainage panel directly over dampproofing, butt joints, and position to ensure downward drainage.
- G. Scribe and cut boards around projections, penetrations, and interruptions.

END OF SECTION

## SECTION 07 21 00 - THERMAL INSULATION

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Board insulation and integral vapor retarder at perimeter foundation wall and exterior wall behind wall finish.
- B. Batt insulation and vapor retarder in exterior wall, ceiling, and roof construction.
- C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

#### 1.2 RELATED REQUIREMENTS

- A. Section 07 53 00 - Elastomeric Membrane Roofing: Installation requirements for board insulation over low slope roof deck.

#### 1.3 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; 2024.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- D. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2026.

#### 1.4 SUBMITTALS

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

#### 1.5 FIELD CONDITIONS

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

### PART 2 PRODUCTS

#### 2.1 FOAM BOARD INSULATION MATERIALS

- A. Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces.
  - 1. Type and Compressive Resistance: Type IV, 25 psi (173 kPa), minimum.
  - 2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
  - 3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
  - 4. Type and Thermal Resistance, R-value: Type IV, 5.0 (0.88), minimum, per 1 inch thickness at 75 degrees F mean temperature.
  - 5. Board Edges: Square.
  - 6. Type and Water Absorption: Type XII, 0.3 percent by volume, maximum, by total immersion.
  - 7. Products:
    - a. DuPont de Nemours, Inc; Styrofoam Brand Square Edge: [building.dupont.com/#sle](http://building.dupont.com/#sle).

- b. Kingspan Insulation LLC; GreenGuard GG25-LG XPS Insulation Board:  
[www.kingspan.com/#sle](http://www.kingspan.com/#sle).
- c. Owens Corning Corporation; FOAMULAR Type \_\_\_\_\_ Extruded Polystyrene (XPS)  
Insulation: [www.owenscorning.com/en-us/#sle](http://www.owenscorning.com/en-us/#sle).

## 2.2 MINERAL FIBER BLANKET INSULATION MATERIALS

- A. Glass Fiber Batt Insulation - Unfaced: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
  - 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
  - 2. Smoke Developed Index: 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. Thermal Resistance: R-value - as indicated..
  - 6. Facing: Unfaced.
  - 7. Products:
    - a. CertainTeed Corporation; Sustainable Insulation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
    - b. Johns Manville; Formaldehyde-Free: [www.jm.com/#sle](http://www.jm.com/#sle).
    - c. Knauf Insulation; Performance+ EcoRoll Insulation: [www.knaufinsulation.com/#sle](http://www.knaufinsulation.com/#sle).
    - d. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation:  
[www.ocbuildingspec.com/#sle](http://www.ocbuildingspec.com/#sle).
- B. Glass Fiber Batt Insulation - Kraft Faced: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
  - 1. Type II(non-reflective faced), Class C(faced surface not rated for flame propagation), Category 1(membrane is a vapopr barrier).
  - 2. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
  - 3. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
  - 4. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
  - 5. Formaldehyde Content: Zero.
  - 6. Thermal Resistance: R-valueas Indicated..
  - 7. Facing: Asphalt treated Kraft paper, one side.
  - 8. Products:
    - a. CertainTeed Corporation; Sustainable Insulation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
    - b. Johns Manville; Formaldehyde-Free: [www.jm.com/#sle](http://www.jm.com/#sle).
    - c. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation:  
[www.ocbuildingspec.com/#sle](http://www.ocbuildingspec.com/#sle).
    - d. Knauf Insulation - EcoRoll or EcoBatt.
- C. Glass Fiber Batt Insulation - Foil Faced: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
  - 1. Type III(reflective faced), Class B(faced surface with a flame propagation resistance of 0.12 W/sq. cm), Category 1(membrane is a vapopr barrier).
  - 2. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
  - 3. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
  - 4. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
  - 5. Formaldehyde Content: Zero.
  - 6. Thermal Resistance: R-value as indicated.
  - 7. Facing: Aluminum foil, one side.
  - 8. Products:
    - a. CertainTeed Corporation; Sustainable Insulation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
    - b. Johns Manville; Formaldehyde-Free: [www.jm.com/#sle](http://www.jm.com/#sle).
    - c. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation:  
[www.ocbuildingspec.com/#sle](http://www.ocbuildingspec.com/#sle).
    - d. Knauf Insulation - EcoRoll or EcoBatt.

## 2.3 ACCESSORIES

- A. Sheet Vapor Retarder: Polyethylene film for above grade application, 10 mil, 0.010 inch thick.
- B. Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
- C. Insulation Fasteners: Appropriate for purpose intended and recommended for use by manufacturer..
- D. Adhesive: Type recommended by insulation manufacturer for application.

## PART 3 EXECUTION

### 3.1 EXAMINATION

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

### 3.2 BOARD INSTALLATION AT FOUNDATION PERIMETER

- A. Apply adhesive to back of boards:
  - 1. Three continuous beads per board length.
  - 2. Full bed 1/8 inch thick.
- B. Install boards horizontally on foundation perimeter.
  - 1. Butt edges and ends tightly to adjacent boards and to protrusions.
- C. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

### 3.3 BOARD INSTALLATION AT EXTERIOR WALLS

- A. Apply adhesive to back of boards:
  - 1. Three continuous beads per board length.
  - 2. Full bed 1/8 inch thick.
- B. Install boards horizontally on walls.
  - 1. Place boards to maximize adhesive contact.
  - 2. Install in running bond pattern.
  - 3. Butt edges and ends tightly to adjacent boards and protrusions.
- C. Extend boards over expansion joints, unbonded to wall on one side of joint.
- D. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- E. Tape insulation board joints.

### 3.4 BOARD INSTALLATION OVER LOW SLOPE ROOF DECK

- A. Board Installation Over Roof Deck, General:
  - 1. See applicable roofing specification section for specific board installation requirements.
  - 2. Fasten insulation to deck in accordance with roofing manufacturer's written instructions and applicable Factory Mutual requirements.
  - 3. Do not apply more insulation than can be covered with roofing on the same day.

### 3.5 BATT INSTALLATION

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.

- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
- E. Install with factory-applied vapor retarder membrane facing warm side of building spaces. Lap ends and side flanges of membrane over framing members.
- F. Staple or nail facing flanges in place at maximum 6 inches on center.
- G. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
- H. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
- I. Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
- J. For metal-framed wall cavities where cavity heights exceed 96 inches, support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.
- K. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces including but not limited to all door and window openings where required to prevent gaps in insulation using the following materials:
- L. Glass-Fiber Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft..

### 3.6 PROTECTION

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

END OF SECTION

## **SECTION 07 21 26 - BLOWN INSULATION**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Attic: Blown insulation pneumatically placed into truss spaces.

#### **1.2 REFERENCE STANDARDS**

- A. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- B. ASTM C764 - Standard Specification for Mineral Fiber Loose-Fill Thermal Insulation; 2025.
- C. ASTM C1015 - Standard Practice for Installation of Cellulosic and Mineral Fiber Loose-Fill Thermal Insulation; 2017 (Reapproved 2025).

#### **1.3 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and limitations.
- C. Certificates: Certify that products of this section meet or exceed specified requirements.
- D. Manufacturer's Installation Instructions: Indicate procedure for preparation and installation.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Blown Insulation:
  - 1. CertainTeed Corporation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
  - 2. GreenFiber: [www.greenfiber.com/#sle](http://www.greenfiber.com/#sle).
  - 3. Johns Manville: [www.jm.com/#sle](http://www.jm.com/#sle).
  - 4. Knauf Insulation; Performance+ Jet Stream Ultra Blowing Wool: [www.knaufinsulation.com/#sle](http://www.knaufinsulation.com/#sle).
  - 5. Nu-Wool: <https://nuwool.com/#sle>.
  - 6. Thermafiber, Inc: [www.thermafiber.com/#sle](http://www.thermafiber.com/#sle).
  - 7. Owens Corning Corporation: [www.ocbuildingspec.com/#sle](http://www.ocbuildingspec.com/#sle).
  - 8. \_\_\_\_\_.

#### **2.2 MATERIALS**

- A. Applications: Provide blown insulation in attic, exterior walls, and ceiling as indicated on drawings.
- B. Thermal Resistance [R-value]: Provided minimum values in accordance with applicable edition of ASHRAE Std 90.1 I-P for envelope requirements of building location and climate zone.
- C. Blown Insulation: ASTM C764, fiberglass type, nodulated for pour and bulk for pneumatic placement.
  - 1. Thermal Resistance (R-value: 11.0 sq ft hr deg F/BTU inch, minimum.

#### **2.3 Accessories**

- A. Roof Ventilation Baffles: Prefabricated ventilation channels for placement under roof sheathing with baffles to prevent wind-washing.
  - 1. Material: Polyvinyl chloride (PVC).

2. Roof Joist/Truss Spacing: 24 inch on center, nominal.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that substrate and adjacent materials are dry and ready to receive insulation.
- B. Verify that light fixtures have thermal cut-out device to restrict over-heating in soffit or ceiling spaces.
- C. Verify spaces are unobstructed to allow for proper placement of insulation.

#### 3.2 INSTALLATION

- A. Install insulation and ventilation baffle in accordance with ASTM C1015 and manufacturer's instructions.
- B. Place insulation pneumatically to completely fill truss spaces.
- C. Place insulation against baffles, and do not impede natural attic ventilation to soffit.
- D. Completely fill intended spaces leaving no gaps or voids.

#### 3.3 CLEANING

- A. Remove loose insulation residue.

END OF SECTION



## **SECTION 07 26 00 - VAPOR RETARDERS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Vapor retarders.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Vapor retarder under concrete slabs on grade.
- B. Section 07 21 00 - Thermal Insulation: Vapor retarder installed in conjunction with insulation products.

#### **1.3 DEFINITIONS**

- A. Vapor Retarder: Airtight barrier made of material that is relatively water vapor impermeable, to degree specified, with seams and joints sealed to adjacent surfaces.
- B. Vapor Retarder Class: A measure of a material or assembly's ability to limit the amount of moisture that passes through that material or assembly. Vapor retarder class is defined using Procedure A, Desiccant Method at 73 degrees F and 50 percent Relative Humidity (RH), in accordance with ASTM E96/E96M and ICC (IBC)-2018, as follows:
  - 1. Class I: 0.1 perm or less.
  - 2. Class II: Greater than 0.1 perm to 1.0 perm.
  - 3. Class III: Greater than 1.0 perm to 10 perms.

#### **1.4 REFERENCE STANDARDS**

- A. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- B. ICC (IBC)-2018 - International Building Code; 2018.

#### **1.5 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Provide data on material characteristics, performance criteria, limitations, and installation methods.
- C. Manufacturer's Installation Instructions: Indicate preparation, installation methods, storage and handling criteria, and special procedures, including perimeter, penetration and other conditions requiring special attention.
- D.

#### **1.6 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience, and approved by manufacturer.
- B. Preinstallation Meeting: Convene a preinstallation meeting two weeks before start of installation of reinforced vapor retarders. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and installer. Review installation, protection, and coordination with other work.

#### **1.7 FIELD CONDITIONS**

- A. Maintain temperature and humidity recommended by materials manufacturers before, during, and after installation.

1.8 COORDINATION

- A. Division 22 and Division 26 for penetrations through vapor retarder.
  - 1. Penetrations through the vapor retarder shall be coordinated and sequenced to allow proper flashing and sealing of all penetrations prior to placement of concrete.
  - 2. Penetrations through the vapor retarder shall be flashed and sealed prior to placement of concrete.
  - 3. Utility penetrations through the vapor retarder shall be a minimum of 12-inches apart.

PART 2 PRODUCTS

2.1 VAPOR RETARDERS

- A. Underslab Vapor Retarders: Refer to Vapor Mitigation documents

2.2 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

3.1 EXAMINATION

- A. Verify that surfaces and conditions comply with requirements of this section.

3.2 PREPARATION

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.

3.3 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.

3.4 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Do not cover installed vapor retarders until required inspections have been completed.
- C. Take digital photographs of each portion of installation prior to covering up vapor retarders.

3.5 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION

## **SECTION 07 27 00 - AIR BARRIERS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Building Wrap.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Sheathing with integral air barrier.
- B. Section 07 62 00 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with air barriers.

#### **1.3 DEFINITIONS**

- A. Air Barrier: Airtight barrier made of material that is virtually air impermeable but water vapor permeable, both to amount as specified, with sealed seams and sealed joints to adjacent surfaces.

#### **1.4 REFERENCE STANDARDS**

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- B. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- C. ASTM E2178 - Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials; 2021a.

#### **1.5 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on material characteristics and performance criteria.
  - 1. For building wrap, include data on air and water vapor permeance based on testing according to referenced standards.

### **PART 2 PRODUCTS**

#### **2.1 AIR BARRIER MATERIALS (AIR IMPERMEABLE AND WATER VAPOR PERMEABLE)**

- A. Air Barrier Sheet, Mechanically Fastened:
  - 1. Air Permeance: 0.001 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.
  - 2. Water Vapor Permeance: 30 perms, minimum, when tested in accordance with ASTM E96/E96M using Method B.
  - 3. Ultraviolet (UV) and Weathering Resistance: Approved by manufacturer for up to 90 days of weather exposure.
  - 4. Surface Burning Characteristics: Flame spread index of 25 or less, and smoke developed index of 50 or less, Class A, when tested in accordance with ASTM E84.
  - 5. Seam and Perimeter Tape: Polyethylene self-adhering type, 2-1/2 inches wide, compatible with sheet material; unless otherwise indicated.
  - 6. Products:
    - a. Basis-of-Design Product: DuPont de Nemours, Inc; Tyvek Construction Wrap with FlexWrap, StraightFlash, VersaFlange, Tyvek Wrap Caps, and Tyvek Tape: [building.dupont.com/#sle](http://building.dupont.com/#sle). Or a comparable product by one of the following:
    - b. Henry, a Carlisle Company; WeatherSmart: [www.henry.com/#sle](http://www.henry.com/#sle).
    - c. Kimberly-Clark, distributed by Wolf Home Products: [www.wolfhomeproducts.com/#sle](http://www.wolfhomeproducts.com/#sle).

- d. TYPAR; TYPAR BuildingWrap: [www.typar.com/#sle](http://www.typar.com/#sle).

## 2.2 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Air Barrier and Adjacent Substrates: As indicated or in compliance with air barrier manufacturer's installation instructions.
- B. Flexible Flashing: Self-adhesive sheet flashing.
  - 1. Width: 4 inches.
  - 2. Ultraviolet (UV) and Weathering Resistance: Approved by manufacturer for up to 30 days of weather exposure.
  - 3. Products:
    - a. DuPont de Nemours, Inc; DuPont FlexWrap: [www.dupont.com/building/#sle](http://www.dupont.com/building/#sle).
    - b. DuPont de Nemours, Inc; DuPont StraightFlash: [www.dupont.com/building/#sle](http://www.dupont.com/building/#sle).
    - c. DuPont de Nemours, Inc; DuPont VersaFlange: [www.dupont.com/building/#sle](http://www.dupont.com/building/#sle).
    - d. Or approved equal.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install materials in accordance with manufacturer's installation instructions.
- B. Apply sealants and adhesives within recommended temperature range in accordance with manufacturer's installation instructions.
- C. Mechanically Fastened Sheets - On Exterior:
  - 1. Install sheets shingle fashion to shed water, with seams generally horizontal.
  - 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. For applications indicated to be airtight, seal seams, laps, penetrations, tears, and cuts with self-adhesive tape; use only large-headed, gasketed fasteners as recommended by manufacturer.
  - 5. Install air barrier underneath jamb flashings.
  - 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 Air Barriers:
  - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto air barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
  - 2. At openings 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 with nonflanged frames, seal air 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 air barrier extending at least 2 inches beyond face of jambs; seal air barrier to flashing.
  - 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
  - 6. Service and Other Penetrations: Form flashing around penetrating item and seal to air barrier surface.

### 3.2 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements
- B. Notify manufacturer's designated representative to obtain required periodic observations of weather barrier assembly installation.
- C. Do not cover installed air barriers until required inspections have been completed and the written field service report has been received by the Contractor and Architect..

3.3 PROTECTION

- A. Protect installed air barrier.
- B. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 07 31 13 - ASPHALT SHINGLES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Asphalt shingle roofing.
- B. Flexible sheet membranes for eave protection, underlayment, and valley protection.
- C. Flashing.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Roof sheathing.
- B. Section 07 62 00 - Sheet Metal Flashing and Trim: Edge and cap flashings.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2025.
- B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2025.
- C. ASTM D3462/D3462M - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules; 2023.
- D. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2024).
- E. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- F. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2025.
- G. NRCA (RM) - The NRCA Roofing Manual; 2026.
- H. UL (DIR) - Online Certifications Directory; Current Edition.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Provide data indicating material characteristics, performance criteria, limitations, and \_\_\_\_\_.
- C. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern ; for color selection.
- D. Warranty Documentation: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- E. Metal flashing products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.

1.5 QUALITY ASSURANCE

1.6 FIELD CONDITIONS

- A. Do not install shingles, eave protection membrane, underlayment, or \_\_\_\_\_ when surface, ambient air, wind chill, or \_\_\_\_\_ temperatures are below 45 degrees F.

1.7 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a 1 -year period after Date of Substantial Completion.
- C. Provide 30 -year manufacturer's limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Asphalt Shingles:
1. CertainTeed Corporation; Landmark PRO: [www.certainteed.com](http://www.certainteed.com).
  2. GAF; Timberline HDZ Shingles: [www.gaf.com/#sle](http://www.gaf.com/#sle).
  3. Malarkey Roofing; Vista: [www.malarkeyroofing.com/#sle](http://www.malarkeyroofing.com/#sle).
  4. Owens Corning Corp: [www.owenscorning.com/#sle](http://www.owenscorning.com/#sle).
  5. Iko Industries: [www.iko.com](http://www.iko.com).
  6. Substitutions: See Section 01 60 00 - Product Requirements.

2.2 ASPHALT SHINGLES

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M.
1. Fire Resistance: Class A, complying with ASTM E108.
  2. Algae resistant.
  3. Style: Square.
  4. Color: As selected by Architect.

2.3 SHEET MATERIALS

- A. Underlayment: Self-adhering, rubber-modified asphalt sheet complying with ASTM D1970/D1970M; with strippable release film and woven polypropylene sheet top surface.
1. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
  2. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
  3. Water Vapor Permeance: 0.067 perm, when tested in accordance with ASTM E96/E96M, Procedure A (desiccant method).
  4. Performance: Meet or exceed requirements for ASTM D226/D226M, Type II asphalt-saturated organic felt.
  5. Functional Temperature Range: From minus 70 degrees F to 212 degrees F.
  6. Products:
    - a. GCP Applied Technologies Inc.; Grace Ice & Water Shield: [www.gcpat.com](http://www.gcpat.com).
    - b. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Underlayment: Asphalt-saturated organic roofing felt, unperforated, complying with ASTM D226/D226M, Type II, No. 30.

2.4 ACCESSORIES

- A. Roofing Nails: Standard round wire shingle type, galvanized steel or aluminum roofing nails, minimum 3/8-inch head diameter, 12-gauge, 0.109-inch nail shank diameter, 1-1/2 inches long and complying with ASTM F1667.



- B. Asphalt Roof Cement: ASTM D4586/D4586M, asbestos-free.
- C. Plastic Ridge Vents: Extruded plastic with vent openings do not permit direct water or weather entry; flanged to receive shingles.

## 2.5 METAL FLASHINGS

- A. Metal Flashings: Provide sheet metal eave edge, gable edge, ridge, ridge vents, open valley flashing, chimney flashing, dormer flashing, step, kickout, and other flashing indicated.
  - 1. Form flashings to protect roofing materials from physical damage and shed water.
  - 2. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
  - 3. Hem exposed edges of flashings minimum 1/4 inch on underside.
  - 4. Kickout Flashing
    - a. Product: J'd Out Kickout flashing.
    - b. Color: As selected from manufacturer's full range.
- B. Aluminum Sheet Metal: Prefinished aluminum, 26-gauge, 0.017-inch minimum thickness; PVC coating, color as selected from full range.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions prior to starting this work.
- B. Verify roof deck is of sufficient thickness to accept fasteners.
- C. Verify roof penetrations and plumbing stacks are in place and flashed to deck surface.
- D. Verify roof openings are correctly framed.
- E. Verify deck surfaces are dry, free of ridges, warps, or voids.

### 3.2 PREPARATION

- A. Seal roof deck joints wider than 1/16 inch as recommended by shingle manufacturer.
- B. At areas where eave protection membrane is to be adhered to substrate, fill knot holes and surface cracks with latex filler.
- C. Broom clean deck surfaces before installing underlayment or eave protection.
- D. Install eave edge and gable edge flashings tight with fascia boards, weather lap joints 2 inches and seal with roof cement, and secure flange with nails spaced 6 inches on center.

### 3.3 INSTALLATION

### 3.4 CLEANING

- A. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

### 3.5 INSTALLATION - EAVE PROTECTION MEMBRANE

- A. Install eave protection membrane from eave edge at least 2 feet up-slope beyond interior face of exterior wall.

- B. Starting from lower edge of starter strip, lay additional 36-inch wide strips in lap cement to produce a 2-ply membrane. Weather lap plies minimum 19 inches and nail in place. Lap ends minimum 6 inches, and stagger end joints of each consecutive ply.

### 3.6 INSTALLATION - UNDERLAYMENT

- A. Underlayment at Roof Slopes up to 4:12: Install two layers of underlayment over area not protected by eave protection, with ends and edges weather lapped minimum 6 inches; stagger end laps of each consecutive layer, and nail in place.
- B. Underlayment at Roof Slopes Greater than 4:12: Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches; stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches over eave protection.
- C. Weather lap and seal watertight with roof cement any items projecting through or mounted on roof.

### 3.7 INSTALLATION - METAL FLASHING AND ACCESSORIES

- A. Install flashings in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Weather lap metal flashing joints at least 2 inches and seal joints weathertight.
- C. Secure metal flashing in place with nails at 6 inches on center, and conceal fasteners.
- D. Items Projecting Through or Mounted on Roofing: Flash and seal weathertight with roof cement.

### 3.8 PROTECTION

- A. Do not permit traffic over finished roof surface; protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged asphalt shingles or accessories before Date of Substantial Completion.

END OF SECTION

## **SECTION 07 46 17 - ALUMINUM SOFFIT**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Aluminum soffit

#### **1.2 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Dimensions, physical properties, and typical details.
  - 3. Storage and handling requirements and recommendations.
  - 4. Installation instructions and recommendations.

#### **1.3 DELIVERY, STORAGE, AND HANDLING**

- A. Store products off the ground, within manufacturer's temperature and environmental limits, away from moisture, protected from traffic and construction activities, and minimize on-site storage prior to installation.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Aluminum Soffit Manufacturers:
  - 1. Quality Edge; TruVent Hidden Vent Soffit: [www.qualityedge.com](http://www.qualityedge.com).
  - 2. Substitutions: See Section 01 60 00 - Product Requirements.

#### **2.2 ALUMINUM SOFFIT**

- A. Aluminum Soffit:
  - 1. Material: Precoated aluminum sheet, 0.019 inch, minimum base metal thickness.
  - 2. Profile: TruVent Hidden Vent Soffit.
  - 3. Dimensions: 12 inch wide by 12 feet long.
  - 4. Ventilation: Provide manufacturer's standard of net free area.
  - 5. Color: White
  - 6. Soffit Accessories: Provide coordinating accessories made of same material as required for complete and proper installation.

### **PART 3 EXECUTION**

#### **3.1 PREPARATION**

- A. Surface Preparation: Prepare surfaces as recommended by manufacturer.
- B. Protect surrounding areas and adjacent surfaces during execution of this work.

3.2 INSTALLATION

- A. Install aluminum soffit and trim in accordance with manufacturer's written instructions.
- B. Exterior Soffit Vents: Install according to manufacturer's written instructions; provide vent area specified.

3.3 CLEANING

- A. See Section 01 70 00 - Execution 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.
- C. Remove excess materials and debris from project site.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

## **SECTION 07 46 46 - FIBER-CEMENT SIDING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Fiber-cement siding.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Siding substrate.
- B. Section 06 10 00 - Rough Carpentry: Water-resistive barrier under siding.
- C. Section 07 92 00 - Joint Sealants: Sealing joints between siding and adjacent construction and fixtures.
- D. Section 09 91 13 - Exterior Painting: Field painting.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM C1186 - Standard Specification for Flat Fiber-Cement Sheets; 2022.

#### **1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's data sheets on each product to be used, including:
  - 1. Manufacturer's requirements for related materials to be installed by others.
  - 2. Preparation instructions and recommendations.
  - 3. Storage and handling requirements and recommendations.
  - 4. Installation methods, including nail patterns.
- C. Test Report: Applicable model code authority evaluation report (e.g. ICC-ES).
- D. Installer's qualification statement.
- E. Maintenance Instructions: Periodic inspection recommendations and maintenance procedures.
- F. Warranty: Submit copy of manufacturer's warranty, made out in Owner's name, showing that it has been registered with manufacturer.

#### **1.5 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing work of type specified in this section with not less than three years of experience.
- B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.
  - 1. Build mockup of typical wall area as shown on Drawings.
  - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver and store materials in manufacturer's unopened packaging, with labels intact, until ready for installation.
- B. Store materials under dry and waterproof cover, well ventilated, and elevated above grade on a flat surface.

1.7 FIELD CONDITIONS

- A. Do not install panels when air temperature or relative humidity are outside manufacturer's limits.

1.8 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide manufacturer warranty for years as indicated under Fiber-Cement Siding article sub-headings for "Warranty". Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 FIBER-CEMENT SIDING

- A. Lap Siding: Individual horizontal boards made of cement and cellulose fiber formed under high pressure with integral surface texture, complying with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment.
  - 1. Style: Standard lap style.
  - 2. Texture: Smooth.
  - 3. Length: 12 feet, nominal.
  - 4. Width (Height): 5-1/4 inches.
  - 5. Thickness: 5/16 inch, nominal.
  - 6. Finish: Factory applied primer.
  - 7. Warranty: 50 year limited; transferable.
  - 8. Products:
    - a. Allura, a division of Plycem USA, Inc; \_\_\_\_\_: [www.allurausa.com/#sle](http://www.allurausa.com/#sle).
    - b. James Hardie Building Products, Inc; \_\_\_\_\_: [www.jameshardie.com/#sle](http://www.jameshardie.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

2.2 ACCESSORIES

- A. Trim: Same material and texture as siding.
- B. Fasteners: Galvanized or corrosion resistant; length as required to penetrate, 1-1/4 inches, minimum.
- C. Sealant: Elastomeric, polyurethane or silyl-terminated polyether/polyurethane, and capable of being painted.
- D. Finish Paint: Latex house paint acceptable to siding manufacturer; primer recommended by paint manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrate, clean and repair as required to eliminate conditions that would be detrimental to proper installation.
- B. Verify that water-resistant barrier has been installed over substrate completely and correctly; see Section 05 40 00.
- C. Do not begin until unacceptable conditions have been corrected.
- D. If substrate preparation is responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Protect surrounding areas and adjacent surfaces during execution of this work.
- B. Install Sheet Metal Flashing:
  - 1. Above door and window trim and casings.
  - 2. Above horizontal trim in field of siding.

3.3 INSTALLATION

- A. Install siding in accordance with manufacturer's instructions and recommendations.
  - 1. Read warranty and comply with terms necessary to maintain warranty coverage.
  - 2. Install in accordance with conditions stated in model code evaluation report applicable to location of project.
  - 3. Use trim details as indicated on drawings.
  - 4. Touch up field cut edges before installing.
  - 5. Pre-drill nail holes if necessary to prevent breakage.
- B. Allow space for thermal movement between both ends of siding panels that butt against trim; seal joint between panel and trim with specified sealant.
- C. Joints in Horizontal Siding: Avoid joints in lap siding except at corners; where joints are inevitable stagger joints between successive courses.
- D. Do not install siding less than 6 inches from ground surface, or closer than 1 inch to roofs, patios, porches, and other surfaces where water may collect.
- E. After installation, seal joints except lap joints of lap siding; seal around penetrations, and paint exposed cut edges.
- F. Finish Painting: See Section 09 91 13.

3.4 PROTECTION

- A. Protect installed products until Date of Substantial Completion.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

This Page is Intentionally Left Blank



## **SECTION 07 53 00 - ELASTOMERIC MEMBRANE ROOFING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Elastomeric roofing membrane application.
- B. Insulation, flat, tapered, and flat or tapered.
- C. Vapor retarder.
- D. Cover boards.
- E. Roofing cant strips, stack boots, roofing expansion joints, and walkway pads.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Wood cant strips.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2024.
- B. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2025.
- C. ASTM D4637/D4637M - Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane; 2015 (Reapproved 2021).
- D. FM (AG) - FM Approval Guide; Current Edition.
- E. FM DS 1-28 - Wind Design; 2015, with Editorial Revision (2025).
- F. UL (FRD) - Fire Resistance Directory; Current Edition.

#### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all affected installers; review preparation and installation procedures and coordination and scheduling necessary for related work.

#### **1.5 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, surfacing, and fasteners.
- C. Shop Drawings: Indicate joint or termination detail conditions and conditions of interface with other materials.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- F. Manufacturer's qualification statement.

- G. Installer's qualification statement.
- H. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- B. Source Limitations: Obtain components for membrane roofing system from or approved by roofing membrane manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original containers, dry and undamaged, with seals and labels intact.
- B. Store materials in weather protected environment, clear of ground and moisture.
- C. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.
- D. Protect foam insulation from direct exposure to sunlight.

1.8 FIELD CONDITIONS

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not apply roofing membrane when ambient temperature is below 40 degrees F.
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.
- E. Schedule applications so that no partially completed sections of roof are left exposed at end of workday.
- F. Protect the interior of the building against water damage at all times while the roofing repair work is in progress.
- G. Protection: Schedule and execute all work to prevent damage to adjacent surfaces not to receive roof coating materials. Provide full coverage of adjacent metal surfaces. Repair damage caused to existing substrates. Clean stains from masonry and other adjacent surfaces upon completion of the work. Damage repair and cleaning performed at Contractor's expense. Provide necessary protection and avoid traffic on completed roofing work.

1.9 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Provide manufacturer's Total Roofing System Warranty, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
  - 1. Special warranty includes roofing membrane, insulation, cover boards, base flashings, roofing accessories including adhesives, sealants, fasteners and plates, metal edgings and copings, and other components of membrane roofing system.
  - 2. Warranty period is 10 years materials and labor after date of final completion, and 5 additional years for roofing membrane.
  - 3. Submit a sample copy of roofing warranty which will be executed upon completion of the Work, prior to award of the contract.

4. This warranty shall not deprive the Owner of other rights the Owner may have under of the provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

C. Correct defective work within a two year period after Date of Substantial Completion.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. EPDM Membrane Materials:
  1. Carlisle Roofing Systems, Inc: [www.carlisle-syntec.com/#sle](http://www.carlisle-syntec.com/#sle).
  2. Firestone Building Products: [www.firestonebpco.com/#sle](http://www.firestonebpco.com/#sle).
  3. GenFlex Roofing Systems, LLC: [www.genflex.com/#sle](http://www.genflex.com/#sle).
  4. Johns Manville: [www.jm.com/#sle](http://www.jm.com/#sle).
  5. Mule-Hide Products Co, Inc: [www.mulehide.com/#sle](http://www.mulehide.com/#sle).
  6. Versico Roofing Systems: [www.versico.com/#sle](http://www.versico.com/#sle).
  7. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Insulation:
  1. Dow: [www.dow.com/#sle](http://www.dow.com/#sle).
  2. GAF: [www.gaf.com/#sle](http://www.gaf.com/#sle).
  3. Johns Manville; \_\_\_\_\_: [www.jm.com/#sle](http://www.jm.com/#sle).
  4. Owens Corning Corporation: [www.owenscorning.com/#sle](http://www.owenscorning.com/#sle).
  5. Versico Roofing Systems; SecurShield Insulation: [www.versico.com/#sle](http://www.versico.com/#sle).

### 2.2 ROOFING

- A. Elastomeric Membrane Roofing: One ply membrane, fully adhered, over vapor retarder and insulation.
- B. Roofing Assembly Requirements:
  1. Roof-Ceiling Fire Resistance Rating: Comply with UL (FRD) certified Assembly Design No. \_\_\_\_\_.
  2. Factory Mutual Classification: Class 1 and windstorm resistance of 1-90, in accordance with FM DS 1-28.
  3. Insulation Thermal Resistance (R-Value): 5.6 per inch, minimum; provide insulation of thickness required.
- C. Acceptable Insulation Types - Constant Thickness Application: Any of types specified.
  1. Minimum 2 layers of polyisocyanurate board.
- D. Acceptable Insulation Types - Tapered Application: Any of types specified.
  1. Uniform thickness composite or polyisocyanurate board covered with tapered polyisocyanurate board.

### 2.3 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

- A. Membrane: Ethylene-propylene-diene-monomer (EPDM); non-reinforced; complying with minimum properties of ASTM D4637/D4637M.
  1. Thickness: 60 mil, 0.060 inch.
  2. Sheet Width: 76 inches, maximum.
  3. Color: White.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Fasteners: As recommended by and approved by membrane manufacturer.
- D. Vapor Retarder: Reinforced Kraft paper laminate, complying with requirements of fire rating classification; compatible with roofing and insulation materials.
  1. Fire-retardant adhesive.

- E. Flexible Flashing Material: Same material as membrane.

## 2.4 COVER BOARDS

- A. Cover Boards: Glass-mat faced gypsum panels complying with ASTM C1177/C1177M.
1. 1/2 inch thick, factory primed.
  2. Products:
    - a. Georgia-Pacific; DensDeck: [www.densdeck.com/#sle](http://www.densdeck.com/#sle).
    - b. CertainTeed Corporation..
    - c. National Gypsum Company.
    - d. United States Gypsum Company.

## 2.5 INSULATION

- A. Polyisocyanurate (ISO) Board Insulation: Rigid cellular foam, complying with ASTM C1289.
1. Classifications:
    - a. Type II: Faced with either cellulosic facers or glass fiber mat facers on both major surfaces of the core foam.
      - 1) Class 1 - Faced with glass fiber reinforced cellulosic facers on both major surfaces of the core foam.
      - 2) Compressive Strength: Classes 1-2-3, Grade 1 - 16 psi (110 kPa), minimum.
      - 3) Thermal Resistance, R-value: At 1-1/2 inches thick; Class 1, Grades 1-2-3 - 8.4 (1.48) at 75 degrees F.
  2. Board Size: 48 by 96 inches.
  3. Board Thickness: 1.5 inch.
  4. Tapered Board: Slope as indicated; minimum thickness 1/2 inch; fabricate of fewest layers possible.
  5. Board Edges: Square.

## 2.6 ACCESSORIES

- A. Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane.
- B. Insulation Joint Tape: Glass fiber reinforced type as recommended by insulation manufacturer, compatible with roofing materials; 6 inches wide; self adhering.
- C. Insulation Fasteners: Appropriate for purpose intended and approved by Factory Mutual and roofing manufacturer.
- D. Membrane Adhesive: As recommended by membrane manufacturer.
- E. Insulation Adhesive: As recommended by insulation manufacturer.
- F. Sealants: As recommended by membrane manufacturer.
- G. Walkway Pads: Suitable for maintenance traffic, contrasting color or otherwise visually distinctive from roof membrane.
1. Size: Manufacturer's standard size(s).
  2. Surface Color: White.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.

- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.
- F. Beginning installation means acceptance of existing substrate.

### 3.2 PREPARATION - WOOD DECK

- A. Verify flatness and tightness of joints in wood decking; fill knot holes with latex filler.

### 3.3 INSTALLATION - INSULATION, UNDER MEMBRANE

- A. Install vapor retarder to deck surface with adhesive in accordance with manufacturer's instructions.
  - 1. Extend vapor retarder under cant strips and blocking to deck edge.
  - 2. Install flexible flashing from vapor retarder to air seal material of wall construction, lap and seal to provide continuity of the air barrier plane.
- B. Ensure vapor retarder is clean and dry, continuous, and ready for application of insulation.
- C. Attachment of Insulation: Embed insulation in adhesive in full contact, in accordance with roofing and insulation manufacturers' instructions.
- D. Cover Boards: Mechanically fasten cover boards in accordance with roofing manufacturer's instructions and FM (AG) Factory Mutual requirements.
  - 1. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.
- E. Lay subsequent layers of insulation with joints staggered minimum 6 inches from joints of preceding layer.
- F. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions.
- G. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- H. Tape joints of insulation in accordance with roofing and insulation manufacturers' instructions.
- I. Do not apply more insulation than can be covered with membrane in same day.

### 3.4 INSTALLATION - MEMBRANE

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching. Allow to relax before installing.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Fully Adhered Application: Apply adhesive to substrate at rate required by manufacturer. Fully embed membrane in adhesive except in areas directly over or within 3 inches of expansion joints. Fully adhere one roll before proceeding to adjacent rolls.
- D. Overlap edges and ends and seal seams by contact adhesive, minimum 3 inches. Seal permanently waterproof. Apply uniform bead of sealant to joint edge.
- E. Mechanical Attachment: Install membrane and mechanical attachment devices in accordance with manufacturer's instructions.
- F. At intersections with vertical surfaces:
  - 1. Extend membrane over cant strips and up a minimum of 4 inches onto vertical surfaces.
  - 2. Fully adhere flexible flashing over membrane and up to nailing strips.
- G. Around roof penetrations, seal flanges and flashings with flexible flashing.

- H. Coordinate installation of roof drains and sumps and related flashings.
- I. Coordinate installation of associated counterflashings installed under other sections.
- J. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- K. Repair tears, voids, and lapped seams in roofing that do not comply with requirements.

3.5 INSTALLATION - MEMBRANE FINISH COATING/COVER

- A. Install walkway pads. Space pad joints to permit drainage.

3.6 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Provide daily on-site attendance of roofing and insulation manufacturer's representative during installation of this work.

3.7 CLEANING

- A. See Section 01 70 00 - Execution Requirements for additional requirements.
- B. Remove bituminous markings from finished surfaces.
- C. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and comply with their documented instructions.
- D. Repair or replace defaced or damaged finishes caused by work of this section.

3.8 PROTECTION

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

3.9 INSPECTION AND WARRANTY

- A. Upon completion of the installation, an inspection shall be made by a representative of the roofing manufacturer to ascertain that the roofing system has been installed according to the manufacturer's published specifications and details.
- B. Warranty to be issued upon approval of the installation.

END OF SECTION

## **SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

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

#### **1.2 REFERENCE STANDARDS**

- A. AAMA 611 - Specification for Anodized Architectural Aluminum; 2026.
- B. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- 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 (Reapproved 2024).
- 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.

#### **1.3 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct at Project site.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- D. Samples: For each exposed product and for each color and texture specified.

#### **1.5 QUALITY ASSURANCE**

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
- B. Fabricator and Installer Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
  - 1. For copings and roof edge flashings that are SPRI ES-1 tested, shop shall be listed as able to fabricate required details as tested and approved.

1.6 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. SPRI Wind Design Standard: Manufacture and install copings and roof edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressure:
  - 1. Design Pressure: As indicated on Drawings.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 SHEET MATERIALS

- A. Anodized Aluminum: ASTM B209/B209M, 3005 alloy, H12 or H14 temper; 0.032 inch thick; clear anodized finish.
  - 1. Clear Anodized Finish: AAMA 611, AA-M12C22A41, Class I, clear anodic coating not less than 0.7 mil, 0.0007 inch thick.
- B. Stainless Steel: ASTM A666/A666M, Type 304 alloy, soft temper, 28 gauge, 0.0156 inch thick; smooth No. 4 - Brushed finish.

2.3 FABRICATION

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
  - 1. Obtain field measurements for accurate fit before shop fabrication.
  - 2. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  - 3. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
  - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
  - 2. Use lapped expansion joints only where indicated on Drawings.
- C. Fabricate cleats of same material as sheet, of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured., interlocking with sheet.
- D. Form pieces in longest possible lengths.
- E. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- F. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.



- G. Tin edges of copper sheet to be soldered; solder shop formed metal joints, and after soldering, remove flux, wipe and wash solder joints clean; provide weathertight joints.
- H. Fabricate corners from one piece with minimum 18-inch long legs; seam for rigidity, seal with sealant.
- I. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.
- J. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.
- K. Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

## 2.4 GUTTERS AND DOWNSPOUTS

- A. Gutters: SMACNA (ASMM) Rectangular profile.
- B. Downspouts: Rectangular profile.
- C. Gutters and Downspouts: Size indicated on drawings.
- D. Accessories: Profiled to suit gutters and downspouts.
  - 1. Anchorage Devices: In accordance with SMACNA (ASMM) requirements.
  - 2. Downspout Supports: Straps.
  - 3. Gutter Accessory: Continuous, removable leaf screen with sheet metal frame and hardware cloth screen.
- E. Downspout Boots: Plastic. Where indicated on Civil drawings.
- F. Seal metal joints.

## 2.5 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.
- B. Through-Wall Flashing: Fabricate continuous flashings in minimum 96-inch-long, but not exceeding 12-foot-long, sections, under copings, and at shelf angles. Fabricate discontinuous lintel, sill, and similar flashings to extend 6 inches beyond each side of wall openings; and form with 2-inch-high, end dams. Fabricate from Stainless Steel.
- C. Opening Flashings in Frame Construction: Fabricate head, sill, jamb, and similar flashings to extend 4 inches beyond wall openings. Form head and sill flashing with 2-inch-high, end dams. Fabricate from Anodized Aluminum.

## 2.6 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Slip Sheet: Rosin-sized sheathing paper.
- C. Primer Type: Zinc chromate.
- 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

### 3.1 EXAMINATION

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

### 3.2 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.

### 3.3 UNDERLAYMENT INSTALLATION

- A. Felt Underlayment: Install felt underlayment, wrinkle free, using adhesive to minimize use of mechanical fasteners under sheet metal flashing and trim. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.
- B. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, according to manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.
- C. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller. Cover underlayment within 14 days.

### 3.4 INSTALLATION

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.
- B. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 3. Space cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
  - 4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
  - 5. Torch cutting of sheet metal flashing and trim is not permitted.
- C. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
  - 1. Coat concealed side of uncoated-aluminum sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

- D. Wall Flashing Installation: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- E. Opening Flashings in Frame Construction: Install continuous head, sill, and similar flashings to extend 4 inches beyond wall openings.
- F. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- G. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws. For manufactured items not less than recommended by fastener manufacturer to achieve maximum pull-out resistance
- H. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- I. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets with solder to width of 1-1/2 inches; however, reduce pre-tinning where pre-tinned surface would show in completed Work.
  - 1. Retain metals in first subparagraph below that are specified in Part 2; revise to suit Project. Soldering requires removal of painted, coated, or lacquered finishes. Although unusual, zinc-coated (galvanized) steel, a type of metallic-coated steel, may be soldered.
  - 2. Do not solder metallic-coated steel and aluminum sheet.
  - 3. Do not use torches for soldering.
  - 4. Heat surfaces to receive solder, and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
  - 5. Stainless-Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.
- J. Rivets: Rivet joints in uncoated aluminum where necessary for strength.
- K. Connect downspouts to downspout boots, and grout connection watertight.

### 3.5 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 07 71 00 - ROOF SPECIALTIES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Manufactured roof specialties, including copings and fascias.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 07 72 00 - Roof Accessories: Manufactured curbs, roof hatches, and snow guards.

#### **1.3 REFERENCE STANDARDS**

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- B. ANSI/SPRI/FM 4435/ES-1 - Test Standard for Edge Systems Used with Low Slope Roofing Systems; 2022.
- C. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2024).
- D. NRCA (RM) - The NRCA Roofing Manual; 2026.
- E. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

#### **1.4 SUBMITTALS**

- A. See Section 01 for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.
- D. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- E. Samples: For each type of roof specialty and for each color and texture specified submit a sample illustrating component shape, finish, and color.
- F. Maintenance Data: For roofing specialties to include in maintenance manuals.

### **PART 2 PRODUCTS**

#### **2.1 PERFORMANCE REQUIREMENTS**

- A. FM Approvals' Listing: Manufacture and install copings and roof-edge specialties that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with FM Approvals' markings.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

## 2.2 COMPONENTS

- A. Roof Edge Flashings: Factory fabricated to sizes required; corners mitered; concealed fasteners.
  1. Configuration: Fascia, cant, and edge securement for roof membrane.
  2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test methods RE-1 and RE-2 to positive and negative design wind pressure as defined by applicable local building code.
  3. Material: Formed aluminum sheet, 0.050 inch thick, minimum.
  4. Color: As selected by Architect from manufacturer's standard range.
- B. Copings: Factory fabricated to sizes required; corners mitered; concealed fasteners.
  1. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of same material, thickness, and finish as cap; concealed stainless steel fasteners.
  2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test method RE-3 to positive and negative design wind pressure as defined by applicable local building code.
  3. Wall Width: As indicated on drawings.
  4. Material: Formed aluminum sheet, 0.040 inch thick, minimum.
  5. Color: As selected by Architect from manufacturer's standard range.
- C. Pipe and Penetration Flashing: Base of rounded aluminum, compatible with sheet metal roof systems, and capable of accommodating pipes sized between 3/8 inch and 12 inches.
  1. Caps: EPDM.
  2. Color: As indicated on drawings.
- D. Roof Penetration Sealing Systems: Premanufactured components and accessories as required to preserve integrity of roofing system and maintain roof warranty; suitable for conduits and roofing system to be installed; designed to accommodate existing penetrations where applicable.

## 2.3 FINISHES

- A. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system; color as indicated.

## 2.4 ACCESSORIES

- A. Sealant for Joints in Linear Components: As recommended by component manufacturer.
- B. Adhesive for Anchoring to Roof Membrane: Compatible with roof membrane and approved by roof membrane manufacturer.
- C. Insulation Board Adhesive: Two-component, low-rise polyurethane foam adhesive used for adhering insulation to low slope roof deck materials.
- D. Asphalt Roof Cement: ASTM D4586/D4586M, Type I, asbestos-free.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that deck, curbs, roof membrane, base flashing, and other items affecting work of this Section are in place and positioned correctly.
  1. See Section 07 72 00 for information on roofing related accessories.

### 3.2 INSTALLATION

- A. Install components in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.

- B. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
    - 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
    - 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
    - 3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
    - 4. Torch cutting of roof specialties is not permitted.
    - 5. Do not use graphite pencils to mark metal surfaces.
  - C. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
    - 1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
    - 2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
  - D. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
    - 1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise indicated on Drawings.
    - 2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
  - E. Fastener Sizes: Use fasteners of sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
  - F. Seal joints within components when required by component manufacturer. Do not install sealants at temperatures below 40 deg F.
  - G. Anchor components securely.
  - H. Coordinate installation of components of this section with installation of roofing membrane and base flashings.
  - I. Coordinate installation of sealants and roofing cement with work of this section to ensure water tightness.
  - J. Coordinate installation of flashing flanges into reglets.
- 3.3 CLEANING AND PROTECTION
- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
  - B. Remove temporary protective coverings and strippable films as roof specialties are installed.

END OF SECTION

This Page is Intentionally Left Blank



## **SECTION 07 72 00 - ROOF ACCESSORIES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Roof hatches.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 07 71 00 - Roof Specialties: Other manufactured roof specialty items.

#### **1.3 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. 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.
- D. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
  - 1. Snow Guards: Submit design calculations for loadings and spacings based on manufacturer testing.
- E. Warranty Documentation:
  - 1. Submit manufacturer warranty.
  - 2. Ensure that forms have been completed in Owner's name and registered with manufacturer.
  - 3. Submit documentation that roof accessories are acceptable to roofing manufacturer, and do not limit the roofing warranty.
- F. Maintenance Data: For roofing specialties to include in maintenance manuals.

#### **1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products under cover and elevated above grade.

### **PART 2 PRODUCTS**

#### **2.1 ROOF HATCHES AND VENTS**

- A. Roof Hatch Manufacturers:
  - 1. Activar Construction Products Group, Inc. - JL Industries; Diamond Series Roof Hatches, Model RHDG: [www.activarcpg.com/#sle](http://www.activarcpg.com/#sle).
  - 2. Acudor Products Inc; Galvanized Steel Roof Hatch: [www.acudor.com/#sle](http://www.acudor.com/#sle).
  - 3. Babcock-Davis; Personnel: [www.babcockdavis.com/#sle](http://www.babcockdavis.com/#sle).
  - 4. Bilco Company; Type TB (various types and special size): [www.bilco.com/#sle](http://www.bilco.com/#sle).
  - 5. Precision Ladders, LLC; Model PH-G: [www.precisionladders.com/#sle](http://www.precisionladders.com/#sle).
  - 6. Substitutions: See Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.
- B. Fastener Sizes: Use fasteners of sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

3.4 CLEANING

- A. Clean installed work to like-new condition.
- B. Remove temporary protective coverings and strippable films as roof specialties are installed.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

## **SECTION 07 81 00 - APPLIED FIRE PROTECTION**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Applied fire protection of interior structural steel not exposed to damage or moisture.
- B. Preparation of applied fire protection for application of exposed overcoat finish specified elsewhere.

#### **1.2 RELATED REQUIREMENTS**

- A. Structural Steel Framing specifications found on the Structural Drawings.
- B. Section 07 84 00 - Firestopping.
- C. Section 09 21 16 - Gypsum Board Assemblies: Gypsum board fireproofing.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- B. ASTM E736/E736M - Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members; 2019 (Reapproved 2023).
- C. ASTM E759/E759M - Standard Test Method for Effect of Deflection on Sprayed Fire-Resistive Material Applied to Structural Members; 1992 (Reapproved 2023).
- D. ASTM E760/E760M - Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members; 1992 (Reapproved 2023).
- E. ASTM E859/E859M - Standard Test Method for Air Erosion of Sprayed Fire-Resistive Materials (SFRMs) Applied to Structural Members; 2023.
- F. ASTM E937/E937M - Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members; 1993 (Reapproved 2023).
- G. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).

#### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with placement of ceiling hanger tabs, mechanical component hangers, and electrical components.
- B. Preinstallation Meeting: Convene one week before starting work of this section.

#### **1.5 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittals procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Provide data indicating product characteristics.

- D. Manufacturer's Certificate: Certify that applied fireproofing products meet or exceed requirements of Contract Documents.
- E. Test Reports: Reports from reputable independent testing agencies for proposed products, indicating compliance with specified criteria, conducted under conditions similar to those on project, as follows:
  - 1. Bond strength.
  - 2. Bond impact.
  - 3. Compressive strength.
  - 4. Fire tests using substrate materials similar those on project.
- F. Manufacturer's Installation Instructions: Indicate special procedures.
- G. Field Quality Control Submittals: Submit field test report.
- H. Manufacturer's Qualification Statement.
- I. Installer's Qualification Statement.
- J. Submit schedule of thicknesses for each member with reference to UL Designs.

#### 1.6 QUALITY ASSURANCE

- A. Products execution and fireproofing thicknesses shall conform to the applicable code and UL requirements for the required fire resistance ratings.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience and approved by manufacturer

#### 1.7 MOCK-UP

- A. Construct mock-up, 100 square feet in size.
- B. Comply with project requirements for fire ratings.
- C. Locate where directed.
- D. Examine installation within one hour of application to determine variances from specified requirements due to shrinkage, temperature, and humidity.
- E. Where shrinkage and cracking are evident, adjust mixture and method of application as necessary; remove materials and re-construct mock-up.
- F. Mock-up may remain as part of the Work.

#### 1.8 FIELD CONDITIONS

- A. Do not apply fireproofing when temperature of substrate material and surrounding air is below 40 degrees F or when temperature is predicted to be below said temperature for 24 hours after application.
- B. Provide ventilation in areas to receive fireproofing during application and 24 hours afterward, to dry applied material.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Applied Fire Protection:
  - 1. GCP Applied Technologies; \_\_\_\_\_: [www.gcpat.com/#sle](http://www.gcpat.com/#sle).
  - 2. Isolatek International Corp; \_\_\_\_\_: [www.isolatek.com/#sle](http://www.isolatek.com/#sle).

3. Southwest Fireproofing Products Company; \_\_\_\_: [www.sfrm.com/#sle](http://www.sfrm.com/#sle).
4. Carboline Company; a subsidiary of RPM International.
5. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.2 APPLIED FIRE PROTECTION ASSEMBLIES

- A. Provide assemblies as indicated on drawings.

## 2.3 MATERIALS

- A. Applied Fire Protection Material for Interior Applications, Concealed: Manufacturer's standard factory mixed material, which when combined with water is capable of providing indicated fire resistance, and complying with following requirements:
  1. Bond Strength: 150 pounds per square foot, minimum, when tested in accordance with ASTM E736/E736M when set and dry.
  2. Compressive Strength: 8.33 pounds per square inch, minimum.
  3. Effect of Impact on Bonding: No cracking, spalling or delamination, when tested in accordance with ASTM E760/E760M.
  4. Corrosivity: No evidence of corrosion, when tested in accordance with ASTM E937/E937M.
  5. Air Erosion Resistance: Weight loss of 0.025 g/sq ft, maximum, when tested in accordance with ASTM E859/E859M after 24 hours.
  6. Surface Burning Characteristics: Maximum flame spread index of 0 (zero) and maximum smoke developed index of 0 (zero), when tested in accordance with ASTM E84.
  7. Effect of Deflection: No cracking, spalling, or delamination, when tested in accordance with ASTM E759/E759M.
  8. Fungal Resistance: No growth after 28 days when tested according to ASTM G21.
    - a. Treat products with manufacturer's standard antimicrobial formulation

## 2.4 ACCESSORIES

- A. General: Provide auxiliary materials that are compatible with fireproofing and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in fire-resistance designs indicated.
- B. Primer \_\_\_\_: Of type recommended by applied fire protection manufacturer.
- C. Overcoat: As recommended by manufacturer of applied fire protection material.
- D. Water: Clean, potable.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that surfaces are ready to receive fireproofing.
- B. Verify that clips, hangers, supports, sleeves, and other items required to penetrate fireproofing are in place.
- C. Verify that ducts, piping, equipment, or other items that would interfere with application of fireproofing have not been installed.
- D. Verify that voids and cracks in substrate have been filled.
- E. Verify that projections have been removed where fireproofing will be exposed to view as a finish material.

### 3.2 PREPARATION

- A. Perform tests as recommended by fireproofing manufacturer in applications where adhesion of fireproofing to substrate is in question.

- B. Remove incompatible materials that could effect bond by scraping, brushing, scrubbing, or sandblasting.
- C. Prepare substrates to receive fireproofing in strict accordance with instructions of fireproofing manufacturer.
- D. Protect surfaces not scheduled for fireproofing and equipment from damage by overspray, fall-out, and dusting.
- E. Close off and seal duct work in areas where fireproofing is being applied.

### 3.3 APPLICATION

- A. Construct fireproofing assemblies that are identical to fire-resistance design indicated and products as specified, tested, and substantiated by test reports; for thickness, primers, sealers, topcoats, finishing, and other materials and procedures affecting fireproofing work.
- B. Comply with fireproofing manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and apply fireproofing; as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.
- C. Apply primer adhesive in accordance with manufacturer's instructions.
- D. Apply fireproofing in uniform thickness and density as necessary to achieve required ratings.
- E. Apply overcoat at the rate recommended by fireproofing manufacturer.

### 3.4 FIELD QUALITY CONTROL

- A. Perform field inspection and testing in accordance with Section 01 40 00 - Quality Requirements.
- B. Inspect installed fireproofing after application and curing for integrity, prior to its concealment.
- C. Ensure that actual thicknesses, densities, and bond strengths meet requirements for specified ratings and requirements of authorities having jurisdiction (AHJ).
- D. Repair or replace applied fireproofing at locations where test results indicate fireproofing does not meet specified requirements.
- E. Re-inspect installed fireproofing for integrity of fire protection, after installation of subsequent Work.

### 3.5 CLEANING, PROTECTING AND REPAIRING

- A. Remove excess material, overspray, droppings, and debris.
- B. Remove fireproofing from materials and surfaces not required to be fireproofed.
- C. Repair fireproofing damaged by other work before concealing it with other construction.
- D. Repair fireproofing by reapplying it using same method as original installation

END OF SECTION

## **SECTION 07 84 00 - FIRESTOPPING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Firestopping systems.
- B. Firestopping of joints and penetrations in fire-resistance-rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 09 21 16 - Gypsum Board Assemblies: Gypsum wallboard fireproofing.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestop Systems; 2024.
- B. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers; 2024.
- C. FM 4991 - Approval Standard of Firestop Contractors; 2013.
- D. UL (FRD) - Fire Resistance Directory; Current Edition.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.
- D. Product Data: Provide data on product characteristics, performance ratings, and limitations.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.

#### **1.5 QUALITY ASSURANCE**

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
  - 1. Listing in UL (FRD) will be considered as constituting an acceptable test report.
- B. Installer Qualifications: Company specializing in performing the work of this section and:
  - 1. Approved by Factory Mutual Research Corporation under FM 4991, or meeting any two of the following requirements:
  - 2. Verification of minimum three years documented experience installing work of this type.
  - 3. Verification of at least five satisfactorily completed projects of comparable size and type.
  - 4. Licensed by local authorities having jurisdiction (AHJ).
- C. Preinstallation Conference: Conduct conference at Project site.

1.6 FIELD CONDITIONS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.
- B. Coordination With Other Trades: Coordinate annular space, sleeve and insulation requirements with work of Divisions 21 through 28.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Firestopping Manufacturers:
  - 1. 3M Fire Protection Products; \_\_\_\_\_: [www.3m.com/firestop/#sle](http://www.3m.com/firestop/#sle).
  - 2. A/D Fire Protection Systems Inc; \_\_\_\_\_: [www.adfire.com/#sle](http://www.adfire.com/#sle).
  - 3. CEMCO; HOTROD Type-X Compressible Firestopping: [www.cemcosteel.com/#sle](http://www.cemcosteel.com/#sle).
  - 4. Everkem Diversified Products, Inc; Intumescent Fire-Rated Putty Pads: [www.everkemproducts.com/#sle](http://www.everkemproducts.com/#sle).
  - 5. Fire Shield, LLC; Barri-Ring: [www.fireshieldlv.com/#sle](http://www.fireshieldlv.com/#sle).
  - 6. Grabber Construction Products, Inc; GrabberGard EFC: [www.grabberman.com/#sle](http://www.grabberman.com/#sle).
  - 7. HoldRite, a Brand of Reliance Worldwide Corporation; HydroFlame: [www.holdrite.com/#sle](http://www.holdrite.com/#sle).
  - 8. MarinoWARE; \_\_\_\_\_: [www.marinoware.com/#sle](http://www.marinoware.com/#sle).
  - 9. Nelson FireStop Products; \_\_\_\_\_: [www.nelsonfirestop.com/#sle](http://www.nelsonfirestop.com/#sle).
  - 10. Passive Fire Protection Partners; Firestop 3600EX: [www.firestop.com/#sle](http://www.firestop.com/#sle).
  - 11. RectorSeal, a CSW Industrials Company; Metacaulk 150+ General Purpose Firestop Sealant: [www.rectorseal.com/firestop-solutions/#sle](http://www.rectorseal.com/firestop-solutions/#sle).
  - 12. Specified Technologies Inc; \_\_\_\_\_: [www.stifirestop.com/#sle](http://www.stifirestop.com/#sle).
  - 13. Tremco Commercial Sealants & Waterproofing; TREMstop Acrylic: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  - 14. Substitutions: See Section 01 60 00 - Product Requirements.

2.2 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.
- C. Fire Ratings: Refer to drawings for required systems and ratings.

2.3 FIRESTOPPING SYSTEMS

- A. Firestopping: Any material meeting requirements.
  - 1. Fire Ratings: See drawings for required systems and ratings.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings are ready to receive the work of this section.

3.2 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.
- C. Install backing materials to prevent liquid material from leakage.



### 3.3 INSTALLATION

- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.
- B. Install forming materials and other accessories of types required to support elastomeric fill materials during their application and in position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.
  - 1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not indicated as permanent components of firestopping system.
- C. Install fill materials by proven techniques to produce the following results:
  - 1. Fill voids and cavities formed by joints, openings, forming materials, accessories and penetrating items to achieve required fire-resistance ratings.
  - 2. Apply fill materials so they contact and adhere to substrates formed by openings and penetrating items.
  - 3. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.
- D. Do not cover installed firestopping until inspected by Owner's Independent Testing Agency.
- E. Do not cover installed firestopping until inspected by authorities having jurisdiction.
- F. Install permanent Wall Identification at walls containing firestopping systems and label all penetration and joint firestopping systems as required by code.

### 3.4 FIELD QUALITY CONTROL

- A. Independent Testing Agency: Inspection agency employed and paid by Owner, will examine penetration firestopping in accordance with ASTM E2174 and ASTM E2393.
- B. Repair or replace penetration firestopping and joints at locations where inspection results indicate firestopping or joints do not meet specified requirements.
- C. Proceed with enclosing firestopping systems with other construction only after inspection reports are issued and installations comply with requirements.

### 3.5 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

### 3.6 PROTECTION

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 07 92 00 - JOINT SEALANTS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

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

#### **1.2 RELATED REQUIREMENTS**

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

#### **1.3 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 C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants; 2018 (Reapproved 2022).
- C. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications; 2024.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).
- E. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2023.
- F. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.
- G. ASTM C1311 - Standard Specification for Solvent Release Sealants; 2022.
- H. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints; 2019 (Reapproved 2025).
- I. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015 (Reapproved 2021).

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.
- F. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.
- G. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.
- H. Field Quality Control Plan: Submit at least two weeks prior to start of installation.
- I. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include bagged test samples and photographic records.
- J. Installation Log: Submit filled-out log for each length or instance of sealant installed.
- K. Field Quality Control Log: Submit filled-out log for each length or instance of sealant installed, within 10 days after completion of inspections/tests; include bagged test samples and photographic records, if any.

#### 1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.
- B. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
  - 1. Adhesion Testing: In accordance with ASTM C794.
  - 2. Compatibility Testing: In accordance with ASTM C1087.
  - 3. Allow sufficient time for testing to avoid delaying the work.
  - 4. Deliver sufficient samples to manufacturer for testing.
  - 5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
- C. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample.
  - 1. Identification of testing agency.
  - 2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out.
    - a. Test date.
    - b. Copy of test method documents.
    - c. Age of sealant upon date of testing.
    - d. Test results, modeled after the sample form in the test method document.
    - e. Indicate use of photographic record of test.
- D. Field Quality Control Plan:
  - 1. Visual inspection of entire length of sealant joints.
  - 2. Destructive field adhesion testing of sealant joints, except interior acrylic latex sealant.
    - a. For each different sealant and substrate combination, allow for one test every 100 feet in the first 1,000 linear feet, and one test per 1,000 linear feet thereafter, or once per floor on each elevation.
    - b. If any failures occur in the first 1,000 linear feet, continue testing at frequency of one test per 500 linear feet at no extra cost to Owner.
  - 3. Field testing agency's qualifications.
  - 4. Field Quality Control Log Form: Show same data fields as on Preinstallation Field Adhesion Test Log, with known information filled out and lines for multiple tests per sealant/substrate combinations; include visual inspection and specified field testing; allow for possibility that more tests than minimum specified may be necessary.
- E. Field Adhesion Test Procedures:
  - 1. Allow sealants to fully cure as recommended by manufacturer before testing.

2. Have a copy of the test method document available during tests.
  3. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log.
  4. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies.
  5. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner.
  6. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Architect.
- F. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Tail Procedure.
1. Sample: At least 18 inches long.
  2. Minimum Elongation Without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two; then multiply 1 inch by that percentage; if adhesion failure occurs before the 1-inch mark is that distance from the substrate, the test has failed.
  3. If either adhesive or cohesive failure occurs before minimum elongation, take necessary measures to correct conditions and retest; record each modification to products or installation procedures.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Nonsag Sealants:
1. Adfast USA Inc; \_\_\_\_: [www.adfastcorp.com/#sle](http://www.adfastcorp.com/#sle).
  2. Bostik Inc; \_\_\_\_: [www.bostik-us.com/#sle](http://www.bostik-us.com/#sle).
  3. Dow: [www.dow.com/#sle](http://www.dow.com/#sle).
  4. Everkem Diversified Products, Inc: [www.everkemproducts.com/#sle](http://www.everkemproducts.com/#sle).
  5. Master Builders Solutions: [www.master-builders-solutions.com/en-us/#sle](http://www.master-builders-solutions.com/en-us/#sle).
  6. Momentive Performance Materials, Inc (formerly GE Silicones): [www.momentive.com/#sle](http://www.momentive.com/#sle).
  7. Pecora Corporation: [www.pecora.com/#sle](http://www.pecora.com/#sle).
  8. Sherwin-Williams Company; \_\_\_\_: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
  9. Sika Corporation: [www.usa.sika.com/#sle](http://www.usa.sika.com/#sle).
  10. Tremco Commercial Sealants & Waterproofing: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  11. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Self-Leveling Sealants:
1. Bostik Inc; \_\_\_\_: [www.bostik-us.com/#sle](http://www.bostik-us.com/#sle).
  2. Dayton Superior Corporation; \_\_\_\_: [www.daytonsuperior.com/#sle](http://www.daytonsuperior.com/#sle).
  3. Dow; \_\_\_\_: [www.dow.com/#sle](http://www.dow.com/#sle).
  4. Master Builders Solutions: [www.master-builders-solutions.com/en-us/#sle](http://www.master-builders-solutions.com/en-us/#sle).
  5. Pecora Corporation; \_\_\_\_: [www.pecora.com/#sle](http://www.pecora.com/#sle).
  6. Sherwin-Williams Company; \_\_\_\_: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
  7. Sika Corporation; \_\_\_\_: [usa.sika.com/#sle](http://usa.sika.com/#sle).
  8. Tremco Commercial Sealants & Waterproofing; \_\_\_\_: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  9. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.2 JOINT SEALANT APPLICATIONS

- A. Scope:
1. Exterior Joints:
    - a. Seal the following joints:
      - 1) Wall expansion and control joints.
      - 2) Joints between doors, windows, and other frames or adjacent construction.
      - 3) Joints between different exposed materials.
      - 4) Miter joints at exterior trim. .
      - 5) All joints noted to be sealed in the drawings.
  2. Interior Joints:

- a. Seal the following joints:
  - 1) Joints between door frames and window frames and adjacent construction.
  - 2) In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, and piping penetrations.
  - 3) In sound-rated wall and ceiling assemblies, seal joints between wall assemblies and ceiling assemblies; between wall assemblies and other construction; between ceiling assemblies and other construction.
  - 4) All joints noted to be sealed in the in the drawings. .
3. Do Not Seal:
  - a. Intentional weep holes in masonry.
  - b. Joints indicated to be covered with expansion joint cover assemblies.
  - c. Joints where sealant is specified to be furnished and installed by manufacturer of product to be sealed.
  - d. Joints where sealant installation is specified in other sections.
  - e. Joints between suspended ceilings and walls.
  - f. Joints indicated on the drawings as not to be sealed. .
- B. Type \_\_\_\_ - Exterior Joints: Use nonsag nonstaining silicone sealant, unless otherwise indicated.
- C. Type \_\_\_\_ - Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
  1. Type \_\_\_\_ - Joints between Tile in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
  2. Type \_\_\_\_ - In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
- D. Interior Wet Areas: Bathrooms, restrooms, kitchens, food service areas, food processing areas, and \_\_\_\_; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, other similar items, and \_\_\_\_.
- E. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated, sound-rated, or acoustical.

### 2.3 JOINT SEALANTS - GENERAL

- A. Only use sealant and primers that comply with the following limits for VOC content:
  1. Architectural Sealants: 250 g/L.
  2. Roofing Sealants: 450 g/L.
  3. Roadway Sealants: 250 g/L.
  4. Sealant primer: 250 g/L.
- B. Colors: As selected by Architect from manufacturer's full range.

### 2.4 NONSAG JOINT SEALANTS

- A. Type SC - Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
  1. Movement Capability: Plus and minus 50 percent, minimum.
  2. Cure Type: Mildew-resistant acetoxycuring.
  3. Products:
    - a. Dow; DOWSIL 758 Silicone Weather Barrier Sealant: [www.dow.com/#sle](http://www.dow.com/#sle).
    - b. Momentive Performance Materials, Inc/GE Silicones; SCS2700 SilPruf LM (Low Modulus) - Silicone Weatherproofing Sealant: [www.siliconeforbuilding.com/#sle](http://www.siliconeforbuilding.com/#sle).
    - c. Pecora Corporation; Pecora 860: [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - d. Sika Corporation; Sikasil WS-295: [usa.sika.com/#sle](http://usa.sika.com/#sle).
    - e. Substitutions: See Section 01 60 00 - Product Requirements.
  4. Use for all exterior joints in or between PVC materials, interior vertical joints which penetrate concrete or masonry and vertical joints between masonry and other materials.
- B. Type SM - 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: White or Clear.
  2. Products:
    - a. Pecora Corporation; Pecora 898 NST (Non-Staining Technology): [www.pecora.com/#sle](http://www.pecora.com/#sle).

- b. Sika Corporation; Sikasil GP: [usa.sika.com/#sle](http://usa.sika.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
  - 3. Use for all horizontal and vertical joints between plumbing fixtures and adjoining walls, floors, and counters and tile control and expansion joints where indicated.
- C. Type SF - Food Contact Silicone Sealant: ASTM C920, One component silicone rubber, acceptable to local health officials, conforming to U.S. Food and Drug Administration regulation 21 CFR 175.105 and 175.300, FS TT-S-001543A, Type Non-Sag, Class A. Type NS, Class 25, Use NT, G, O and A
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Hardness Minimum: 20, Shore A, when tested in accordance with ASTM C661.
  - 3. Manufacturers:
    - a. Dow; DowSil 732.
    - b. GE Silicones; SCS1000.
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
  - 4. Use for all interior applications with food contact.
- D. Type P2 - Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Products:
    - a. Sika Corporation; Sikaflex-2c NS EZ Mix+: [usa.sika.com/#sle](http://usa.sika.com/#sle).
    - b. Substitutions: See Section 01 60 00 - Product Requirements.
- E. Type B - Butyl Sealant: Solvent-based; ASTM C1311; single component, nonsag; not expected to withstand continuous water immersion or traffic
  - 1. Hardness Range: 10 to 30, Shore A, when tested in accordance with ASTM C661.
  - 2. Products:
    - a. Pecora Corporation; Pecora BC-158 Butyl Rubber Sealant: [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - b. Sherwin-Williams Company; Storm Blaster All Season Sealant: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
  - 3. Use for bedding of thresholds

## 2.5 SELF-LEVELING JOINT SEALANTS

- A. Type HL-1 - Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Products:
    - a. Pecora Corporation; Urexspan NR-201: [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - b. Sherwin-Williams Company; Loxon SL1 Self-Leveling Sealant: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
    - c. Sherwin-Williams Company; Loxon SL2 Multi-Component Self-Leveling Polyurethane Sealant: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
    - d. Sika Corporation; Sikaflex-1c SL: [usa.sika.com/#sle](http://usa.sika.com/#sle).
    - e. Sika Corporation; Sikaflex-2c SL: [usa.sika.com/#sle](http://usa.sika.com/#sle).
    - f. Tremco Commercial Sealants & Waterproofing; Vulkem 45 SSL.
    - g. Substitutions: See Section 01 60 00 - Product Requirements.
  - 3. Use for all interior joints in floor.
- B. Type HL-2 - Self-Leveling Polyurethane Sealant for Horizontal Expansion Joints: ASTM C920, Grade P, Uses T, M, and O; multi-component; explicitly approved by manufacturer for horizontal expansion joints.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Hardness Range: 30 to 35, Shore A, when tested in accordance with ASTM C661.
  - 3. Products:
    - a. Pecora Corporation; Urexspan NR-200: [www.pecora.com/#sle](http://www.pecora.com/#sle).
    - b. Tremco Commercial Sealants & Waterproofing; \_\_\_\_: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

4. Use for all exterior joints subject to traffic and interior floor joints at exterior building walls.
- C. Type FS - Flexible Polyurethane Foam: Single-component, gun grade, and low-expanding.
1. Products:
    - a. DAP Products Inc; DRAFTSTOP 812 Foam: [www.dapspecline.com/#sle](http://www.dapspecline.com/#sle).
    - b. Tremco Commercial Sealants & Waterproofing; ExoAir LEF: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Type HL-3 - Semi-Self-Leveling Polyurethane Sealant: Intended for expansion joints in sidewalks, swimming pool decks, plazas, floors and other horizontal surfaces with up to 6 percent slope.
1. Composition: Single or multicomponent.
  2. Durometer Hardness, Type A: 35 to 45, minimum, when tested in accordance with ASTM D2240.
  3. Products:
    - a. Tremco Commercial Sealants & Waterproofing; Vulkem 45 SSL: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - b. Tremco Commercial Sealants & Waterproofing; Vulkem 445 SSL: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.6 ACCESSORIES

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

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan.
1. Test each sample as specified in PART 1 under QUALITY ASSURANCE article.
  2. Notify Architect of date and time that tests will be performed, at least seven days in advance.
  3. Record each test on Preinstallation Adhesion Test Log as indicated.
  4. If any sample fails, review products and installation procedures, consult manufacturer, or take other measures that are necessary to ensure adhesion; retest in a different location; if unable to obtain satisfactory adhesion, report to Architect.
  5. After completion of tests, remove remaining sample material and prepare joints for new sealant installation.

### 3.2 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.



3.3 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 acoustical sealant application work in accordance with ASTM C919.
- D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- E. Install bond breaker backing tape where backer rod cannot be used.
- F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- G. 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.
- H. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

3.4 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Perform field quality control inspection/testing as specified in PART 1 under QUALITY ASSURANCE article.
- C. Destructive Adhesion Testing: If there are any failures in first 1,000 linear feet, notify Architect immediately.
- D. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.
- E. Repair destructive test location damage immediately after evaluation and recording of results.

END OF SECTION

This Page is Intentionally Left Blank

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

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Non-fire-rated hollow metal doors and frames.
- B. Hollow metal frames for wood doors.
- C. Fire-rated hollow metal doors and frames.
- D. Thermally insulated hollow metal doors with frames.
- E. Hollow metal borrowed lites glazing frames.
- F. Accessories, including glazing and matching panels.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 08 71 00 - Door Hardware.
- B. Section 08 88 13 - Fire Rated Glazing : Glass for doors and borrowed lites.
- C. Section 09 91 13 - Exterior Painting: Field painting.
- D. Section 09 91 23 - Interior Painting: Field painting.

#### **1.3 ABBREVIATIONS AND ACRONYMS**

- A. HMMA: Hollow Metal Manufacturers Association.
- B. NAAMM: National Association of Architectural Metal Manufacturers.
- C. SDI: Steel Door Institute.

#### **1.4 DEFINITIONS**

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

#### **1.5 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2024.
- C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023.
- D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2025.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.
- F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2025.

- G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2023.
- H. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.
- I. ASTM C476 - Standard Specification for Grout for Masonry; 2023.
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- K. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- L. ITS (DIR) - Directory of Listed Products; Current Edition.
- M. NAAMM HMMA 840 - Guide Specifications for Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2024.
- N. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2025.
- O. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.
- P. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- Q. UL (DIR) - Online Certifications Directory; Current Edition.
- R. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
- S. UL 1784 - Standard for Air Leakage Tests of Door Assemblies and Other Opening Protectives; Current Edition, Including All Revisions.

#### 1.6 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.
- D. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
- E. Samples: For units with factory applied color finishes: Submit two samples of metal, 2 by 2 inches in size, showing factory finishes, colors, and surface texture.
- F. Schedule: Prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings.

#### 1.7 QUALITY ASSURANCE

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

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
  - 1. Ceco Door, an Assa Abloy Group company: [www.assaabloydss.com/#sle](http://www.assaabloydss.com/#sle).
  - 2. Curries, an Assa Abloy Group company: [www.assaabloydss.com/#sle](http://www.assaabloydss.com/#sle).
  - 3. Deansteel Manufacturing Company, Inc; Hollow Metal Doors - SP Series: [www.deansteel.com/#sle](http://www.deansteel.com/#sle).
  - 4. Dunbarton Corporation; Hollow Metal: [www.dunbarton.com/#sle](http://www.dunbarton.com/#sle).
  - 5. Krieger Specialty Products; \_\_\_\_\_: [www.kriegerproducts.com/#sle](http://www.kriegerproducts.com/#sle).
  - 6. Premier Steel Doors and Frames: [www.trustpremier.com/#sle](http://www.trustpremier.com/#sle).
  - 7. Pioneer Industries, an Assa Abloy Group company: [www.pioneerindustries.com/](http://www.pioneerindustries.com/)
  - 8. Republic Doors, an Allegion brand; \_\_\_\_: [www.republicdoor.com/#sle](http://www.republicdoor.com/#sle).
  - 9. Steelcraft, an Allegion brand: [www.allegion.com/#sle](http://www.allegion.com/#sle).
  - 10. Taylor Entrance Systems; Cambridge: [www.taylordoor.com/#sle](http://www.taylordoor.com/#sle).
  - 11. Titan Metal Products, Inc; Builders Series 20 - 90 Minute Doors: [www.titanmetalproducts.com/#sle](http://www.titanmetalproducts.com/#sle).
  - 12. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.2 REGULATORY REQUIREMENTS

- A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits] indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
  - 1. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
- B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and 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 or UL 9.

### 2.3 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
  - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
  - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
  - 3. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

### 2.4 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Exterior Doors: Thermally insulated.
  - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
    - a. Level 3 - Extra Heavy-duty.
    - b. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.

- c. Type: As indicated in the Door and Frame Schedule.
    - d. Model 2 - Seamless.
    - e. Door Face Metal Thickness: 16 gauge, 0.053 inch, minimum.
    - f. Zinc Coating: A 40 /ZF \_\_\_\_ galvanized coating; ASTM A653/A653M.
  - 2. Door Core Material: Polystyrene, 1 lbs/cu ft minimum density.
    - a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
  - 3. Door Thermal Resistance: R-Value of 6.0 minimum, for installed thickness of polystyrene when tested according to ASTM C1362
  - 4. Door Thickness: 1-3/4 inches, nominal.
  - 5. Weather Protection: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
- C. Interior Doors, Non-Fire-Rated:
- 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
    - a. Level 2 - Heavy-duty.
    - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
    - c. Type: As indicated in the Door and Frame Schedule.
    - d. Model 1 - Full Flush.
    - e. Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.
  - 2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
  - 3. Door Thickness: 1-3/4 inches, nominal.
- D. Fire-Rated Doors:
- 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
    - a. Level 2 - Heavy-duty.
    - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
    - c. Type: As indicated in the Door and Frame Schedule.
    - d. Model 1 - Full Flush.
    - e. Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.
  - 2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
  - 3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
    - a. Attach fire rating label to each fire rated unit.
  - 4. Smoke and Draft Control Doors (Indicated with letter "S" on Drawings and/or Door Schedule): Self-closing or automatic closing doors in accordance with NFPA 80 and NFPA 105, with fire-resistance-rated wall construction rated the same or greater than the fire-rated doors, and the following:
    - a. Maximum Air Leakage: 3.0 cfm/sq ft of door opening at 0.10 inch w.g. pressure, when tested in accordance with UL 1784 at both ambient and elevated temperatures.
    - b. Gasketing: Provide gasketing or edge sealing as necessary to achieve leakage limit.
    - c. Label: Include the "S" label on fire-rating label of door.
  - 5. Door Core Material: Manufacturers standard core material/construction in compliance with requirements.
  - 6. Door Thickness: 1-3/4 inches, nominal.
  - 7. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated.

## 2.5 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
  - 1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvanized) in accordance with ASTM A653/A653M, with A40/ZF120 coating.

2. Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.
  3. Weatherstripping: Separate, see Section 08 71 00.
- D. Interior Door Frames, Non-Fire Rated: Knock-down type.
1. Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.
- E. Door Frames, Fire-Rated: Knock-down type.
1. Fire Rating: Same as door, labeled.
  2. Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.
- F. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.
- G. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.
- H. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.
- I. Frames Wider than 48 inches: Reinforce with steel channel fitted tightly into frame head, flush with top.
- J. Jamb Anchors:
1. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
  2. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.
  3. Provide number and spacing of anchors as follows:
    - a. 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 one additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
    - b. Compression Type: Not less than two anchors in each frame.
    - c. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
- K. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch, and as follows:
1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
  2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.
  3. Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.

## 2.6 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15 mil, 0.015 inch dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
1. Fire-Rated Frames: Comply with fire rating requirements indicated.

## 2.7 ACCESSORIES

- A. Glazing: As specified in Section 08 88 13, factory installed.
- B. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.
- C. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- D. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

### HOLLOW METAL DOORS AND FRAMES

PART 3 EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.3 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install prefinished frames after painting and wall finishes are complete.
- C. Hollow-Metal Frames: Install hollow-metal frames for doors, transoms, sidelites, borrowed lites, and other openings, of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.
  - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
    - a. At fire-rated openings, install frames according to NFPA 80.
    - b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
    - c. Install frames with removable stops located on secure side of opening.
    - d. Install door silencers in frames before grouting.
    - e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
    - f. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
    - g. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.
  - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
    - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
  - 3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
  - 4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
  - 5. Concrete Walls: Solidly fill space between frames and concrete with mineral-fiber insulation.
  - 6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
  - 7. In-Place Metal or Wood-Stud Partitions: Secure slip-on drywall frames in place according to manufacturer's written instructions.
  - 8. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
    - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
    - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.

**HOLLOW METAL DOORS AND  
FRAMES**



- d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
  - D. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.
    - 1. Non-Fire-Rated Steel Doors:
      - a. Between Door and Frame Jambs and Head: 1/8 inch plus or minus 1/32 inch.
      - b. Between Edges of Pairs of Doors: 1/8 inch to 1/4 inch plus or minus 1/32 inch.
      - c. At Bottom of Door: 3/4 inch plus or minus 1/32 inch.
      - d. Between Door Face and Stop: 1/16 inch to 1/8 inch plus or minus 1/32 inch.
  - E. Install fire rated units in accordance with NFPA 80.
  - F. Coordinate frame anchor placement with wall construction.
  - G. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.
  - H. Install door hardware as specified in Section 08 71 00.
  - I. Comply with glazing installation requirements of Section 08 80 00.
    - 1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.
  - J. Coordinate installation of electrical connections to electrical hardware items.
  - K. Touch up damaged factory finishes.
- 3.4 TOLERANCES
- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.
- 3.5 ADJUSTING
- A. Adjust for smooth and balanced door movement.
  - B. 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.
- 3.6 CLEANING
- A. Remove grout and other bonding material from hollow-metal work immediately after installation.
  - B. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
  - C. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
  - D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.
- 3.7 SCHEDULE
- A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 08 14 16 - FLUSH WOOD DOORS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Flush wood doors; flush and flush glazed configuration; fire-rated and non-rated.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 20 00 - Finish Carpentry: Wood door frames.
- B. Section 08 11 13 - Hollow Metal Doors and Frames.
- C. Section 08 71 00 - Door Hardware.
- D. Section 08 88 13 - Fire Rated Glazing.
- E. Section 09 91 23 - Interior Painting: Field finishing of doors.

#### **1.3 REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2025.
- C. ASTM E2112 - Standard Practice for Installation of Exterior Windows, Doors and Skylights; 2023.
- D. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2025.
- E. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- F. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
- G. WDMA I.S. 1A - Interior Architectural Wood Flush Doors; 2021, with Errata (2022).

#### **1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- C. 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.
- D. Certificate: Submit labels and certificates required by quality assurance and quality control programs.

#### **1.5 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.

- C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Wood Veneer Faced Doors:
  - 1. Masonite Architectural; Cendura Standard Wood Veneer Doors: [www.architectural.masonite.com/#sle](http://www.architectural.masonite.com/#sle).
  - 2. VT Industries, Inc; \_\_\_\_: [www.vtindustries.com/#sle](http://www.vtindustries.com/#sle).
  - 3. Jeld-wen; <https://www.jeld-wen.com/en-us/products/interior-doors/browse>.
  - 4. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.2 DOORS AND PANELS

- A. Doors: See drawings for locations and additional requirements.
  - 1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with WDMA I.S. 1A.
  - 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Exterior Doors: Flush solid core construction and water repellent treated.
  - 1. Thickness: 1-3/4 inches, unless otherwise indicated.
  - 2. Facing: Wood veneer with factory opaque finish.
- C. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
  - 1. Provide solid core doors at each location.
  - 2. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with UL 10C - Positive Pressure; Underwriters Laboratories Inc (UL) or Intertek/Warnock Hersey (WHI) labeled without any visible seals when door is open.
  - 3. Smoke and Draft Control Doors (Indicated as "S" on Drawings): In addition to required fire rating, provide flush wood door assemblies in compliance with WDMA I.S. 1A requirements for "S" label; if necessary, provide additional gasketing or edge sealing.
  - 4. Wood veneer facing with factory opaque finish as indicated on drawings.

### 2.3 DOOR AND PANEL CORES

- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.
- B. Fire-Rated Doors: Mineral core type, with fire resistant composite core (FD), plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.
- C. Hollow Core Doors: Type - Standard (FSHC); plies and faces as indicated above.

### 2.4 DOOR FACINGS

- A. Veneer Facing for Opaque Finish: Medium density overlay (MDO), in compliance with indicated quality standard.

### 2.5 DOOR CONSTRUCTION

- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with stiles and rails:
  - 1. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
  - 2. Provide solid blocking for other throughbolted hardware.
- C. Glazed Openings: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings.

- D. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- E. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
  - 1. Exception: Doors to be field finished.
- F. Provide edge clearances in accordance with the quality standard specified.

## 2.6 FINISHES - WOOD VENEER DOORS

- A. Finish work in accordance with WDMA I.S. 1A for grade specified and as follows:
  - 1. Transparent:
    - a. System - TR-2, Catalyzed Lacquer.
    - b. Stain: As selected by Architect.
    - c. Sheen: Flat.
  - 2. Opaque:
    - a. Manufacturers standard, in compliance with performance duty level indicated.
    - b. Color: As selected by Architect.
    - c. Sheen: Flat.
- B. Factory finish doors in accordance with approved sample.
- C. Seal door top edge with color sealer to match door facing.

## 2.7 ACCESSORIES

- A. Wood Door Frames: See Section 06 20 00.
- B. Hollow Metal Door Frames: See Section 08 11 13.
- C. Glazed Openings:
  - 1. Heat-Strengthened and Fully Tempered Glass: ASTM C1048.
  - 2. Fire-Protection-Rated Glass: Safety Certification, 16 CFR 1201, Category II.
  - 3. Glazing: Sealed insulating units, 1 inch thick, made of 1/4 inch glass.
  - 4. Tint: Clear.
  - 5. Coating: Low-E type, on No. 2 surface.
- D. Glazing Stops: Wood, of same species as door facing, butted corners; prepared for countersink style tamper proof screws.
- E. Astragals for Fire-Rated Double Doors: Steel, T shaped, overlapping and recessed at face edge, specifically for double doors.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

### 3.2 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
  - 1. Install fire-rated doors in accordance with NFPA 80 requirements.
  - 2. Install smoke and draft control doors in accordance with NFPA 105 requirements.
  - 3. Install exterior doors in accordance with ASTM E2112.

- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.
- E. Coordinate installation of glazing.

3.3 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

3.4 SCHEDULE

- A. See Door and Frame Schedule on the drawings.

END OF SECTION

## **SECTION 08 31 00 - ACCESS DOORS AND PANELS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Wall- and ceiling-mounted access units.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 09 91 23 - Interior Painting: Field paint finish.

#### **1.3 REFERENCE STANDARDS**

- A. ITS (DIR) - Directory of Listed Products; Current Edition.
- B. UL (FRD) - Fire Resistance Directory; Current Edition.

#### **1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work.

### **PART 2 PRODUCTS**

#### **2.1 ACCESS DOORS AND PANELS ASSEMBLIES**

- A. Wall-Mounted Units:
  - 1. Location: As indicated on drawings.
  - 2. Size: 12 by 12 inches.
  - 3. Door/Panel: Hinged, standard duty, with tool-operated spring or cam lock and no handle.
  - 4. Wall Mounting Criteria: Provide surface-mounted frame concealed by door, with pantograph hinges.
  - 5. Gypsum Board Mounting Criteria: Provide drywall bead frame with door surface flush with wall surface.
- B. Fire-Rated Wall-Mounted Units:
  - 1. Location: As indicated on drawings.
  - 2. Wall Fire-Rating: As indicated on drawings.
  - 3. Size: 12 by 12 inches.
  - 4. Door/Panel: Insulated double-surface panel, with tool-operated spring or cam lock and no handle.
- C. Ceiling-Mounted Units:
  - 1. Location: As indicated on drawings.
  - 2. Size - Lay-In Grid Ceilings: To match module of ceiling grid.
  - 3. Size - Other Ceilings: 12 by 12 inches., or as indicated on the drawings.
  - 4. Door/Panel: Hinged, standard duty, with tool-operated spring or cam lock and no handle.
- D. Fire-Rated Ceiling-Mounted Units:
  - 1. Location: As indicated on drawings.
  - 2. Ceiling Fire-Rating: As indicated on drawings.
  - 3. Size: 12 by 12 inches, or as indicated on the drawings.

4. Door/Panel: Hinged, standard duty, with tool-operated spring or cam lock and no handle.

## 2.2 Wall- and Ceiling-MOUNTED ACCESS UNITS

### A. Manufacturers:

1. Activar Construction Products Group, Inc. - JL Industries; \_\_\_\_\_: [www.activarcpg.com/#sle](http://www.activarcpg.com/#sle).
2. ACUDOR Products Inc; FW-5050-ACF: [www.acudor.com/#sle](http://www.acudor.com/#sle).
3. Babcock-Davis: [www.babcockdavis.com/#sle](http://www.babcockdavis.com/#sle).
4. Best Access Doors: [www.bestaccessdoors.com/#sle](http://www.bestaccessdoors.com/#sle).
5. Substitutions: See Section 01 60 00 - Product Requirements.

### B. 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: Frame concealed by door panel(typical) and Recessed door panel for infill with wall/ceiling finish material at all exposed visible locations.
  - 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. Primed and Factory Finish: Polyester powder coat; color as selected by Architect from manufacturer's standard colors.
9. Door/Panel Size: As indicated on the drawings.
10. Hardware:
  - a. Hardware for Fire-Rated Units: As required for listing.
  - b. Hinges for Non-Fire-Rated Units: Concealed, constant force closure spring type.
  - c. Handle: Handle operated cam latch.
  - d. Latch/Lock: Screw driver slot for quarter turn cam latch. For recessed door panel style only
  - e. Inside Latch Release: Mechanism that allows door/panel to be opened from inside.
  - f. Gasketing: Extruded neoprene, around perimeter of door panel.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that rough openings are correctly sized and located.
- B. Begin installation only after substrates have been properly prepared, and if the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Prepare surfaces using methods recommended by manufacturer for applicable substrates in accordance with project conditions.

### 3.3 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

This Page is Intentionally Left Blank

## **SECTION 08 42 29 - AUTOMATIC ENTRANCES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Sliding type packaged power-operated door assemblies.
- B. Controllers, actuators and safety devices.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 26 05 83 - Wiring Connections.
- B. Section 28 13 00 - Security and Access Control: Connection to access control system; access control devices used as actuators.
- C. Section 28 46 00 - Fire Detection and Alarm: Connection to fire alarm system.

#### **1.3 DEFINITIONS**

- A. AAADM: American Association of Automatic Door Manufacturers.

#### **1.4 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. BHMA A156.10 - Power Operated Pedestrian Doors; 2024.
- C. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

#### **1.5 SUBMITTALS**

- A. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- B. Shop Drawings:
  - 1. Indicate layout and dimensions; head, jamb, and sill conditions; elevations; components, anchorage, recesses, materials, and finishes, electrical characteristics and connection requirements.
  - 2. Identify installation tolerances required, assembly conditions, routing of service lines and conduit, and locations of operating components and boxes.
- C. Product Data: Include system components, sizes, features, and finishes.
- D. Maintenance Data: Include manufacturer's parts list and maintenance instructions for each type of hardware and operating component.

#### **1.6 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience, and a member of AAADM.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience and approved by manufacturer.
  - 1. Certified by AAADM.

1.7 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide two-year manufacturer warranty. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Sliding Automatic Entrance Door Assemblies:
  - 1. ASSA ABLOY Entrance Solutions; Besam SL500: [www.besam-usa.com/#sle](http://www.besam-usa.com/#sle).
  - 2. NABCO Entrances Inc; GT 1175 Whisper Slider: [www.nabcoentrances.com/#sle](http://www.nabcoentrances.com/#sle).
  - 3. Stanley Access Technologies; Dura-Glide 2000 Sliding: [www.stanleyaccess.com/#sle](http://www.stanleyaccess.com/#sle).
  - 4. Substitutions: See Section 01 60 00 - Product Requirements.

2.2 POWER OPERATED DOORS

- A. Power Operated Doors: Provide products that comply with NFPA 101 and requirements of authorities having jurisdiction; provide equipment selected for actual door weight and for light pedestrian traffic, unless otherwise indicated.
  - 1. Packaged Door Assemblies: Provide components by single manufacturer, factory-assembled, including doors, frames, operators, actuators, and safeties.
    - a. Finish exposed equipment components to match door and frame finish.
  - 2. Exterior and Vestibule Doors: Provide equipment suitable for operating temperature range of minus 20 to plus 140 degrees F ambient.

2.3 AUTOMATIC ENTRANCE DOOR ASSEMBLIES

- A. Comply with ADA Standards for egress requirements.
- B. Framing and Transom Members: Provide manufacturer's standard extruded aluminum framing, reinforced as required to support imposed loads.
  - 1. Nominal Sizes:
  - 2. Transoms: Provide flush glazed transom with framing that is integral with automatic entrance framing system.
- C. Door and Sidelight Construction: Heavy duty interlocked extruded aluminum tubular stile and rail sections, through-rod bolted construction with steel corner support at hinge stile of carrier-suspended swinging panels or mechanically fastened corners with welded reinforcing brackets to reduce sag in sliding or breakout mode.
  - 1. Door Thickness: 1-3/4 inch, nominal.
  - 2. Stile Design:
  - 3. Top Rail Height: 4 inch, nominal.
  - 4. Bottom Rail Height: 10 inch, nominal.
  - 5. Glazing Stops: Manufacturer's standard snap-on extruded aluminum square stops with preformed resilient glazing gaskets.
  - 6. Glazing Stop Width: Manufacturers standard.
  - 7. Glazing Thickness: 1/4 inch.

2.4 CONTROLLERS, ACTUATORS, AND SAFETIES

- A. Comply with BHMA A156.10 for actuator and safety types and zones.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are ready to receive work and dimensions are as indicated on shop drawings.
- B. Verify that electric power is available, at the correct location, and is of the correct characteristics.

3.2 INSTALLATION

- A. Install equipment in accordance with manufacturer's written instructions, except where more stringent requirements are specified.
- B. Provide for thermal expansion and contraction of door and frame units and live and dead loads that may be transmitted to operating equipment.
- C. Provide for dimensional distortion of components during operation.
- D. Coordinate installation of components with related and adjacent work; level and plumb.

3.3 ADJUSTING

- A. Adjust entrances for correct function and smooth operation, without binding or scraping and without excessive noise; lubricate operating hardware and other moving parts.

3.4 CLEANING

- A. Remove temporary protection; clean exposed surfaces.

3.5 CLOSEOUT ACTIVITIES

- A. Demonstrate operation, operating components, adjustment features, and lubrication requirements.

3.6 MAINTENANCE

- A. See Section 01 70 00 - Execution Requirements for additional requirements.
- B. Provide service and maintenance of operating equipment for one year from Date of Substantial Completion, at no extra charge to Owner.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 08 53 13 - VINYL WINDOWS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Vinyl-framed, factory-glazed windows.
- B. Operating hardware.
- C. Insect screens.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 07 92 00 - Joint Sealants: Sealing joints between frames and adjacent construction.

#### **1.3 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. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- C. ASTM E1332 - Standard Classification for Rating Outdoor-Indoor Sound Attenuation; 2022.
- D. ASTM E2112 - Standard Practice for Installation of Exterior Windows, Doors and Skylights; 2023.
- E. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals
- B. Product Data: Provide component dimensions, anchors, fasteners, glass, and internal drainage.
- C. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work, and installation requirements.
- 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 and acceptable to authorities having jurisdiction.
- 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.

#### **1.5 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with minimum 5 years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of type specified, with minimum 5 years of documented experience.

1.6 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.

1.7 FIELD CONDITIONS

- A. Maintain this minimum temperature during and after installation of sealants.

1.8 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a 5-year period after Date of Substantial Completion.
- C. Manufacturer Warranty: Provide 10-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 form in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Vinyl Windows:
  - 1. Ply-Gem; 1500.

2.2 DESCRIPTION

- A. Vinyl Windows: Factory-fabricated frame and sash members of extruded, hollow, ultraviolet-resistant, \_\_\_\_\_ polyvinyl chloride (PVC) with integral color; with factory-installed glazing, hardware, related flashings, anchorage and attachment devices.
  - 1. Configuration: As indicated on drawings.
  - 2. Color: White.
  - 3. Exterior Color: White.
  - 4. Size to fit openings with minimum clearance around perimeter of assembly providing necessary space for perimeter seals.
  - 5. 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.
  - 6. Glazing Stops, Trim, Flashings, and Accessory Pieces: Formed of rigid PVC, fitting tightly into frame assembly.
  - 7. Mounting Flange: Integral to frame assembly, providing weather stop at entire perimeter of frame.
  - 8. Insect Screens: Tight fitting for operating sash location.

2.3 PERFORMANCE REQUIREMENTS

- A. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific window type:
  - 1. Performance Class (PC): CW.
  - 2. Performance Grade (PG): Equivalent to or greater than specified design pressure.
- B. Design Pressure: In accordance with applicable codes.
- C. Overall Thermal Transmittance (U-value): 0.26, maximum, including glazing, measured on window sizes required for this project.
- D. Center of Glass Solar Heat Gain Coefficient (SHGC): 0.45; comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
- E. Acoustic Performance: Minimum STC rating of 25.



## 2.4 COMPONENTS

- A. Glazing: Insulated double pane, tempered glass, clear, low-E coated, argon filled, with glass thicknesses as recommended by manufacturer for specified wind conditions.
- B. Frame Depth: Manufacturer's standard.
- C. Divided Lite Grid: Installed between panes of insulating glass, 5/8 inch wide flat metal bars, color to match frame and sash.
  - 1. Pattern: As indicated on drawings.
- D. 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.
- E. Accessories: Provide related flashings, anchorage and attachment devices as necessary for full assembly.
- F. Sealants for Setting Window Sill Pan Flashing: Provide butyl tape, non-hardening butyl, polyurethane, or silicone sealant; in compliance with ASTM E2112 installation practices.

## 2.5 HARDWARE

- A. Vertical Sliding Sash: Metal and nylon spiral friction slide cylinder, provide two for each sash and jamb.
- B. Sash lock: Lever handle and keeper with cam lock, provide at least one for each operating sash.
- C. Sill lock: Extended paddle latch.
- D. Window Opening Control Devices (WOCD):
  - 1. Hardware shall limit openings to only allow passage of 4 inch diameter rigid sphere or less, and are easily releasable to fully open without use of keys, tools, or special knowledge.
  - 2. Provide WOCDs on all windows that are installed more than 72" above finished exterior grade.
  - 3. Provide WOCDs on all windows located in the Memory Care Unit.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify wall openings and adjoining water-resistive barrier seal materials are ready to receive this work.

### 3.2 INSTALLATION

- A. Install window unit assemblies in accordance with manufacturers instructions and applicable building codes.
- B. Install windows in accordance with ASTM E2112.
- C. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities as necessary.
- D. Align window plumb and level, free of warp or twist, and maintain dimensional tolerances and alignment with adjacent work.
- E. Set sill members and sill flashing in continuous bead of sealant.
- F. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

3.3 ADJUSTING

- A. Adjust hardware for smooth operation and secure weathertight closure.

3.4 CLEANING

- A. Remove protective material from pre-finished surfaces.
- B. Wash surfaces by method recommended and acceptable to window manufacturer; rinse and wipe surfaces clean.

END OF SECTION

## **SECTION 08 71 00 - DOOR HARDWARE**

### **PART 1 GENERAL**

#### **1.1 SUMMARY**

- A. Section includes:
  - 1. Mechanical and electrified door hardware
  - 2. Electronic access control system components
- B. Section excludes:
  - 1. Windows
  - 2. Cabinets (casework), including locks in cabinets
  - 3. Signage
  - 4. Toilet accessories
  - 5. Overhead doors
- C. Related Sections:
  - 1. Division 01 "General Requirements" sections for Allowances, Alternates, Owner Furnished Contractor Installed, Project Management and Coordination.
  - 2. Division 06 Section "Rough Carpentry"
  - 3. Division 06 Section "Finish Carpentry"
  - 4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
  - 5. Division 08 Sections:
    - a. "Metal Doors and Frames"
    - b. "Flush Wood Doors"
    - c. "Stile and Rail Wood Doors"
    - d. "Interior Aluminum Doors and Frames"
    - e. "Aluminum-Framed Entrances and Storefronts"
    - f. "Stainless Steel Doors and Frames"
    - g. "Special Function Doors"
    - h. "Entrances"
  - 6. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
  - 7. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

#### **1.2 REFERENCES**

- A. UL LLC
  - 1. UL 10B - Fire Test of Door Assemblies
  - 2. UL 10C - Positive Pressure Test of Fire Door Assemblies
  - 3. UL 1784 - Air Leakage Tests of Door Assemblies
  - 4. UL 305 - Panic Hardware
- B. DHI - Door and Hardware Institute
  - 1. Sequence and Format for the Hardware Schedule
  - 2. Recommended Locations for Builders Hardware
  - 3. Keying Systems and Nomenclature
  - 4. Installation Guide for Doors and Hardware
- C. NFPA – National Fire Protection Association
  - 1. NFPA 70 – National Electric Code
  - 2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
  - 3. NFPA 101 – Life Safety Code
  - 4. NFPA 105 – Smoke and Draft Control Door Assemblies
  - 5. NFPA 252 – Fire Tests of Door Assemblies

- D. ANSI - American National Standards Institute
  - 1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
  - 2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
  - 3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
  - 4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
  - 5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

### 1.3 SUBMITTALS

- A. General:
  - 1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
  - 2. Prior to forwarding submittal:
    - a. Review drawings and Sections from related trades to verify compatibility with specified hardware.
    - b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
- B. Action Submittals:
  - 1. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
  - 2. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
  - 3. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
    - a. Wiring Diagrams: For power, signal, and control wiring and including:
      - 1) Details of interface of electrified door hardware and building safety and security systems.
      - 2) Schematic diagram of systems that interface with electrified door hardware.
      - 3) Point-to-point wiring.
      - 4) Risers.
  - 4. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
    - a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
  - 5. Door Hardware Schedule:
    - a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
    - b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
    - c. Indicate complete designations of each item required for each opening, include:
      - 1) Door Index: door number, heading number, and Architect's hardware set number.
      - 2) Quantity, type, style, function, size, and finish of each hardware item.
      - 3) Name and manufacturer of each item.
      - 4) Fastenings and other pertinent information.
      - 5) Location of each hardware set cross-referenced to indications on Drawings.
      - 6) Explanation of all abbreviations, symbols, and codes contained in schedule.
      - 7) Mounting locations for hardware.
      - 8) Door and frame sizes and materials.
      - 9) Degree of door swing and handing.
      - 10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

6. Key Schedule:
  - a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
  - b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
  - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
  - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
  - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
  - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.
- C. Informational Submittals:
  1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
  2. Provide Product Data:
    - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
    - b. Include warranties for specified door hardware.
- D. Closeout Submittals:
  1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
    - a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
    - b. Catalog pages for each product.
    - c. Final approved hardware schedule edited to reflect conditions as installed.
    - d. Final keying schedule
    - e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
    - f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
- E. Inspection and Testing:
  1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
    - a. Fire door assemblies, in compliance with NFPA 80.
    - b. Required egress door assemblies, in compliance with NFPA 101.

#### 1.4 QUALITY ASSURANCE

- A. Qualifications and Responsibilities:
  1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
  2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
  3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
    - a. For door hardware: DHI certified AHC or DHC.
    - b. Can provide installation and technical data to Architect and other related subcontractors.
    - c. Can inspect and verify components are in working order upon completion of installation.

- d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.
    - 4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.
  - B. Certifications:
    - 1. Fire-Rated Door Openings:
      - a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
      - b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
    - 2. Smoke and Draft Control Door Assemblies:
      - a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
      - b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
    - 3. Electrified Door Hardware
      - a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.
    - 4. Accessibility Requirements:
      - a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.
  - C. Pre-Installation Meetings
    - 1. Keying Conference
      - a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
        - 1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
        - 2) Preliminary key system schematic diagram.
        - 3) Requirements for key control system.
        - 4) Requirements for access control.
        - 5) Address for delivery of keys.
    - 2. Pre-installation Conference
      - a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
      - b. Inspect and discuss preparatory work performed by other trades.
      - c. Inspect and discuss electrical roughing-in for electrified door hardware.
      - d. Review sequence of operation for each type of electrified door hardware.
      - e. Review required testing, inspecting, and certifying procedures.
      - f. Review questions or concerns related to proper installation and adjustment of door hardware.
    - 3. Electrified Hardware Coordination Conference:
      - a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.
- 1.5 DELIVERY, STORAGE, AND HANDLING
- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping
  - B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
  - C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.

- D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

#### 1.6 COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
- B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

#### 1.7 WARRANTY

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.
  - 1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
  - 2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
    - a. Mechanical Warranty
      - 1) Locks
        - a) 10 years
      - 2) Exit Devices
        - a) 10 years
      - 3) Closers
        - a) 10 years
    - b. Electrical Warranty
      - 1) Closers
        - a) 2 years

#### 1.8 MAINTENANCE

- A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- B. Turn over unused materials to Owner for maintenance purposes.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.
- B. Approval of alternate manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category are only to be considered by official substitution request in accordance with section 01 25 00.
- C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

## 2.2 MATERIALS

- A. Fabrication
  1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.
  2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
  3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.
- B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
  1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

## 2.3 HINGES

- A. Manufacturers and Products:
  1. Scheduled Manufacturer and Product:
    - a. Ives 5BB series
  2. Acceptable Manufacturers and Products:
    - a. Hager BB1191/1279 series
    - b. McKinney TB series
- B. Requirements:
  1. Provide hinges conforming to ANSI/BHMA A156.1.
  2. Provide five knuckle, ball bearing hinges.
  3. 1-3/4 inch thick doors, up to and including 36 inches wide:
    - a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches high
    - b. Interior: Standard weight, steel, 4-1/2 inches high
  4. 1-3/4 inch thick doors over 36 inches wide:
    - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches high
    - b. Interior: Heavy weight, steel, 5 inches high
  5. 2 inches or thicker doors:
    - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches high
    - b. Interior: Heavy weight, steel, 5 inches high
  6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
  7. Provide three hinges per door leaf for doors 90 inches or less in height, and one additional hinge for each 30 inches of additional door height.
  8. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
    - a. Steel Hinges: Steel pins
    - b. Non-Ferrous Hinges: Stainless steel pins
    - c. Out-Swinging Exterior Doors: Non-removable pins
    - d. Out-Swinging Interior Lockable Doors: Non-removable pins
    - e. Interior Non-lockable Doors: Non-rising pins



9. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

## 2.4 CONTINUOUS HINGES

### A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Select
  - b. Roton

### B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

## 2.5 FLUSH BOLTS

### A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Burns
  - b. Trimco

### B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch steel or brass rods at doors up to 90 inches in height. For doors over 90 inches in height increase top rods by 6 inches for each additional 6 inches of door height. Provide dust-proof strikes at each bottom flush bolt.

## 2.6 COORDINATORS

### A. Manufacturers:

1. Scheduled Manufacturer:
  - a. Ives
2. Acceptable Manufacturers:
  - a. Burns
  - b. Trimco

### B. Requirements:

1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.

2. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers, surface vertical rod exit device strikes, or other stop mounted hardware. Factory-prepared coordinators for vertical rod devices as specified.

## 2.7 CYLINDRICAL LOCKS – GRADE 1

- A. Manufacturers and Products:
  1. Scheduled Manufacturer and Product:
    - a. Schlage ND series
  2. Acceptable Manufacturers and Products:
    - a. No Substitute
- B. Requirements:
  1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
  2. Indicators: Where specified, provide escutcheon with lock status indicator window on top of lockset rose:
    - a. Escutcheon height (including rose) 6.05 inches high by 3.68 inches wide.
    - b. Indicator window measuring a minimum 3.52-inch by .60 inch with 1.92 square-inches of front facing viewing area and 180-degree visibility with a total of .236 square-inches of total viewable area.
    - c. Provide snap-in serviceable window to prevent tampering. Lock must function if indicator is compromised.
    - d. Provide messages color-coded with full text and symbol, as scheduled, for easy visibility.
    - e. Unlocked and Unoccupied message will display on white background, and Locked and Occupied message will display on red background.
  3. Cylinders: Refer to "KEYING" article, herein.
  4. Provide locks with standard 2-3/4 inches backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
  5. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
  6. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
  7. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
  8. Provide electrified options as scheduled in the hardware sets.
  9. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.
    - a. Lever Design: ATH

## 2.8 CYLINDRICAL LOCKS – GRADE 2

- A. Manufacturers and Products:
  1. Scheduled Manufacturer and Product:
    - a. Schlage ALX series
  2. Acceptable Manufacturers and Products:
    - a. No Substitute
- B. Requirements
  1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 2, and UL Listed for 3-hour fire doors with a minimum cycle life of 1 million.
  2. Cylinders: Refer to "KEYING" article, herein.
  3. Provide locks with standard 2-3/4 inches backset, unless noted otherwise, with 1/2-inch latch throw. Provide 3/4" latch throw for UL listing at pairs.
  4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
  5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
  6. Provide a minimum of 5 points of lever engagement between the cassette spindle and lever shank to prevent lever sag.
  7. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
  8. Plug-n-Play – Provide modular lockset allowing lock functions to be created for 7 typical functions by inserting/installing parts into the exterior of a fully assembled chassis

9. Reconfigurable Chassis - Provide modular lockset that allows the function to be reconfigured by removing external components from the chassis
10. Lever Trim: Solid cast levers and wrought roses on both sides.
  - a. Lever Design: ATH

## 2.9 TUBULAR LOCKS – GRADE 2 AT UNITS

- A. Manufacturers and Products:
  1. Scheduled Manufacturer and Product:
    - a. Schlage F series
  2. Acceptable Manufacturers and Products:
    - a. No Substitute
- B. Requirements:
  1. Provide tubular locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 2, Grade 2 and ANSI/BHMA A156.39 Residential Grade AAA, and UL Listed for 3-hour fire doors.
  2. Cylinders: Refer to "KEYING" article, herein.
  3. Provide locks with standard 2-3/8 inches adjustable to 2-3/4 inches backset with 1/2-inch (0.51 inch) latch throw. Provide 2-3/4 inches backset, unless 2-3/8 inches is required by door or frame detail or noted otherwise.
  4. Provide locksets that fit standard 2-1/8 inches diameter bore without use of thru bolts.
  5. Door Thickness: Locksets adjustable to fit in 1-3/8 inches or 1-3/4 inches door thickness.
  6. Provide standard T-strikes unless extended lip strikes are necessary to protect trim.
  7. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.
    - a. Lever Design: JAZ

## 2.10 EXIT DEVICES

- A. Manufacturers and Products:
  1. Scheduled Manufacturer and Product:
    - a. Falcon 24/25 series
  2. Acceptable Manufacturers and Products:
    - a. Sargent 19-43-GL-80 series
    - b. Precision Apex series
- B. Requirements:
  1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
  2. Cylinders: Refer to "KEYING" article, herein.
  3. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
  4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
  5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
  6. Provide flush end caps for exit devices.
  7. Provide exit devices with manufacturer's approved strikes.
  8. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
  9. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
  10. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
  11. Removable Mullions: 2 inches x 3 inches steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
  12. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
  13. Provide electrified options as scheduled.
  14. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.11 ELECTRIC STRIKES

- A. Manufacturers and Products:
  - 1. Scheduled Manufacturer and Product:
    - a. Von Duprin 6000 Series
  - 2. Acceptable Manufacturers and Products:
    - a. Folger Adam 300 Series
    - b. HES 1006 Series
- B. Requirements:
  - 1. Provide electric strikes designed for use with type of locks shown at each opening.
  - 2. Provide electric strikes UL Listed as burglary resistant that are tested to a minimum endurance test of 1,000,000 cycles.
  - 3. Where required, provide electric strikes UL Listed for fire doors and frames.
  - 4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.12 CYLINDERS

- A. Manufacturers and Products:
  - 1. Scheduled Manufacturer:
    - a. Falcon
  - 2. Acceptable Manufacturers and Products:
    - a. No Substitute
- B. Requirements:
  - 1. Provide cylinders/cores compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset; manufacturer's series as indicated. Refer to "KEYING" article, herein.
  - 2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.
    - a. Open: cylinder with small format interchangeable core (SFIC) core with open keyway

2.13 KEYING

- A. Scheduled System:
  - 1. New factory registered system:
    - a. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
- B. Requirements:
  - 1. Construction Keying:
    - a. Replaceable Construction Cores.
      - 1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
        - a) 3 construction control keys
        - b) 12 construction change (day) keys.
      - 2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.
  - 2. Permanent Keying:
    - a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
      - 1) Master Keying system as directed by the Owner.
    - b. Forward biting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
    - c. Provide keys with the following features:
      - 1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
      - 2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
    - d. Identification:

- 1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
  - 2) Identification stamping provisions must be approved by the Architect and Owner.
  - 3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
  - 4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
  - 5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
- e. Quantity: Furnish in the following quantities.
- 1) Permanent Control Keys: 3.
  - 2) Master Keys: 6.
  - 3) Change (Day) Keys: 3 per cylinder/core that is keyed differently
  - 4) Key Blanks: Quantity as determined in the keying meeting.

## 2.14 KEY CONTROL SYSTEM

- A. Manufacturers:
1. Scheduled Manufacturer:
    - a. Lund
  2. Acceptable Manufacturers:
    - a. Telkee
    - b. HPC
- B. Requirements:
1. Provide key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of number of locks required for Project.
    - a. Provide complete cross index system set up by hardware supplier, and place keys on markers and hooks in cabinet as determined by final key schedule.
    - b. Provide hinged-panel type cabinet for wall mounting.

## 2.15 KEY LOCK BOX

- A. Manufacturers:
1. Scheduled Manufacturer:
    - a. Knox Company
  2. Acceptable Manufacturers:
    - a. No Substitute
- B. Requirements
1. Provide Knox Box 3200 Series recessed key lock boxl.
  2. Provide lock box meeting the requirements of UL 1037, UL 1610, UL 1332, and UL 437.
  3. Provide lock box capable of storing a maximum of 10 keys.
  4. Provide lock box with hinged door and weather-resistant door gasket.
  5. Provide recessed mounting kit for new concrete or masonry construction.

## 2.16 DOOR CLOSERS

- A. Manufacturers and Products:
1. Scheduled Manufacturer and Product:
    - a. Falcon SC70A series
  2. Acceptable Manufacturers and Products:
    - a. LCN 4050 series
    - b. Norton 7500 series
- B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with aluminum cylinder.
3. Closer Body: 1-1/2-inch 1.5 inch diameter with 5/8-inch (0.63 inch) diameter heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL 10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees Fahrenheit to -30 degrees Fahrenheit.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

## 2.17 DOOR CLOSERS

### A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
  - a. Falcon SC80A series
2. Acceptable Manufacturers and Products:
  - a. LCN 1450 series
  - b. Norton 8000 series

### B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory.
2. Provide door closers with fully hydraulic, full rack and pinion action with aluminum cylinder.
3. Closer Body: 1-1/4-inch 1.26 inch diameter, with 5/8-inch (0.63 inch) diameter heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL 10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees Fahrenheit to -30 degrees Fahrenheit.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

## 2.18 ELECTROMECHANICAL CLOSER/HOLDERS

### A. Manufacturers:

1. Scheduled Manufacturer:
  - a. LCN 4040XP SE
2. Acceptable Manufacturers:
  - a. Norton
  - b. Rixson

### B. Requirements:

1. Provide single-point or multi-point hold-open electromechanical closer/holders as specified. Coordinate voltage requirements and provide transformer if necessary.
2. Provide closer/holders that function as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged.
3. Provide door closers with fully hydraulic, full rack and pinion action with high strength cylinder and full complement bearings at shaft.
4. Hydraulic Fluid: Fireproof, passing requirements of UL 10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees Fahrenheit to -30 degrees Fahrenheit.

5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

## 2.19 DOOR TRIM

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:
    - a. Burns
    - b. Trimco
- B. Requirements:
  1. Provide push plates, push bars, pull plates, pulls, and hands-free reversible door pulls with diameter and length as scheduled.

## 2.20 PROTECTION PLATES

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:
    - a. Burns
    - b. Trimco
- B. Requirements:
  1. Provide protection plates with a minimum of 0.050 inch thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
  2. Sizes plates 2 inches less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch less width of door on pairs without a mullion or edge guards.
  3. At fire rated doors, provide protection plates over 16 inches high with UL label.

## 2.21 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

- A. Manufacturers:
  1. Scheduled Manufacturers:
    - a. Glynn-Johnson
  2. Acceptable Manufacturers:
    - a. Rixson
    - b. Sargent
- B. Requirements:
  1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.

## 2.22 DOOR STOPS AND HOLDERS

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:
    - a. Burns
    - b. Trimco
- B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.23 SILENCERS

- A. Manufacturers:
1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:
    - a. Burns
    - b. Trimco
- B. Requirements:
1. Provide "push-in" type silencers for hollow metal or wood frames.
  2. Provide one silencer per 30 inches of height on each single frame, and two for each pair frame.
  3. Omit where gasketing is specified.

2.24 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

- A. Manufacturers:
- B. Scheduled Manufacturer:
1. Zero International
- C. Acceptable Manufacturers:
1. National Guard
  2. Reese
- D. Seals and Gasketing: Provide continuous gasketing on exterior openings, to the head and jambs, forming a continuous seal between the door and the frame. Provide smoke, light, or sound gasketing on interior doors where indicated.
1. Provide self-tapping fasteners for aluminum extruded gasketing being applied to hollow metal frames.
    - a. Provide non-corrosive fasteners for all exterior applications.
    - b. Provide security fasteners where indicated.
  2. Provide neoprene, EPDM, silicone, or nylon brush inserts as specified in hardware sets. Provide non brush inserts of solid or sponge cell, as specified in hardware sets. Vinyl inserts are not allowed except where specified in hardware sets.
- E. Smoke Labeled Gasketing: At all smoke labeled openings, provide smoke listed perimeter gasketing assemblies complying with NFPA 105 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.
- F. Fire Listed Gasketing: Assemblies complying with NFPA 80 that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction for fire ratings indicated based on testing according to UL 10C.
1. Where frame-applied intumescent seals are required by the manufacturer, provide gaskets that comply with UL 10C Standard for Positive Pressure Fire Tests of Door Assemblies and UBC 7-2, Fire Tests of Door Assemblies.
- G. Sound-Rated Gasketing: Provide acoustic gasketing to meet Sound Transmission Class (STC) rating required.
- H. Meeting-Stile Gasketing: Provide meeting-stile gasketing that fastens to the meeting stiles forming a continuous seal when doors are closed.
- I. Door Sweeps or Shoes: Apply to the bottom of the door to close the gap between the door bottom and finished floor or saddle threshold.



1. Provide solid neoprene, EPDM, silicone, or nylon brush type of seal as specified in hardware sets. Vinyl inserts are not allowed except where specified in hardware sets.
- J. Automatic Door Bottoms:
  1. Provide closed cell sponge, bulb neoprene, or EPDM type of seal as specified in hardware sets.
  2. Door bottom to be mortised, semi mortised, or surface mount as with a minimum thickness as specified in hardware sets.
- K. Rain Drips:
  1. Provide overhead rain drips for out-swinging hollow metal doors that are not covered against 45 degree blowing rain. Aluminum extrusion to be a minimum of .088 inches thick and extend 2.50 inches from the face of the frame, in anodized finish to match door.
  2. Door sweeps or shoes with integral rain drip must meet ADA requirements
- L. Thresholds: Provide threshold units not less than 4 inches wide, formed to accommodate change in floor elevation where indicated, and fabricated to accommodate door hardware and fit door frames.
  1. Threshold extrusion to be a minimum thickness as specified in hardware sets.

## 2.25 MAGNETIC HOLDERS

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. LCN
  2. Acceptable Manufacturers:
    - a. Rixson
    - b. Sargent
- B. Requirements:
  1. Provide wall or floor mounted electromagnetic door release as specified with minimum of 25 pounds of holding force. Coordinate projection of holder and armature with other hardware and wall conditions to ensure that door sits parallel to wall when fully open. Connect magnetic holders on fire-rated doors into the fire control panel for fail-safe operation.

## 2.26 DOOR VIEWERS

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:
    - a. Burns
    - b. Rockwood
- B. Provide appropriate door viewer for door type and rating with minimum of 180-degree view area.

## 2.27 LATCH PROTECTORS

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:
    - a. Burns
    - b. Trimco
- B. Provide stainless steel latch protectors of type required to function with specified lock.

## 2.28 COAT HOOKS

- A. Manufacturers:
  1. Scheduled Manufacturer:
    - a. Ives
  2. Acceptable Manufacturers:

- a. Burns
- b. Rockwood

- B. Provide coat hooks as specified.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
  - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
  - 2. Custom Steel Doors and Frames: HMMA 831.
  - 3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
  - 4. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
- I. Lock Cylinders:
  - 1. Install construction cores to secure building and areas during construction period.
  - 2. Replace construction cores with permanent cores as indicated in keying section.
  - 3. Furnish permanent cores to Owner for installation.
- J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:
  - 1. Conduit, junction boxes and wire pulls.
  - 2. Connections to and from power supplies to electrified hardware.
  - 3. Connections to fire/smoke alarm system and smoke evacuation system.
  - 4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.

5. Connections to panel interface modules, controllers, and gateways.
  6. Testing and labeling wires with Architect's opening number.
- K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- L. Continuous Hinges: Re-locate the door and frame fire rating labels where they will remain visible so that the hinge does not cover the label once installed.
- M. Door Closers & Auto Operators: Mount closers/operators on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers/operators so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
- N. Overhead Stops/Holders: Mount overhead stops/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
- O. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
- P. Thresholds:
1. Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
  2. Aluminum thresholds to be cut-in, and scribed around mullions, frame members, and stops. Do not butt to thresholds. Provide a continuous surface across full width of opening from jamb to jamb.
  3. Where aluminum panic-type (rabbeted) thresholds with neoprene inserts are specified, undercut doors as required to properly mate with seal in threshold.
- Q. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
- R. Perimeter Gasketing:
1. Apply to head and jamb, forming seal between door and frame.
  2. Install gasketing in a manner eliminating need to cut any seal to install surface mounted hardware. Install compatible mounting bracket for surface mounted hardware unless minimum 1/4 inch thick solid aluminum seals are provided for mounting of surface applied hardware.
- S. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- T. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.
- 3.3 ADJUSTING
- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
  2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
  3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.
- 3.4 CLEANING AND PROTECTION
- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items per manufacturer's instructions to restore proper function and finish.

- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

### 3.5 DOOR HARDWARE SCHEDULE

- A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
- B. Discrepancies, conflicting hardware, and missing items are to 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.
- C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.
- D. Hardware Sets:

144151 OPT0463625 VERSION 3

#### HARDWARE GROUP NO. 01

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG NUMBER                 | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | PASSAGE SET       | ALX10 ATH<br>BABA              | 626    | SCH |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE        | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | WALL STOP         | WS406/407CCV                   | 630    | IVE |
| 1   | EA | GASKETING         | 488SBK PSA                     | BK     | ZER |
| 1   | EA | DOOR<br>BOTTOM    | 360AA-Z49                      | AA     | ZER |

#### HARDWARE GROUP NO. 02

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG NUMBER                 | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | PASSAGE SET       | ALX10 ATH<br>BABA              | 626    | SCH |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL<br>RW/PA             | 689    | FAL |

| QTY |    | DESCRIPTION | CATALOG<br>NUMBER         | FINISH | MFR |
|-----|----|-------------|---------------------------|--------|-----|
| 1   | EA | KICK PLATE  | 8400 10" X 2"<br>LDW B-CS | 630    | IVE |
| 1   | EA | WALL STOP   | WS406/407CCV              | 630    | IVE |
| 1   | EA | GASKETING   | 488SBK PSA                | BK     | ZER |

HARDWARE GROUP NO. 03

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION                                | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|--------------------------------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE                                      | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | PRIVACY<br>LOCK W/<br>OUTSIDE<br>INDICATOR | ND40S ATH OS-<br>OCC BABA      | 626    | SCH |
| 1   | EA | SURFACE<br>CLOSER                          | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE                                 | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | MOP PLATE                                  | 8400 4" X 1"<br>LDW B-CS       | 630    | IVE |
| 1   | EA | WALL STOP                                  | WS406/407CCV                   | 630    | IVE |
| 1   | EA | GASKETING                                  | 488SBK PSA                     | BK     | ZER |

HARDWARE GROUP NO. 04

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION             | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|-------------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE                   | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | ENTRANCE/OFFICE<br>LOCK | ALX50BDC<br>ATH BABA           | 626    | SCH |
| 1   | EA | SFIC CORE               | C606 SFIC                      | 626    | FAL |
| 1   | EA | OH STOP                 | 100S                           | 630    | GLY |
| 1   | EA | SURFACE CLOSER          | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE              | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | GASKETING               | 488SBK PSA                     | BK     | ZER |

HARDWARE GROUP NO. 05

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG NUMBER                 | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | CLASSROOM<br>LOCK | ALX70BDC ATH<br>BABA           | 626    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                      | 626    | FAL |
| 1   | EA | WALL STOP         | WS406/407CCV                   | 630    | IVE |
| 1   | EA | SILENCER          | SR64                           | GRY    | IVE |

HARDWARE GROUP NO. 06

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG NUMBER                 | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | CLASSROOM<br>LOCK | ALX70BDC ATH<br>BABA           | 626    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                      | 626    | FAL |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE        | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | WALL STOP         | WS406/407CCV                   | 630    | IVE |
| 1   | EA | GASKETING         | 488SBK PSA                     | BK     | ZER |

HARDWARE GROUP NO. 07

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG NUMBER                 | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | CLASSROOM<br>LOCK | ALX70BDC<br>ATH BABA           | 626    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                      | 626    | FAL |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL SS                   | 689    | FAL |
| 1   | EA | KICK PLATE        | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | GASKETING         | 488SBK PSA                     | BK     | ZER |

HARDWARE GROUP NO. 08

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION             | CATALOG NUMBER                   | FINISH | MFR |
|-----|----|-------------------------|----------------------------------|--------|-----|
| 6   | EA | HINGE                   | 5BB1 4.5 X 4.5<br>PER 08 71 00   | 652    | IVE |
| 1   | EA | AUTO FLUSH<br>BOLT      | FB31P/FB41P                      | 630    | IVE |
| 1   | EA | DUST PROOF<br>STRIKE    | DP2                              | 626    | IVE |
| 1   | EA | CLASSROOM<br>LOCK       | ALX70BDC ATH<br>BABA             | 626    | SCH |
| 1   | EA | SFIC CORE               | C606 SFIC                        | 626    | FAL |
| 1   | EA | COORDINATOR             | COR X FL (MB AS<br>REQ'D)        | 628    | IVE |
| 1   | EA | OH STOP                 | 100S                             | 630    | GLY |
| 2   | EA | SURFACE<br>CLOSER       | SC81A DEL<br>RW/PA               | 689    | FAL |
| 2   | EA | KICK PLATE              | 8400 10" X 1"<br>LDW B-CS        | 630    | IVE |
| 1   | EA | WALL STOP               | WS406/407CCV                     | 630    | IVE |
| 1   | EA | GASKETING               | 488SBK PSA                       | BK     | ZER |
| 2   | EA | OVERLAPPING<br>ASTRAGAL | BY<br>DOOR/FRAME<br>MANUFACTURER |        | B/O |

HARDWARE GROUP NO. 09

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION             | CATALOG NUMBER                 | FINISH | MFR |
|-----|----|-------------------------|--------------------------------|--------|-----|
| 6   | EA | HINGE                   | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 2   | EA | MANUAL<br>FLUSH BOLT    | FB358/FB458 (AS<br>REQ'D)      | 626    | IVE |
| 1   | EA | DUST PROOF<br>STRIKE    | DP2                            | 626    | IVE |
| 1   | EA | CLASSROOM<br>LOCK       | ALX70BDC ATH<br>BABA           | 626    | SCH |
| 1   | EA | SFIC CORE               | C606 SFIC                      | 626    | FAL |
| 2   | EA | OH STOP &<br>HOLDER     | 100H                           | 630    | GLY |
| 1   | EA | OVERLAPPING<br>ASTRAGAL | BY DOOR/FRAME<br>MANUFACTURER  |        | B/O |
| 2   | EA | SILENCER                | SR64                           | GRY    | IVE |

HARDWARE GROUP NO. 10

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | STOREROOM<br>LOCK | ALX80BDC ATH<br>BABA           | 626    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                      | 626    | FAL |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE        | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | WALL STOP         | WS406/407CCV                   | 630    | IVE |
| 1   | EA | GASKETING         | 488SBK PSA                     | BK     | ZER |

HARDWARE GROUP NO. 11

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1HW 5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | STOREROOM<br>LOCK | ALX80BDC ATH<br>BABA           | 626    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                      | 626    | FAL |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE        | 8400 10" X 2"<br>LDW B-CS      | 630    | IVE |
| 1   | EA | WALL STOP         | WS406/407CCV                   | 630    | IVE |
| 1   | EA | GASKETING         | 488SBK PSA                     | BK     | ZER |

HARDWARE GROUP NO. 12

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|-------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE             | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 1   | EA | STOREROOM<br>LOCK | ALX80BDC<br>ATH BABA           | 626    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                      | 626    | FAL |
| 1   | EA | SURFACE<br>CLOSER | SC81A DEL SS                   | 689    | FAL |



| QTY |    | DESCRIPTION | CATALOG NUMBER         | FINISH | MFR |
|-----|----|-------------|------------------------|--------|-----|
| 1   | EA | KICK PLATE  | 8400 10" X 2" LDW B-CS | 630    | IVE |
| 1   | EA | GASKETING   | 488SBK PSA             | BK     | ZER |

HARDWARE GROUP NO. 13

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION    | CATALOG NUMBER              | FINISH | MFR |
|-----|----|----------------|-----------------------------|--------|-----|
| 3   | EA | HINGE          | 5BB1 4.5 X 4.5 PER 08 71 00 | 652    | IVE |
| 1   | EA | STOREROOM LOCK | ALX80BDC ATH BABA           | 626    | SCH |
| 1   | EA | SFIC CORE      | C606 SFIC                   | 626    | FAL |
| 1   | EA | OH STOP        | 100S                        | 630    | GLY |
| 1   | EA | SURFACE CLOSER | SC81A DEL RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE     | 8400 10" X 2" LDW B-CS      | 630    | IVE |
| 1   | EA | GASKETING      | 488SBK PSA                  | BK     | ZER |

HARDWARE GROUP NO. 14

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION          | CATALOG NUMBER              | FINISH | MFR |
|-----|----|----------------------|-----------------------------|--------|-----|
| 2   | EA | HINGE                | 5BB1 4.5 X 4.5 PER 08 71 00 | 652    | IVE |
| 1   | EA | AUTO FLUSH BOLT      | FB31P/FB41P                 | 630    | IVE |
| 1   | EA | DUST PROOF STRIKE    | DP2                         | 626    | IVE |
| 1   | EA | STOREROOM LOCK       | ALX80BDC ATH BABA           | 626    | SCH |
| 1   | EA | SFIC CORE            | C606 SFIC                   | 626    | FAL |
| 1   | EA | COORDINATOR          | COR X FL (MB AS REQ'D)      | 628    | IVE |
| 2   | EA | SURFACE CLOSER       | SC81A DEL SS                | 689    | FAL |
| 2   | EA | KICK PLATE           | 8400 10" X 1" LDW B-CS      | 630    | IVE |
| 1   | EA | GASKETING            | 488SBK PSA                  | BK     | ZER |
| 2   | EA | OVERLAPPING ASTRAGAL | BY DOOR/FRAME MANUFACTURER  |        | B/O |

HARDWARE GROUP NO. 15

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |     | DESCRIPTION        | CATALOG NUMBER                             | FINISH | MFR |
|-----|-----|--------------------|--------------------------------------------|--------|-----|
| 3   | EA  | HINGE              | 5BB1HW 4.5 X 4.5 NRP                       | 630    | IVE |
| 1   | EA  | PANIC HARDWARE     | LD-25-R-EO                                 | 626    | FAL |
| 1   | EA  | SFIC HOUSING       | RIM/MORTISE AS REQ'D                       | 626    | SCH |
| 1   | EA  | SFIC CORE          | C606 SFIC                                  | 626    | FAL |
| 1   | EA  | OH STOP            | 100S                                       | 630    | GLY |
| 1   | EA  | SURFACE CLOSER     | SC71A RW/PA                                | 689    | FAL |
| 1   | EA  | KICK PLATE         | 8400 10" X 2" LDW B-CS                     | 630    | IVE |
| 1   | EA  | RAIN DRIP          | 142AA                                      | AA     | ZER |
| 1   | SET | GASKETING          | 429AA-S                                    | AA     | ZER |
| 1   | EA  | DOOR SWEEP         | 39A                                        | A      | ZER |
| 1   | EA  | THRESHOLD          | 655A-223                                   | A      | ZER |
| 1   | EA  |                    | DOOR POSITION SWITCH - WORK OF DIVISION 28 |        |     |
| 1   | EA  | DOOR PROPPED ALARM | EAX-300W                                   | GRY    | DET |

OPERATION: PROP OPEN ALARM: ALARM WILL SOUND IF DOOR IS PROPPED OPEN LONGER THAN THE SET TIME (ESTABLISHED BY OWNER) . ALARM CAN BE SILENCED OR RESET BY MECHANICAL KEY.

HARDWARE GROUP NO. 16

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION    | CATALOG NUMBER       | FINISH | MFR |
|-----|----|----------------|----------------------|--------|-----|
| 3   | EA | HINGE          | 5BB1HW 5 X 4.5 NRP   | 630    | IVE |
| 1   | EA | PANIC HARDWARE | LD-25-R-EO           | 626    | FAL |
| 1   | EA | SFIC HOUSING   | RIM/MORTISE AS REQ'D | 626    | SCH |
| 1   | EA | SFIC CORE      | C606 SFIC            | 626    | FAL |
| 1   | EA | OH STOP        | 100S                 | 630    | GLY |

| QTY |     | DESCRIPTION        | CATALOG NUMBER                             | FINISH | MFR |
|-----|-----|--------------------|--------------------------------------------|--------|-----|
| 1   | EA  | SURFACE CLOSER     | SC71A RW/PA                                | 689    | FAL |
| 1   | EA  | KICK PLATE         | 8400 10" X 2" LDW B-CS                     | 630    | IVE |
| 1   | EA  | RAIN DRIP          | 142AA                                      | AA     | ZER |
| 1   | SET | GASKETING          | 429AA-S                                    | AA     | ZER |
| 1   | EA  | DOOR SWEEP         | 39A                                        | A      | ZER |
| 1   | EA  | THRESHOLD          | 655A-223                                   | A      | ZER |
| 1   | EA  |                    | DOOR POSITION SWITCH - WORK OF DIVISION 28 |        |     |
| 1   | EA  | DOOR PROPPED ALARM | EAX-300W                                   | GRY    | DET |

OPERATION: PROP OPEN ALARM: ALARM WILL SOUND IF DOOR IS PROPPED OPEN LONGER THAN THE SET TIME (ESTABLISHED BY OWNER) . ALARM CAN BE SILENCED OR RESET BY MECHANICAL KEY.

HARDWARE GROUP NO. 17

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION        | CATALOG NUMBER              | FINISH | MFR |
|-----|----|--------------------|-----------------------------|--------|-----|
| 1   | EA | HINGE              | 5BB1 4.5 X 4.5 PER 08 71 00 | 652    | IVE |
| 1   | EA | FIRE EXIT HARDWARE | F-25-R-L-BE-AVA             | 626    | FAL |
| 1   | EA | SURFACE CLOSER     | SC81A DEL RW/PA             | 689    | FAL |
| 1   | EA | KICK PLATE         | 8400 10" X 2" LDW B-CS      | 630    | IVE |
| 1   | EA | WALL STOP          | WS406/407CCV                | 630    | IVE |
| 1   | EA | GASKETING          | 488SBK PSA                  | BK     | ZER |

HARDWARE GROUP NO. 18

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION    | CATALOG NUMBER | FINISH | MFR |
|-----|----|----------------|----------------|--------|-----|
| 1   | EA | CONT. HINGE    | 224HD          | 628    | IVE |
| 1   | EA | PANIC HARDWARE | LD-25-R-NL-OP  | 626    | FAL |

| QTY |     | DESCRIPTION              | CATALOG<br>NUMBER                                      | FINISH  | MFR |
|-----|-----|--------------------------|--------------------------------------------------------|---------|-----|
| 1   | EA  | SFIC HOUSING             | RIM/MORTISE<br>AS REQ'D                                | 626     | SCH |
| 1   | EA  | SFIC RIM<br>HOUSING      | 80-159 BRN                                             | 626     | SCH |
| 2   | EA  | SFIC CORE                | C606 SFIC                                              | 626     | FAL |
| 1   | EA  | ELECTRIC<br>STRIKE       | 6300 FSE 12/24<br>VAC/VDC                              | 630     | VON |
| 1   | EA  | 90 DEG<br>OFFSET PULL    | 8190EZHD 12"<br>O                                      | 630-316 | IVE |
| 1   | EA  | OH STOP                  | 100S                                                   | 630     | GLY |
| 1   | EA  | SURFACE<br>CLOSER        | SC71A RW/PA                                            | 689     | FAL |
| 1   | EA  | RAIN DRIP                | 142AA                                                  | AA      | ZER |
| 1   | SET | GASKETING                | 429AA-S                                                | AA      | ZER |
| 1   | EA  | DOOR SWEEP               | 39A                                                    | A       | ZER |
| 1   | EA  | THRESHOLD                | 655A-223                                               | A       | ZER |
| 1   | EA  |                          | CREDENTIAL<br>READER -<br>WORK OF<br>DIVISION 28       |         |     |
| 2   | EA  |                          | DOOR<br>POSITION<br>SWITCH -<br>WORK OF<br>DIVISION 28 |         |     |
| 1   | EA  | DOOR<br>PROPPED<br>ALARM | EAX-300W                                               | GRY     | DET |
| 1   | EA  |                          | REQUEST TO<br>EXIT SWITCH -<br>WORK OF<br>DIVISION 28  |         |     |
| 1   |     |                          | POWER<br>SUPPLY -<br>WORK OF<br>DIVISION 28            |         |     |

OPERATION: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL TO READER  
MOMENTARILY RELEASES ELECTRIC STRIKE ALLOWING ENTRY. FREE EGRESS AT ALL TIMES.

PROP OPEN ALARM: ALARM WILL SOUND IF DOOR IS PROPPED OPEN LONGER THAN THE SET TIME  
(ESTABLISHED BY OWNER) . ALARM CAN BE SILENCED OR RESET BY MECHANICAL KEY.

HARDWARE GROUP NO. 19

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

| QTY |     | DESCRIPTION             | CATALOG<br>NUMBER                                       | FINISH | MFR |
|-----|-----|-------------------------|---------------------------------------------------------|--------|-----|
| 6   | EA  | HINGE                   | 5BB1HW 4.5 X<br>4.5 NRP                                 | 630    | IVE |
| 1   | EA  | AUTO FLUSH<br>BOLT      | FB31P/FB41P                                             | 630    | IVE |
| 1   | EA  | DUST PROOF<br>STRIKE    | DP1                                                     | 626    | IVE |
| 1   | EA  | FIRE EXIT<br>HARDWARE   | F-25-M-L-NL-AVA                                         | 626    | FAL |
| 1   | EA  | SFIC MORTISE<br>HOUSING | 80-102 BRN<br>(BLOCKING RING<br>AND CAM AS<br>REQUIRED) | 626    | SCH |
| 1   | EA  | SFIC HOUSING            | RIM/MORTISE AS<br>REQ'D                                 | 626    | SCH |
| 2   | EA  | SFIC CORE               | C606 SFIC                                               | 626    | FAL |
| 1   | EA  | LOCK GUARD              | LG10                                                    | 630    | IVE |
| 1   | EA  | COORDINATOR             | COR X FL (MB AS<br>REQ'D)                               | 628    | IVE |
| 2   | EA  | SURFACE<br>CLOSER       | SC71A SSHO                                              | 689    | FAL |
| 2   | EA  | KICK PLATE              | 8400 10" X 1"<br>LDW B-CS                               | 630    | IVE |
| 1   | EA  | RAIN DRIP               | 142AA                                                   | AA     | ZER |
| 1   | SET | GASKETING               | 429AA-S                                                 | AA     | ZER |
| 1   | EA  | OVERLAPPING<br>ASTRAGAL | BY<br>DOOR/FRAME<br>MANUFACTURER                        |        | B/O |
| 2   | EA  | DOOR SWEEP              | 39A                                                     | A      | ZER |
| 1   | EA  | THRESHOLD               | 655A-223                                                | A      | ZER |
| 2   | EA  |                         | DOOR POSITION<br>SWITCH - WORK<br>OF DIVISION 28        |        |     |
| 1   | EA  | DOOR<br>PROPPED         | EAX-300W                                                | GRY    | DET |

| QTY |  | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|-----|--|-------------|----------------|--------|-----|
|     |  | ALARM       |                |        |     |

OPERATION: PROP OPEN ALARM: ALARM WILL SOUND IF DOOR IS PROPPED OPEN LONGER THAN THE SET TIME (ESTABLISHED BY OWNER) . ALARM CAN BE SILENCED OR RESET BY MECHANICAL KEY.

HARDWARE GROUP NO. 20

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION             | CATALOG NUMBER                                             | FINISH | MFR |
|-----|----|-------------------------|------------------------------------------------------------|--------|-----|
| 6   | EA | HINGE                   | 5BB1 4.5 X 4.5<br>PER 08 71 00                             | 652    | IVE |
| 2   | EA | FIRE EXIT<br>HARDWARE   | F-25-C-WDC-L-<br>LBR-AVA-SNB                               | 626    | FAL |
| 2   | EA | SFIC MORTISE<br>HOUSING | 80-102 BRN<br>(BLOCKING<br>RING AND<br>CAM AS<br>REQUIRED) | 626    | SCH |
| 2   | EA | SFIC CORE               | C606 SFIC                                                  | 626    | FAL |
| 2   | EA | OH STOP                 | 100SE                                                      | 630    | GLY |
| 2   | EA | FIRE/LIFE<br>CLOSER     | 4040SE<br>24V/120V<br>AC/DC AS REQ                         | 689    | LCN |
| 2   | EA | KICK PLATE              | 8400 10" X 1"<br>LDW B-CS                                  | 630    | IVE |
| 1   | EA | GASKETING               | 488SBK PSA                                                 | BK     | ZER |
| 2   | EA | MEETING<br>STILE        | 8194AA                                                     | AA     | ZER |

ELECTRIFIED DOOR CLOSERS TO BE POWERED BY FIRE ALARM SYSTEM.

OPERATION: DOORS NORMALLY HELD OPEN BY ELECTRIFIED DOOR CLOSERS. TIE DOOR CLOSER HOLD OPENS INTO FIRE ALARM. UPON ACTIVATION OF FIRE ALARM OR POWER FAILURE CLOSER HOLD OPENS TO RELEASE ALLOWING DOOR TO CLOSE AND LATCH. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 21

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION           | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|-----------------------|--------------------------------|--------|-----|
| 6   | EA | HINGE                 | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 652    | IVE |
| 2   | EA | FIRE EXIT<br>HARDWARE | F-25-C-WDC-<br>EO-LBR-SNB      | 626    | FAL |
| 2   | EA | SURFACE<br>CLOSER     | SC71A RW/PA                    | 689    | FAL |
| 4   | EA | KICK PLATE            | 8400 10" X 1"<br>LDW B-CS      | 630    | IVE |
| 2   | EA | MAGNET                | SEM7800<br>SERIES AS<br>REQ'D  | 689    | LCN |
| 1   | EA | GASKETING             | 488SBK PSA                     | BK     | ZER |
| 2   | EA | MEETING<br>STILE      | 8194AA                         | AA     | ZER |

MAGNETIC HOLD-OPENS TO BE POWERED BY FIRE ALARM SYSTEM.

OPERATION: DOORS HELD OPEN ON MAGNETIC HOLD OPENS. UPON POWER LOSS OR FIRE ALARM  
SIGNAL DOORS TO RELEASE FROM MAGNETIC HOLDERS, CLOSE AND LATCH.

HARDWARE GROUP NO. 22

PROVIDE EACH SL DOOR(S) WITH THE FOLLOWING:

| QTY |  | DESCRIPTION | CATALOG<br>NUMBER | FINISH | MFR |
|-----|--|-------------|-------------------|--------|-----|
|-----|--|-------------|-------------------|--------|-----|

ALL REQUIRED HARDWARE BY SLIDING DOOR MANUFACTURER

HARDWARE GROUP NO. MISC

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION | CATALOG<br>NUMBER                        | FINISH | MFR |
|-----|----|-------------|------------------------------------------|--------|-----|
| 1   | EA | KEY CABINET | 1200 SERIES +<br>50% EXP.                |        | LUN |
| 1   | EA | KNOX-BOX    | 3200 X MRK X<br>ALUMINIZATION<br>X BLACK |        | KNO |

HARDWARE GROUP NO. U1

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION         | CATALOG<br>NUMBER              | FINISH | MFR |
|-----|----|---------------------|--------------------------------|--------|-----|
| 3   | EA | HINGE               | 5BB1 4.5 X 4.5<br>PER 08 71 00 | 646    | IVE |
| 1   | EA | PASSAGE SET         | ALX10 ATH<br>BABA              | 619    | SCH |
| 1   | EA | SGL CYL<br>DEADBOLT | B60N 12-321<br>10-116          | 619    | SCH |
| 1   | EA | SURFACE<br>CLOSER   | SC81A DEL<br>RW/PA             | 689    | FAL |
| 1   | EA | DOOR STOP           | 060 OR 70 AS<br>REQ'D          | 619    | IVE |
| 1   | EA | GASKETING           | 488SBK PSA                     | BK     | ZER |
| 1   | EA | DOOR SWEEP          | 39A                            | A      | ZER |
| 1   | EA | THRESHOLD           | 544A                           | A      | ZER |
| 1   | EA | KNOCKER             | 02-3125 U700                   | 619    | IVE |



| QTY |    | DESCRIPTION | CATALOG<br>NUMBER | FINISH | MFR |
|-----|----|-------------|-------------------|--------|-----|
| 1   | EA | VIEWER      | U700              | 619    | IVE |

HARDWARE GROUP NO. U2

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION | CATALOG<br>NUMBER     | FINISH | MFR |
|-----|----|-------------|-----------------------|--------|-----|
| 3   | EA | HINGE       | 1011 3.5 X 3.5        | 646    | IVE |
| 1   | EA | PASSAGE SET | F10 JAZ               | 619    | SCH |
| 1   | EA | DOOR STOP   | 060 OR 70 AS<br>REQ'D | 619    | IVE |

HARDWARE GROUP NO. U3

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION     | CATALOG<br>NUMBER     | FINISH | MFR |
|-----|----|-----------------|-----------------------|--------|-----|
| 3   | EA | HINGE           | 1011 3.5 X 3.5        | 646    | IVE |
| 1   | EA | PRIVACY<br>LOCK | F40 JAZ               | 619    | SCH |
| 1   | EA | DOOR STOP       | 060 OR 70 AS<br>REQ'D | 619    | IVE |

HARDWARE GROUP NO. U4

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

| QTY |    | DESCRIPTION       | CATALOG<br>NUMBER                                            | FINISH | MFR |
|-----|----|-------------------|--------------------------------------------------------------|--------|-----|
| 3   | EA | HINGE             | 1011 3.5 X 3.5<br>(IF NOT BY<br>PREHUNG<br>DOOR<br>PROVIDER) | F619E  | IVE |
| 1   | EA | STOREROOM<br>LOCK | ALX80BDC<br>ATH BABA                                         | 619    | SCH |
| 1   | EA | SFIC CORE         | C606 SFIC                                                    | 626    | FAL |
| 1   | EA | DOOR STOP         | 060 OR 70 AS<br>REQ'D                                        | F15    | IVE |

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 08 88 13 - FIRE-RATED GLAZING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Fire-rated glazing units.
- B. Glazing compounds.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 08 11 13 - Hollow Metal Doors and Frames: Glazed lites in doors, borrowed lites, and transoms.

#### **1.3 REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2019).
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).
- E. ASTM C1036 - Standard Specification for Flat Glass; 2025.
- F. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2025.
- G. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2024, with Editorial Revision (2025).
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.
- I. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2026.
- J. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2024.
- K. GANA (GM) - GANA Glazing Manual; 2022.
- L. GANA (SM) - GANA Sealant Manual; 2008.
- M. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- N. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (Reaffirmed 2016).
- O. ITS (DIR) - Directory of Listed Products; Current Edition.
- P. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.
- Q. NFPA 257 - Standard on Fire Test for Window and Glass Block Assemblies; 2022.
- R. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- S. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

- T. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2020.
- U. NGA (LGRM) - Laminated Glazing Reference Manual; 2019.
- V. UL (DIR) - Online Certifications Directory; Current Edition.
- W. UL 9 - Standard for Fire Tests of Window Assemblies; Current Edition, Including All Revisions.
- X. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.
- Y. UL 10B - Standard for Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
- Z. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

#### 1.4 SUBMITTALS

- A. See Section 01 31 50 - Submit for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data on Glazing Unit Glazing Types: Provide structural, physical, and environmental characteristics, size limitations, special handling and installation requirements.
- D. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- E. Certificate: Certify that products of this section meet or exceed specified requirements.

#### 1.5 QUALITY ASSURANCE

- A. Perform work in accordance with GANA (GM), GANA (SM), IGMA TM-3000, and NGA (LGRM) for glazing installation methods. Maintain one copy on site.
- B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

#### 1.6 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty for Insulating Glass Units: Provide 5-year manufacturer warranty coverage for seal failure, interpane dusting or misting, including providing products to replace failed units, and commencing on the Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Fire-Protection-Rated Glass:
  - 1. Manufacturers:
    - a. McGrory Glass, Inc; FireDefend Series \_\_\_\_: [www.mcgrory.com/#sle](http://www.mcgrory.com/#sle).
    - b. SAFTIFIRST, a division of O'Keeffe's Inc; SuperClear 45-HS: [www.safti.com/#sle](http://www.safti.com/#sle).
    - c. Technical Glass Products: [www.fireglass.com/#sle](http://www.fireglass.com/#sle).
    - d. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads and withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
  - 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
  - 2. Provide glass edge support system sufficiently stiff to limit lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
  - 3. Glass thicknesses listed are minimum.
- B. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain building enclosure vapor retarder and air barrier continuity.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated, in accordance with manufacturer's published data as determined with the following procedures or test methods:
  - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW software.
  - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW software.
  - 3. Solar Optical Properties: Comply with NFRC 300 test method.

## 2.3 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
  - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
  - 2. Kind HS - Heat-Strengthened Type: Comply with ASTM C1048.
  - 3. Kind FT - Fully Tempered Type: Comply with ASTM C1048.
  - 4. Impact-Resistant Safety Glass: Comply with ANSI Z97.1 - Class B, or 16 CFR 1201 - Category I criteria.
- B. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
  - 1. Laminated Safety Glass: Comply with ANSI Z97.1 - Class B or 16 CFR 1201 - Category I impact test requirements.

## 2.4 GLAZING UNITS

- A. Fire-Resistance-Rated Glazing: Type, thickness, and configuration of glazing that contains flames, smoke, and blocks radiant heat, as required to achieve indicated fire rating period exceeding 45 minutes.
  - 1. Applications:
    - a. Glazing in fire-rated door assembly.
    - b. Glazing in fire-rated window assembly.
    - c. Glazing in sidelites, borrowed lites, and other glazed openings in fire-rated wall assemblies.
    - d. Other locations as indicated on drawings.
  - 2. Glass Type: Multi-laminate annealed glass with intumescent fire retardant interlayers.
  - 3. Provide products listed by ITS (DIR) or UL (DIR) and approved by authorities having jurisdiction.
  - 4. Safety Glazing Certification: 16 CFR 1201 Category II.
  - 5. Fire Rating Period: 60 minutes.
  - 6. Markings for Fire-Resistance-Rated Glazing Assemblies: Provide permanent markings on fire-resistance-rated glazing in compliance with ICC (IBC), local building code, and authorities having jurisdiction.
    - a. "W" - meets wall assembly criteria of ASTM E119 or UL 263 fire test standards.
    - b. "D" - meets fire door assembly criteria of NFPA 252, UL 10B, or UL 10C fire test standards.
    - c. "H" - meets fire door assembly hose stream test of NFPA 252, UL 10B, or UL 10C fire test standards.
    - d. "T" - meets temperature rise of not more than 450 degrees F above ambient at end of 30 minutes fire exposure in accordance with NFPA 252, UL 10B, or UL 10C fire test standards.
    - e. "XXX" - placeholder that represents fire rating period, in minutes.
- B. Fire-Protection-Rated Glazing: Type, thickness, and configuration of glazing that contains flame, smoke, and does not block radiant heat, as required to achieve indicated fire rating period of 90 minutes or less.

1. Applications:
  - a. Glazing in fire-resistance-rated door assembly.
  - b. Glazing in fire-resistance-rated window assembly.
  - c. Other locations as indicated on drawings.
2. Glass Type: Specialty tempered float glass.
3. Provide products listed by ITS (DIR) or UL (DIR) and approved by authorities having jurisdiction.
4. Safety Glazing Certification: 16 CFR 1201 Category II.
5. Fire-Rating Period: As indicated on drawings.
6. Markings for Fire-Protection-Rated Glazing Assemblies: Provide permanent markings on fire-protection-rated glazing in compliance with ICC (IBC), local building code, and authorities having jurisdiction
  - a. "D" - meets fire door assembly criteria of NFPA 252, UL 10B, or UL 10C fire test standards.
  - b. "OH" - meets fire window assembly criteria, including hose stream test of NFPA 257 or UL 9 fire test standards.
  - c. "H" - meets fire door assembly hose stream test of NFPA 252, UL 10B, or UL 10C fire tests standards.
  - d. "XXX" - placeholder that represents fire-rating period, in minutes.

## 2.5 GLAZING COMPOUNDS

- A. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; nonbleeding, nonstaining; ASTM C920 Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; color as selected.

## 2.6 ACCESSORIES

- A. Setting Blocks: Aluminum silicate, 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. Continuous by one half the height of glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing Tape: Closed-cell polyvinyl chloride (PVC) foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent, designed for compression of 25 percent to affect air barrier and vapor retarder seal.
- D. Glazing Gaskets: Flexible intumescent seals.

## PART 3 EXECUTION

### 3.1 Examination

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

### 3.2 PREPARATION

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.3 INSTALLATION - GENERAL

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers unless more stringent requirements are indicated, including those in referenced glazing standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.
- F. Prevent glass from contact with contaminating substances that may result from construction operations including, but not limited to weld spatter, fire-safing, plastering, mortar droppings, etc.

3.4 FIELD QUALITY CONTROL

- A. Glass and Glazing product manufacturers to provide field surveillance of the installation of their products.

3.5 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 four days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

END OF SECTION

This Page is Intentionally Left Blank



## **SECTION 09 05 61 - COMMON WORK RESULTS FOR FLOORING PREPARATION**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
  - 1. Resilient tile and sheet.
  - 2. Carpet tile.
  - 3. Thin-set ceramic tile and stone tile.
- B. Preparation of new concrete floor slabs for installation of floor coverings.
- C. Testing of concrete floor slabs for moisture and alkalinity (pH).
- D. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
  - 1. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued.
- E. Patching compound.
- F. Remedial floor coatings.

#### **1.2 REFERENCE STANDARDS**

- A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2024.
- B. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.
- C. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

#### **1.3 SUBMITTALS**

- A. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
  - 1. Moisture and alkalinity (pH) limits and test methods.
  - 2. Manufacturer's required bond/compatibility test procedure.
- B. Remedial Materials Product Data: Manufacturer's published data on each product to be used for remediation.
- C. Adhesive Bond and Compatibility Test Report.

#### **1.4 QUALITY ASSURANCE**

- A. Contractor may perform adhesive and bond test with Contractor's own personnel or hire a testing agency.
- B. Contractor's Responsibility Relating to Independent Agency Testing:
  - 1. Provide access for and cooperate with testing agency.
  - 2. Confirm date of start of testing at least 10 days prior to actual start.
  - 3. Allow at least 4 business days on site for testing agency activities.
  - 4. Achieve and maintain specified ambient conditions.
  - 5. Notify Architect when specified ambient conditions have been achieved and when testing will start.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

1.6 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F.
- B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:
  - 1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
  - 2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
  - 3. Products:
    - a. ARDEX Engineered Cements; ARDEX Feather Finish: [www.ardexamericas.com/#sle](http://www.ardexamericas.com/#sle).
    - b. TEC Specialty Products LLC; TEC Feather Edge Skim Coat: [www.tecspecialty.com/#sle](http://www.tecspecialty.com/#sle).
    - c. USG Corporation; Durock Brand Advanced Skim Coat Floor Patch: [www.usg.com/#sle](http://www.usg.com/#sle).
- B. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.
- C. Remedial Floor Coating, Two-Component: Single-layer coating resistant to water vapor transmission meeting flooring manufacturer's emission limits, resistant to alkalinity (pH) level found, and suitable for flooring adhesion without further treatment.
  - 1. Thickness: As required for application and in accordance with manufacturer's installation instructions.

PART 3 EXECUTION

3.1 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated:
  - 1. Preliminary cleaning.
  - 2. Moisture vapor emission tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise indicated or required by flooring manufacturer.
  - 3. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
  - 4. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
  - 5. Specified remediation, if required.
  - 6. Patching, smoothing, and leveling, as required.
  - 7. Other preparation specified.

8. Adhesive bond and compatibility test.
9. Protection.

B. Remediations:

1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating or remedial sheet membrane over entire suspect floor area.
3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

3.2 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours.
- F. Report: Report the information required by the test method.

3.3 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.4 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer.
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- D. Do not fill expansion joints, isolation joints, or other moving joints.

3.5 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

3.6 APPLICATION OF REMEDIAL FLOOR COATING

- A. Comply with requirements and recommendations of coating manufacturer.

Gracious Manor  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

3.7 PROTECTION

- A. Cover prepared floors with building paper or other durable covering.

END OF SECTION

## **SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Performance criteria for gypsum board assemblies.
- B. Metal channel ceiling framing.
- C. Acoustic insulation.
- D. Gypsum wallboard.
- E. Joint treatment and accessories.
- F. Textured finish system.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Wood blocking product and execution requirements.
- B. Section 07 21 00 - Thermal Insulation: Acoustic insulation.
- C. Section 07 84 00 - Firestopping: Top-of-wall assemblies at fire-resistance-rated walls.
- D. Section 07 92 00 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).
- B. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2026).
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.
- D. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2025.
- E. 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.
- F. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- G. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2024.
- H. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2024.
- I. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- J. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.

1.4 SUBMITTALS

- A. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- B. Product Data: Provide data on gypsum board, glass mat faced gypsum board, accessories, and joint finishing system.

PART 2 PRODUCTS

2.1 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
  - 1. American Gypsum Company; \_\_\_\_: [www.americangypsum.com/#sle](http://www.americangypsum.com/#sle).
  - 2. CertainTeed Corporation: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
  - 3. Continental Building Products: [www.continental-bp.com/#sle](http://www.continental-bp.com/#sle).
  - 4. Georgia-Pacific Gypsum: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
  - 5. National Gypsum Company: [www.nationalgypsum.com/#sle](http://www.nationalgypsum.com/#sle).
  - 6. USG Corporation: [www.usg.com/#sle](http://www.usg.com/#sle).
  - 7. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
  - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
    - a. Mold-resistant board is required whenever board is being installed before the building is enclosed and conditioned.
  - 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. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
- C. Backing Board For Wet Areas: One of the following products:
  - 1. Application: Surfaces behind tile in wet areas including tub and shower surrounds and shower ceilings.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  - 3. Glass Mat Faced Board: Coated glass mat water-resistant gypsum backing panel as defined in ASTM C1178/C1178M.
    - a. Fire-Resistance-Rated Type: Type X core, thickness 5/8 inch.
    - b. Products:
      - 1) CertainTeed Corporation; 5/8" GlasRoc Tile Backer Type X: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
      - 2) Georgia-Pacific Gypsum; DensShield Tile Backer: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
      - 3) Gold Bond Building Products, LLC provided by National Gypsum Company; Gold Bond eXP Fire-Shield Tile Backer: [www.goldbondbuilding.com/#sle](http://www.goldbondbuilding.com/#sle).
      - 4) USG Corporation; Durock Brand Glass-Mat Tile Backerboard 5/8 in. (15.9 mm): [www.usg.com/#sle](http://www.usg.com/#sle).
- D. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
  - 1. Application: Vertical surfaces behind thinset tile, except in wet areas.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  - 3. Type X Thickness: 5/8 inch.
  - 4. Edges: Tapered.
  - 5. Products:

- a. American Gypsum Company; M-Bloc Type X: [www.americangypsum.com/#sle](http://www.americangypsum.com/#sle).
  - b. Georgia-Pacific Gypsum; ToughRock Mold-Guard Gypsum Board: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
  - c. Georgia-Pacific Gypsum; DensArmor Plus: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
  - d. Gold Bond Building Products, LLC provided by National Gypsum Company; Gold Bond XP Fire-Shield Gypsum Board: [www.goldbondbuilding.com/#sle](http://www.goldbondbuilding.com/#sle).
- E. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
- 1. Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.
  - 2. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X.
  - 3. Types: Type X and Type C, in locations indicated.
  - 4. Type X Thickness: 5/8 inch.
  - 5. Type C Thickness: 5/8 inch.
  - 6. Edges: Tapered.
  - 7. Products:
    - a. American Gypsum Company; Exterior Soffit Gypsum Wallboard Type X: [www.americangypsum.com/#sle](http://www.americangypsum.com/#sle).
    - b. CertainTeed Corporation; 5/8" Soffitboard Type C: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
    - c. Georgia-Pacific Gypsum; ToughRock Fireguard C Soffit Board: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
- F. Shaftwall and Coreboard: Type X; 1 inch thick by 24 inches wide, beveled long edges, ends square cut.

## 2.2 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced.
- 1. Surface Burning Characteristics: Provide assemblies with Class I rating, when tested in accordance with ASTM E84.
  - 2. Thickness: Full thickness of cavity, unless otherwise indicated.
  - 3. Products:
    - a. CertainTeed Corporation; CertaPro AcoustaTherm Batts
    - b. Johns Manville Building Insulation Div.; Sound Control Batts
    - c. Knauf Fiber Glass; QuietTherm
    - d. Owens Corning; Sound Attenuation Batts
- B. Acoustic Insulation: ASTM C665; mineral fiber blanket, friction fit type, unfaced.
- 1. Surface Burning Characteristics: Provide assemblies with Class I rating, when tested in accordance with ASTM E84.
  - 2. Thickness: Full thickness of cavity, unless otherwise indicated.
  - 3. Products:
    - a. Roxul
    - b. Fibrex Insulations, Inc.
    - c. Rock Wool Manufacturing Co. Thermafiber LLC
- C. Fire-Resistance Rated and Acoustical Putty Pads: UL1479; moldable intumescent compound sheets.
- 1. Products:
    - a. Grace Construction Products; Flamesafe FSP 1077 Putty Pads
    - b. Knauf Drywall; Putty Pads
    - c. Specified Technologies, Inc; Series SSP Putty Pads
    - d. Tremco; TREMstop Electrical Box Insert
    - e. 3M; Fire Barrier Moldable Putty+Pads
- D. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- E. 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. L-Trim with Tear-Away Strip: Sized to fit 5/8 inch thick gypsum wallboard.

- 3. Expansion Joints:
  - a. Type: V-shaped metal with factory-installed protective tape.
- F. 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.
  - 2. Joint Compound: Drying type, vinyl-based, ready-mixed.
- G. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- H. Adhesive for Attachment to Wood, ASTM C557 and Metal:

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

#### 3.2 SHAFT WALL INSTALLATION

- A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.
  - 1. Fasten runners to structure with short leg to finished side, using appropriate power-driven fasteners at not more than 24 inches on center.
- B. Shaft Wall Liner: Cut panels to accurate dimensions and install sequentially between special friction studs.

#### 3.3 FRAMING INSTALLATION

- A. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
  - 1. Level ceiling system to a tolerance of 1/1200.
  - 2. Laterally brace entire suspension system.
  - 3. Install bracing as required at exterior locations to resist wind uplift.
- B. Standard Wall Furring: Install at concrete walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.
- C. Blocking: Install wood blocking for support of:
  - 1. Wall-mounted cabinets.
  - 2. Plumbing fixtures.
  - 3. Toilet partitions.
  - 4. Toilet accessories.
  - 5. Wall-mounted door hardware.

#### 3.4 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
  - 1. Place continuous bead at perimeter of each layer of gypsum board.
  - 2. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

#### 3.5 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. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- C. Exterior Soffits: Install exterior soffit board perpendicular to framing, with staggered end joints over framing members or other solid backing.

### 3.6 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
  - 1. Not more than 30 feet apart on walls and ceilings over 50 feet long.
  - 2. At exterior soffits, not more than 30 feet apart in both directions.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

### 3.7 JOINT TREATMENT

- A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, embed and finish with setting type joint compound.
- B. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- C. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
  - 1. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
  - 2. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
  - 3. Level 3: Walls to receive textured wall finish.
  - 4. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
  - 5. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- D. 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.
- E. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

### 3.8 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 09 30 00 - TILING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Tile for floor applications.
- B. Ceramic accessories.
- C. Ceramic trim.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 09 05 61 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.
- B. Section 09 21 16 - Gypsum Board Assemblies: Tile backer board.

#### **1.3 REFERENCE STANDARDS**

- A. ANSI A108/A118/A136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2024.
- B. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2019.
- C. ANSI A118.12 - American National Standard Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2014 (Reaffirmed 2024).
- D. ANSI A326.3 - American National Standard Test Method for Measuring Dynamic Coefficient of Friction of Hard Surface Flooring Materials; 2021.
- E. TCNA (HB-GP) - Handbook for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs Installation; 2023.
- F. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2025.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

#### **1.5 MOCK-UPS**

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Construct tile mock-up incorporating components specified for location.
  - 1. Locate where directed by Architect.
  - 2. Mock-up may remain as part of work.

#### **1.6 FIELD CONDITIONS**

- A. Maintain ambient and substrate temperature above 50 degrees F and below 100 degrees F during installation and curing of setting materials.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Tile:
  - 1. Dal-Tile Corporation; As indicated on the drawings: [www.daltile.com/#sle](http://www.daltile.com/#sle).
- B. Setting Materials:
  - 1. LATICRETE International, Inc: [www.laticrete.com/#sle](http://www.laticrete.com/#sle).
  - 2. Mapei Corporation: [www.mapei.com/#sle](http://www.mapei.com/#sle).
  - 3. Source Limitations: Furnish products produced by single manufacturer and obtained from single supplier.
- C. Grout:
  - 1. LATICRETE International, Inc; As indicated on the drawings: [www.laticrete.com/#sle](http://www.laticrete.com/#sle).
  - 2. Mapei Corporation; As indicated on the drawings: [www.mapei.com/#sle](http://www.mapei.com/#sle).
  - 3. Source Limitations: Furnish products produced by single manufacturer and obtained from single supplier.

### 2.2 Performance Requirements

- A. Floor Tile: Provide tile for flooring applications with minimum wet Dynamic Coefficient of Friction (DCOF) of 0.42 when tested in accordance with ANSI A326.3.

### 2.3 TRIM AND ACCESSORIES

- A. Ceramic Trim: Matching bullnose, double bullnose, cove base, and cove ceramic shapes in sizes coordinated with field tile.
  - 1. Manufacturers: Same as for tile.

### 2.4 SETTING MATERIALS

- A. Provide setting and grout materials from same manufacturer.

### 2.5 GROUTS

- A. Provide setting and grout materials from same manufacturer.
- B. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
  - 1. Applications: Use where indicated on drawings and where no other type of grout is indicated.
  - 2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
  - 3. Color: As indicated on drawings.

### 2.6 ACCESSORY MATERIALS

- A. Concrete Floor Slab Crack Isolation Membrane: Material complying with ANSI A118.12; not intended as waterproofing.
  - 1. Crack Resistance: No failure at 1/8 inch gap, minimum.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive tile.
- B. Verify that subfloor surfaces are dust free and free of substances that could impair bonding of setting materials to subfloor surfaces.

- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for tiling installation by testing for moisture and alkalinity (pH).
  - 1. Obtain instructions if test results are not within limits recommended by tiling material manufacturer and setting material manufacturer.

### 3.2 Preparation

- A. Vacuum clean surfaces and damp clean.
- B. Seal substrate surface cracks with filler.

### 3.3 INSTALLATION - GENERAL

- A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108/A118/A136, manufacturer's instructions, and TCNA (HB) or TCNA (HB-GP) recommendations, as applicable.
- B. Lay tile to pattern indicated on drawings. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
- E. Form internal angles square and external angles bullnosed.
- F. Sound tile after setting. Replace hollow sounding units.
- G. Keep control and expansion joints free of mortar, grout, and adhesive.
- H. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
- I. Grout tile joints unless otherwise indicated on drawings. Use standard grout unless otherwise indicated on drawings.
- J. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

### 3.4 INSTALLATION - FLOORS - THIN-SET METHODS

- A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, on ground, with standard grout, unless otherwise indicated on drawings.
  - 1. Where crack isolation membrane is indicated on drawings, install in accordance with TCNA (HB) Method F125-Partial, with latex-Portland cement grout.

### 3.5 CLEANING

- A. Clean tile and grout surfaces.

### 3.6 PROTECTION

- A. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 09 51 00 - ACOUSTICAL CEILINGS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

#### **1.2 REFERENCE STANDARDS**

- A. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- B. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
- C. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

#### **1.3 ADMINISTRATIVE REQUIREMENTS**

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Provide data on suspension system components and acoustical units.

#### **1.5 FIELD CONDITIONS**

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Acoustic Tiles/Panels:
  - 1. Armstrong World Industries, Inc; \_\_\_\_: [www.armstrongceilings.com/#sle](http://www.armstrongceilings.com/#sle).
  - 2. Acoustic Ceiling Products, Inc; \_\_\_\_: [www.acpideas.com/#sle](http://www.acpideas.com/#sle).
  - 3. Acoustics First Corporation; \_\_\_\_: [www.acousticsfirst.com/#sle](http://www.acousticsfirst.com/#sle).
  - 4. Ceilings4U; \_\_\_\_: [www.ceilings4u.com/#sle](http://www.ceilings4u.com/#sle).
  - 5. Certainteed Architectural; \_\_\_\_: [www.certainteed.com/ceilings-and-walls/#sle](http://www.certainteed.com/ceilings-and-walls/#sle).
  - 6. Kinetics Noise Control, Inc; \_\_\_\_: [www.kineticsnoise.com/#sle](http://www.kineticsnoise.com/#sle).
  - 7. USG Corporation; \_\_\_\_: [www.usg.com/#sle](http://www.usg.com/#sle).
- B. Suspension Systems:
  - 1. Same as for acoustical units.

## 2.2 ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Panels, Type ACT -1: Painted mineral fiber, with the following characteristics:
  - 1. Classification: ASTM E1264 Type A.
  - 2. Size: 24 by 24 inches.
  - 3. Thickness: 3/4 inch.
  - 4. Panel Edge: Square.
  - 5. Tile Edge: Beveled.
    - a. Joint: Kerfed and rabbeted.
  - 6. Color: White.
- C. \_\_\_\_\_
- D. ASTM E1264 Type A, Form A3 - Mineral fiber with scrubbable finish, typical in commercial kitchen/food prep areas.
- E. \_\_\_\_\_
- F. \_\_\_\_\_
- G. ASTM E1264 Type A, Form A4 - Mineral base with plastic or aluminum faced overlay; cleanroom classified option.
- H. \_\_\_\_\_
- I. \_\_\_\_\_
- J. ASTM E1264 Types C and D - Metal-faced acoustical panels (Type C) and planks (Type D).
- K. \_\_\_\_\_
- L. \_\_\_\_\_
- M. ASTM E1264 Type F - Wood with a mineral or glass fiber backing, Forms F1 (perforated) and F2 (non-perforated).
- N. \_\_\_\_\_
- O. \_\_\_\_\_
- P. ASTM E1264 Type G - Gypsum, Forms G1 (perforated) and G2 (non-perforated).
- Q. \_\_\_\_\_
- R. \_\_\_\_\_
- S. ASTM E1264 Type J - Melamine foam tiles, planks, and panels.
- T. \_\_\_\_\_

## 2.3 Suspension Systems

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold-down clips, stabilizer bars, clips, and splices as required.
  - 1. Materials:
    - a. Aluminum Grid: Aluminum sheet, ASTM B209/B209M.
- B. Exposed Suspension System: Aluminum grid and cap.
  - 1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
  - 2. Profile: Tee; 15/16 inch face width.
  - 3. Finish: Baked enamel.



2.4 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application 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.
  - 2. Angle Molding: L-shaped, for mounting at same elevation as face of grid.
- D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.2 Preparation

- A. Install after major above-ceiling work is complete.
- B. Coordinate the location of hangers with other work.

3.3 INSTALLATION - SUSPENSION SYSTEM

- A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- B. Locate system on room axis according to reflected plan.
- C. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
  - 1. Use longest practical lengths.
- D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- 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.

3.4 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.

3.5 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.

3.6 CLEANING

- A. Clean surfaces.
- B. Replace damaged or abraded components.

END OF SECTION

## **SECTION 09 54 23 - LINEAR METAL CEILINGS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Linear metal ceilings.
- B. Suspended metal support system and perimeter trim.

#### **1.2 REFERENCE STANDARDS**

- A. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019 (Reapproved 2025).
- B. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.
- C. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

#### **1.3 DESIGN REQUIREMENTS**

#### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate work of this section with installation of mechanical and electrical components and with other construction activities affected by work of this section.

#### **1.5 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Samples: Submit two samples \_\_\_\_ by \_\_\_\_ inch illustrating color and finish of components exposed to view.

#### **1.6 MOCK-UPS**

- A. Construct \_\_\_\_\_ mock-up, \_\_\_\_ feet long by \_\_\_\_ feet wide; include suspension system, panels, closures in mock-up.
- B. Locate mock-up where directed.
- C. Mock-up may remain as part of the work.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Linear Metal Ceilings:
  - 1. As indicated on drawings
  - 2. Substitutions: See Section 01 60 00 - Product Requirements.

#### **2.2 LINEAR METAL CEILINGs**

- A. Linear Metal Ceiling System: Panels, suspension members, trim, and accessories as required to provide a complete system.
- B. Performance Requirements:
  - 1. Design to support imposed loads of indicated items without eccentric loading of supports.
  - 2. Design for maximum deflection of 1/360 of span.

## 2.3 COMPONENTS

- A. Linear Metal Panels:
  - 1. Classification: ASTM E1264, Class A, Type D, Form D2, non-perforated, aluminum formed sheet.
  - 2. Type: Linear panel with reveals; snap-in installation.
    - a. Size and Configuration: As indicated on drawings.
    - b. Panel Profile: Box shaped.
- B. Edge Molding, Expansion Joints, and Splices: Same material, thickness, and finish as linear panels.
- C. End Caps: Formed metal; same color and finish as sight-exposed surfaces of linear panels.
- D. Brackets: L-shaped, size recommended by ceiling manufacturer for specified application.
- E. Suspension Members: Formed steel sections, with integral attachment points; galvanized finish; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- F. Suspension Wire: Steel, annealed, galvanized finish, 9 gauge, 0.1144 inch diameter.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

### 3.2 INSTALLATION

- A. Suspension Components:
  - 1. Install after above-ceiling work is complete in accordance with manufacturer's instructions, ASTM C636/C636M, and ASTM E580/E580M.
  - 2. Hang carrying members independent of walls, columns, ducts, light fixtures, pipe, and conduit; where carrying members are spliced, avoid visible displacement of face panels with adjacent panels.
  - 3. Where ducts or other equipment prevent regular spacing of hangers, reinforce nearest adjacent hangers to span the required distance.
- B. Linear Metal Ceiling:
  - 1. Install linear panels, baffles, and other system components in accordance with manufacturer's instructions.

### 3.3 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.

### 3.4 CLEANING

- A. Clean surfaces.
- B. Replace damaged or abraded components.

END OF SECTION

## **SECTION 09 65 00 - RESILIENT FLOORING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Resilient tile flooring.
- B. Resilient base.
- C. Installation accessories.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 09 05 61 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

#### **1.3 REFERENCE STANDARDS**

- A. ASTM F1861 - Standard Specification for Resilient Wall Base; 2021 (Reapproved 2025).

#### **1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate seaming plans and floor patterns.
- D. Verification Samples: Submit two samples, 6 by 9 inch in size illustrating color and pattern for each resilient flooring product specified.
- E. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.

#### **1.5 QUALITY ASSURANCE**

- A. Testing Agency Qualifications: Independent firm specializing in performing concrete slab moisture testing and inspections of the type specified in this section.

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

#### **1.7 FIELD CONDITIONS**

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

### **PART 2 PRODUCTS**

#### **2.1 TILE FLOORING**

- A. As indicated on drawings

## 2.2 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; style as scheduled.
  - 1. Manufacturers:
    - a. As indicated on drawings.
  - 2. Height: As indicated on drawings
  - 3. Thickness: 0.125 inch.
  - 4. Finish: Satin.
  - 5. Length: Roll.
  - 6. Color: As indicated on drawings.
  - 7. Accessories: Premolded external corners and internal corners.

## 2.3 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- C. Adhesive for Vinyl and Rubber Flooring:
- D. Moldings, Transition and Edge Strips: Same material as flooring.
- E. Sound Control Underlayment: Non-woven fabric composed of PET/Nylon polymer fibers.
  - 1. Thickness: 1/8 inch, nominal.

## PART 3 EXECUTION

### 3.1 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. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
  - 1. Conduct tests by an independent testing agency acceptable to Owner.
  - 2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- C. Verify that required floor-mounted utilities are in correct location.

### 3.2 PREPARATION

- A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.
- C. Prohibit traffic until filler is fully cured.

### 3.3 Installation - General

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Adhesive-Applied Installation:
  - 1. Place copper grounding strip in conductive adhesive and apply additional adhesive to top side of strip before installing static control flooring. Allow strip to extend beyond flooring in accordance with static control flooring manufacturer's instructions. Refer to Section 26 05 26 for grounding and bonding to building grounding system.

2. Fit joints and butt seams tightly.
    3. Set flooring in place, press with heavy roller to attain full adhesion.
  - D. Loose-Laid Installation: Set flooring in place in accordance with manufacturer's instructions.
  - E. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
  - F. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
    1. Resilient Strips: Attach to substrate using adhesive.
  - G. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- 3.4 Installation - Sound Control Underlayment
- A. Install in accordance with underlayment manufacturer's instructions.
- 3.5 Installation - Tile Flooring
- A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.
  - B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.
  - C. Install loose-laid tile, fit interlocking edges tightly.
- 3.6 Installation - Resilient Base
- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
  - B. Install base on solid backing. Bond tightly to wall and floor surfaces.
- 3.7 CLEANING
- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
  - B. Clean in accordance with manufacturer's written instructions.
- 3.8 PROTECTION
- A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

This Page is Intentionally Left Blank



## **SECTION 09 68 13 - TILE CARPETING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Carpet tile, fully adhered.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 09 05 61 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

#### **1.3 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- C. Shop Drawings: Indicate layout of joints.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.
- F. Operation and Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

#### **1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.

#### **1.5 FIELD CONDITIONS**

- A. Store materials in area of installation for minimum period of 24 hours prior to installation.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Tile Carpeting:
  - 1. As indicated on drawings

#### **2.2 ACCESSORIES**

- A. Subfloor Filler: White premix latex; type recommended by flooring material manufacturer.
- B. Carpet Tile Adhesive: Recommended by carpet tile manufacturer; releasable type.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet tile.
- B. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).
  - 1. Test in accordance with Section 09 05 61.
  - 2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

#### 3.2 PREPARATION

- A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- B. Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with subfloor filler.
- C. Vacuum clean substrate.

#### 3.3 INSTALLATION

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install carpet tile in accordance with manufacturer's instructions and CRI 104 (Commercial).
- C. Blend carpet from different cartons to ensure minimal variation in color match.
- D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.
- F. Fully adhere carpet tile to substrate.
- G. Trim carpet tile neatly at walls and around interruptions.
- H. Complete installation of edge strips, concealing exposed edges.

#### 3.4 CLEANING

- A. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- B. Clean and vacuum carpet surfaces.

END OF SECTION

## **SECTION 09 91 13 - EXTERIOR PAINTING**

### **PART 1 GENERAL**

#### **1.1 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. Floors, unless specifically indicated.
  - 8. Glass.
  - 9. Concealed pipes, ducts, and conduits.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 05 50 00 - Metal Fabrications: Shop-primed items.
- B. Section 09 91 23 - Interior Painting.

#### **1.3 DEFINITIONS**

- A. Comply with ASTM D16 for interpretation of terms used in this section.
- B. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.
- C. Gloss Level 2: Flat refers to a lusterless or matte finish with a gloss range below 15 at 85 degrees, according to ASTM D 523.
- D. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- E. Gloss Level 4: Eggshell refers to low-sheen finish with a gloss range between 20 and 35 at 85 degrees, according to ASTM D 523.
- F. Gloss Level 5: Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 at 60 degrees, according to ASTM D 523.
- G. Gloss Level 6: Full gloss refers to high-sheen finish with a gloss range more than 70 at 60 degrees, according to ASTM D 523.
- H. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

#### **1.4 REFERENCE STANDARDS**

- A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.
- B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).

- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- F. SSPC-SP 2 - Hand Tool Cleaning; 2024.
- G. SSPC-SP 3 - Power Tool Cleaning; 2024.
- H. SSPC-SP 6/NACE No.3 - Commercial Blast Cleaning; 2006.
- I. SSPC-SP 13/NACE No.6 - Surface Preparation of Concrete; 2018.

#### 1.5 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit one paper "draw down" sample, 8-1/2 by 11 inches in size, for each finishing product and color specified.
  - 1. Where sheen is specified, submit samples in only that sheen.
  - 2. Where sheen is not specified, submit each color in each sheen available.
  - 3. Step coats on Samples to show each coat required for system.
  - 4. Label each coat of each Sample.
  - 5. Label each Sample for location and application area.
- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Extra Paint and Finish Materials: 5 percent but not less than 1 gallon of each color; from the same product run, store where directed.
  - 3. Label each container with color in addition to the manufacturer's label.

#### 1.6 MOCK-UPS

- A. See Section 01 40 00 - Quality Requirements, for general requirements for mock-up.
- B. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system.
  - 2. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..
    - a. Other Items: Architect will designate items or areas required.
  - 3. Final approval of color selections will be based on mockups.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
  - 4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 5. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

#### 1.8 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer, or to damp or wet surfaces.
- D. Minimum Application Temperatures for Latex Paints: 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  - 1. Sherwin-Williams Company: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
- C. Substitutions: See Section 01 60 00 - Product Requirements.

#### 2.2 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](http://www.paintinfo.com), for specified MPI categories, except as otherwise indicated.
  - 2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 3. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
  - 4. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
  - 5. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 6. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions.
- B. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.
- C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

- D. Colors: To be selected from manufacturer's full range of available colors.

## 2.3 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including brick, fiber cement siding, 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.
    - a. Products:
      - 1) Sherwin-Williams A-100 Exterior Latex Flat.
  3. Top Coat Sheen:
    - a. Flat: MPI gloss level 1; use this sheen for overhead surfaces.
    - b. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.
  4. Primer: As recommended by top coat manufacturer for specific substrate.
- B. Paint E-OP-FL - Concrete Floors to be Painted.
1. Two top coats and one coat primer.
  2. Top Coat(s): Latex Floor Paint, Low Gloss; MPI #60.
    - a. Products:
      - 1) Pittsburgh Paints Floor and Porch Enamel 100% Acrylic Latex, 3-510XI Series, Satin.
      - 2) S-W Amorseal Tread-Plex.
  3. Primer: As recommended by top coat manufacturer for specific substrate.

## 2.4 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. 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 Plaster and Stucco: 12 percent.
  2. Fiber Cement Siding: 12 percent.
  3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
  4. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.
  5. Concrete Floors and Traffic Surfaces: 8 percent.

### 3.2 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 surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- 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. Concrete:
  - 1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
  - 2. Prepare surface as recommended by top coat manufacturer and in accordance with SSPC-SP 13/NACE No.6.
- G. Masonry:
  - 1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
  - 2. Prepare surface as recommended by top coat manufacturer.
- H. Fiber Cement Siding: Remove dirt, dust and other foreign matter with a stiff fiber brush. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
- I. Exterior Gypsum Board: Fill minor defects with exterior filler compound. Spot prime defects after repair.
- J. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
- K. Galvanized Surfaces:
  - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
  - 2. Prepare surface according to SSPC-SP 3.
- L. 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.
  - 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.
- M. 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.
- N. Previously Coated Surfaces: If in sound condition, clean the surface of foreign material. Dull smooth, hard or glossy coatings and surfaces abrading surfaces. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if paint product attacks previous finish, remove previous coating. If paint is peeling or badly weathered, clean surface to sound substrate and treat according to requirements for new substrates.

### 3.3 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- C. Application Procedure: Spray, back roll, plus two finish coats.

- D. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
  - E. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
  - F. 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.
  - G. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
    - 1. Use applicators and techniques suited for paint and substrate indicated.
    - 2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  - H. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
  - I. Application Procedure: Spray, back roll, plus two finish coats.
  - J. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
  - K. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
  - L. Apply paints and finishes to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
  - M. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
  - N. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
  - O. Apply each coat to uniform appearance.
  - P. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.
  - Q. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
  - R. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
  - S. Paint all exposed wall and roof penetrations and other miscellaneous unfinished materials that are adjacent to "finished" wall or roof materials including, but not limited to, exhaust wall caps, PVC vent pipes, exposed ductwork, window and door steel lintels, etc. Coordinate with MEP drawings.
- 3.4 CLEANING
- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
  - B. After completing paint and finish application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- 3.5 PROTECTION
- A. Protect finishes until completion of project.



- B. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- C. Touch-up damaged finishes after Substantial Completion.

### 3.6 SCHEDULE - MPI SYSTEMS

- A. Substrate: Concrete, Exterior .
  - 1. FirstPrimer: Primer, Alkali Resistant, Water Based; MPI # 3.
  - 2. Second Primer: Primer, Alkali Resistant, Water Based; MPI # 3.
  - 3. Intermediate Coat: Latex, Exterior, Low Sheen; MPI # 15.
  - 4. Top Coat: Latex, Exterior, Low Sheen; MPI # 15.
- B. Substrate: Cementitious Siding, Exterior .
  - 1. MPI System: EXT 3.3A - G3/4.
    - a. Primer: Factory Primed.
    - b. Intermediate Coat: Latex, Exterior, Low Sheen; MPI # 15.
    - c. Top Coat: Latex, Exterior, Low Sheen; MPI # 15.
- C. Substrate: CMU, Exterior .
  - 1. MPI System: EXT 4.2A - G5.
    - a. Primer: Block Filler, Latex, Interior/Exterior; MPI # 4.
    - b. Intermediate Coat: Latex, Exterior, Semi-Gloss; MPI # 11.
    - c. Top Coat: Latex, Exterior, Semi-Gloss; MPI # 11.
  - 2. MPI System: 4.2L - G5.
    - a. Primer: Primer, Alkali Resistant, Water Based; MPI # 3.
    - b. Intermediate Coat: Latex, Exterior, Semi-Gloss; MPI # 11.
    - c. Top Coat: Latex, Exterior, Semi-Gloss; MPI # 11.
- D. Substrate: Concrete Horizontal Surfaces, Exterior .
  - 1. MPI System: EXT 3.2A - G2/3.
    - a. Primer: Floor Paint, Latex, Low Gloss; MPI # 60.
    - b. Intermediate Coat: Floor Paint, Latex, Low Gloss; MPI # 60.
    - c. Top Coat: Floor Paint, Latex, Low Gloss; MPI # 60.
- E. Substrate: Steel, Exterior .
  - 1. MPI System: EXT 5.1C - 5G.
    - a. Primer: Primer, Alkyd, Anti-Corrosive for Metal; MPI # 79.
    - b. Intermediate Coat: Light Industrial Coating, Exterior, Water Based, Semi-Gloss; MPI # 163.
    - c. Top Coat: Light Industrial Coating, Exterior, Water Based, Semi-Gloss; MPI # 163.
- F. Substrate: Galvanized-Metal, Exterior .
  - 1. MPI System: EXT 5.3J - 5G.
    - a. Primer: Primer, Galvanized, Water Based; MPI # 134.
    - b. Intermediate Coat: Light Industrial Coating, Exterior, Water Based, Semi-Gloss; MPI # 163.
    - c. Top Coat: Light Industrial Coating, Exterior, Water Based, Semi-Gloss; MPI # 163.
- G. Substrate: Wood (Trim, Doors, Windows, Wood Board Siding and Fences), Exterior .
  - 1. MPI System: EXT 6.3L - G5.
    - a. Primer: Primer, Latex for Exterior Wood; MPI # 6.
    - b. Intermediate Coat: Latex, Exterior, Semi-Gloss; MPI # 11.
    - c. Top Coat: Latex, Exterior, Semi-Gloss; MPI # 11.
- H. Substrate: Portland Cement Plaster, Exterior .
  - 1. MPI System: EXT 9.1A - G3/4.
    - a. Primer: Primer, Alkali Resistant, Water Based; MPI # 3.
    - b. Intermediate Coat: Latex, Exterior, Low Sheen; MPI # 15.
    - c. Top Coat: Latex, Exterior, Low Sheen; MPI # 15.

- I. Substrate: Plastic, Exterior .
  - 1. Paint all exposed PVC vent pipes where penetrating shingle and or metal roofs. See Mechanical drawings for locations. Color to match roofing material (coordinate w/ architect).
  - 2. MPI System: EXT 6.8A - G3/4.
    - a. Primer: Primer, Bonding, Water Based; MPI # 17.
    - b. Intermediate Coat: Latex, Exterior, Low Sheen; MPI # 15.
    - c. Top Coat: Latex, Exterior, Low Sheen; MPI # 15.

END OF SECTION

## **SECTION 09 91 23 - INTERIOR PAINTING**

### **PART 1 GENERAL**

#### **1.1 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. Prime surfaces to receive wall coverings.
- 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. Ceramic and other tiles.
  - 8. Glass.
  - 9. Acoustical materials, unless specifically indicated.
  - 10. Concealed pipes, ducts, and conduits.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 05 50 00 - Metal Fabrications: Shop-primed items.
- B. Section 09 91 13 - Exterior Painting.

#### **1.3 DEFINITIONS**

- A. Comply with ASTM D16 for interpretation of terms used in this section.
- B. Gloss Level 2: Flat refers to a lusterless or matte finish with a gloss range below 15 at 85 degrees, according to ASTM D 523.
- C. Gloss Level 4: Eggshell refers to low-sheen finish with a gloss range between 20 and 35 at 85 degrees, according to ASTM D 523.
- D. Gloss Level 5: Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 at 60 degrees, according to ASTM D 523.
- E. Gloss Level 6: Full gloss refers to high-sheen finish with a gloss range more than 70 at 60 degrees, according to ASTM D 523.

#### **1.4 REFERENCE STANDARDS**

- A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.
- B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).
- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.

- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- F. SSPC-SP 2 - Hand Tool Cleaning; 2024.
- G. SSPC-SP 6/NACE No.3 - Commercial Blast Cleaning; 2006.
- H.
- I. SSPC-SP 13/NACE No.6 - Surface Preparation of Concrete; 2018.

#### 1.5 SUBMITTALS

- A. See Section 01 31 50 - Submittal, 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 three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
  - 1. Where sheen is specified, submit samples in only that sheen.
  - 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens not required.
  - 3. Step coats on Samples to show each coat required for system.
  - 4. Label each coat of each Sample.
  - 5. Label each Sample for location and application area.
- D. Product List: For each product indicated, include the following:
  - 1. Cross-reference to finish system and locations of application areas. Use same designations indicated on Drawings and in schedules.
- E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Label each container with color in addition to the manufacturer's label.

#### 1.6 MOCK-UP

- A. See Section 01 40 00 - Quality Requirements, for general requirements for mock-up.
- B. Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system.
    - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..
    - b. Other Items: Architect will designate items or areas required.
  - 2. Final approval of color selections will be based on mockups.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

1.7 DELIVERY, STORAGE, AND HANDLING

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

1.8 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 fc measured mid-height at substrate surface.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  - 1. Benjamin Moore & Co.; Eco Spec Interior.
- C. Primer Sealers: Same manufacturer as top coats.

2.2 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](http://www.paintinfo.com), for specified MPI categories, except as otherwise indicated.
  - 2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 3. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
  - 4. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
  - 5. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 6. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

- C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- D. Colors: To be selected from manufacturer's full range of available colors.
  - 1. Selection to be made by Architect after award of contract.

## 2.3 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## PART 3 EXECUTION

### 3.1 EXAMINATION

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

### 3.2 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 hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- 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. Acoustical Panel Ceilings:
  - 1. Pretreat ceiling water stains according to manufacturer's written instructions.
- G. Concrete:

1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
  2. Prepare surface as recommended by top coat manufacturer and in accordance with SSPC-SP 13/NACE No.6.
- H. Masonry:
1. Remove efflorescence and chalk. Do not coat surfaces if moisture content, alkalinity of surfaces, or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
  2. Prepare surface as recommended by top coat manufacturer.
- I. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
- J. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- K. Galvanized Surfaces:
1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
  2. Prepare surface according to SSPC-SP 3.
- L. 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.
  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.
- M. 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.

### 3.3 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".
1. Use applicators and techniques suited for paint and substrate indicated.
  2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
  4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- D. Application Procedure: Spray, back roll, plus two finish coats.
- E. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- F. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- G. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- H. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- I. Sand wood and metal surfaces lightly between coats to achieve required finish.

- J. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
  - 1. Paint the following work where exposed in equipment rooms:
    - a. Equipment, including panelboards and switch gear.
    - b. Uninsulated metal piping.
    - c. Uninsulated plastic piping.
    - d. Pipe hangers and supports.
    - e. Metal conduit.
    - f. Plastic conduit.
    - g. Tanks that do not have factory-applied final finishes.
    - h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
  - 2. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.
- K. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- L. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### 3.4 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection.
- B. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

### 3.5 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- B. After completing paint and finish application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

### 3.6 PROTECTION

- A. Protect finishes until completion of project.
- B. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- C. Touch-up damaged finishes after Substantial Completion.

END OF SECTION



## **SECTION 10 14 23 - PANEL SIGNAGE**

### **PART 1 GENERAL**

- 1.1 Section Includes
  - A. Panel signage.
- 1.2 Reference Standards
  - A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
  - B. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- 1.3 Submittals
  - A. See Section 01 31 50 - Submittals for submittal procedures.
  - B. 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.
  - C. Shop Drawings:
    - 1. Include dimensions, locations, elevations, materials, text and graphic layout, attachment details, and schedules.
  - D. Samples: Submit two samples of each type of sign, of size similar to that required for project, indicating sign style, font, and method of attachment.
  - E. Selection Samples: Where colors, materials, and finishes are not specified, submit two sets of color selection charts or chips.
  - F. Verification Samples: Submit samples showing colors, materials, and finishes specified.
  - G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

### **PART 2 PRODUCTS**

- 2.1 Manufacturers
  - A. Panel Signage:
    - 1. Inpro Corporation: [www.inprocorp.com/#sle](http://www.inprocorp.com/#sle).
    - 2. Ellet.
    - 3. Columbus Signs.
    - 4. Great Impressions - Greg Kitzmiller - 614-428-8290
- 2.2 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.
- 2.3 Panel Signage
  - A. Panel Signage:
    - 1. Application: Room, Door, Interior Directional and Information signs.
    - 2. Description: Flat signs with engraved panel media, tactile characters.
    - 3. Sign Size: As indicated on drawings.
    - 4. Total Thickness: 1/8 inch.

5. 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 scheduled.
  - d. Character Color: Contrasting color.
6. Material: Acrylic plastic base with applied plastic letters and braille.
7. Profile: Flat panel without frame.
8. Tactile Letters: Raised 1/32 inch minimum.
9. Braille: Grade II, ADA-compliant.
10. One-Sided Wall Mounting: Tape adhesive.

2.4 Accessories

- A. Tape Adhesive: Double-sided tape, permanent adhesive.

PART 3 EXECUTION

3.1 Examination

- A. Verify that substrate surfaces are ready to receive work.
- B. Notify Architect if conditions are not suitable for installation of signs; do not proceed until conditions are satisfactory.

3.2 Installation

- A. Install in accordance with manufacturer's instructions.
- 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.

END OF SECTION

## **SECTION 10 28 00 - TOILET, BATH, AND LAUNDRY ACCESSORIES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Commercial toilet accessories.
- B. Commercial shower and bath accessories.
- C. Residential toilet, shower, and bath accessories.
- D. Under-lavatory pipe supply covers.
- E. Utility room accessories.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 22 40 00 - Plumbing Fixtures: Under-lavatory pipe and supply covers.

#### **1.3 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2025.
- C. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- D. ASTM C1036 - Standard Specification for Flat Glass; 2025.
- E. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2024.
- F. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).

#### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

#### **1.5 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- C. Samples: Submit two samples of each accessory, illustrating color and finish.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Commercial Toilet, Shower, and Bath Accessories:
  - 1. As indicated in Owner provided schedule
- B. Under-Lavatory Pipe Supply Covers:

1. Plumberex Specialty Products, Inc: [www.plumberex.com/#sle](http://www.plumberex.com/#sle).
2. IPS Corporation.
3. Buckaroos, Inc..

## 2.2 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. Keys: Provide 6 keys for each accessory to Owner; master key lockable accessories.
- C. Stainless Steel Sheet: ASTM A666/A666M, Type 304.
- D. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
- E. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- F. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.

## 2.3 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.
- B. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.

## 2.4 Commercial Toilet Accessories

## 2.5 Commercial Shower and Bath Accessories

- A. As indicated on Owner provided schedule or below.
- B. Folding Shower Seat for 30" x 60" Shower (**T-15**): Wall-mounted surface; welded tubular seat frame, structural support members, hinges, and mechanical fasteners of Type 304 stainless steel, L-shaped, right hand and L-shaped, left hand seat.
  1. Seat: Phenolic or polymeric composite one-piece seat or seat slats, of color as selected.
  2. Size: ADA Standards compliant.
  3. Basis of Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.; Reversible Solid Phenolic Folding Shower Seat B-5181 or a comparable product by one of the following:
    - a. American Specialties, Inc. .
    - b. Bradley Corporation.
    - c.

## 2.6 Residential Toilet, Shower, and Bath Accessories

## 2.7 As indicated on Owner provided schedule.

- A. Medicine Cabinet (**T-22**): One-piece construction of heavy-gauge steel with factory-applied, gloss white, baked enamel finish, fully recessed, satin finish stainless steel mirror frame.
  1. Shelves: Adjustable, aluminum or glass; provide not less than 3 shelves.
  2. Door: Fitted with continuous piano-type hinge, shock-absorbing spring-and-rod door stop, magnetized catch, swing as indicated.
  3. Basis of Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.; Recessed Medicine Cabinet, B397 or a comparable product by one of the following:
    - a. American Specialties, Inc: [www.americanspecialties.com/#sle](http://www.americanspecialties.com/#sle).
    - b. Bradley Corporation.
    - c. GAMCO Commerical Restroom Accessories: a division of Bobrick.

2.8 UNDER-LAVATORY PIPE AND SUPPLY COVERS

- A. Under-Lavatory Pipe and Supply Covers **(T-23)**:
  - 1. Insulate exposed drainage piping, including hot, cold, and tempered water supplies under lavatories or sinks to comply with ADA Standards.
  - 2. Construction: 1/8 inch flexible PVC.
    - a. Microbial and Fungal Resistance: Comply with ASTM G21.
  - 3. Color: White.
  - 4. Fasteners: Reusable, snap-locking fasteners with no sharp or abrasive external surfaces.
  - 5. Basis of Design Product: Subject to compliance with requirements, provide Truebro by IPS Corporation; or a comparable product by one of the following:
    - a. Plumberex Specialty Products, Inc; [www.plumberex.com/#sle](http://www.plumberex.com/#sle).
    - b. Buckaroos, Inc..

2.9 Utility Room Accessories

- A. Mop and Broom Holder **(T-26)**: 22 gauge thick stainless steel, Type 304, hat-shaped channel.
  - 1. Holders: Three spring-loaded rubber cam holders.
  - 2. Length: 24 inches.
  - 3. Basis of Design Product: Subject to compliance with requirements; provide Bobrick Washroom Equipment, Inc.; B-223x24 or a comparable product by one of the following:
    - a. American Specialties, Inc: [www.americanspecialties.com/#sle](http://www.americanspecialties.com/#sle).
    - b. Bradley Corporation.
    - c. GAMCO Commerical Restroom Accessories: a division of Bobrick.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.

3.2 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

This Page is Intentionally Left Blank

## **SECTION 10 31 00 - MANUFACTURED FIREPLACES**

### **PART 1 GENERAL**

- 1.1 Section Includes
  - A. Electric fireplaces.
- 1.2 Reference Standards
  - A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
  - B. UL 2021 - Fixed and Location Dedicated Electric Room Heaters; Current Edition, Including All Revisions.
- 1.3 Submittals
  - A. See Section 01 31 50 - Submittals for submittal procedures.
  - B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
  - C. Product Data: Provide firebox cabinet dimensions, clearances required from adjacent dissimilar construction, applicable regulatory agency approvals, and electrical characteristics of fan.
  - D. Executed warranty.
- 1.4 Warranty
  - A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
  - B. Manufacturer Warranty: Provide 2-year manufacturer warranty for \_\_\_\_\_. Complete forms in Owner's name and register with manufacturer.

### **PART 2 PRODUCTS**

- 2.1 Electric Fireplaces
  - A. Manufacturers:
    - 1. FPI Fireplace Products International, Inc; \_\_\_\_: [www.regency-fire.com/#sle](http://www.regency-fire.com/#sle).
    - 2. Superior Fireplaces; \_\_\_\_: [www.superiorfireplaces.us.com/#sle](http://www.superiorfireplaces.us.com/#sle).
    - 3. Substitutions: See Section 01 60 00 - Product Requirements.
  - B. Description:
    - 1. Location: Indoor.
    - 2. Fireplace Style: Traditional.
    - 3. Power Connection: Plug-in.
    - 4. Btu Rating: \_\_\_\_\_.
    - 5. Built-in fireboxes.
  - C. Design Criteria:
    - 1. Comply with UL 2021 for electric room heating equipment.

2.2 Components

- A. Firebox: Formed insulated steel cabinet with rectangular-shaped interior, configured to include chimney outlet and cleanout, refractory brick lining, and \_\_\_\_\_.

PART 3 EXECUTION

3.1 Verification of Conditions

- A. Verify prepared openings are ready to receive work and opening dimensions are as indicated on drawings.
- B. Verify proper power supply and fuel source are available.

3.2 Installation

- A. Comply with applicable code for clearances from adjacent materials, chimney height above roof line requirements, and unit UL approval.
- B. Perform electrical work in accordance with NFPA 70.
- C. Install unit assembly in accordance with manufacturer's instructions.

END OF SECTION



## **SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES**

### **PART 1 GENERAL**

- 1.1 Section Includes
  - A. Fire extinguishers.
  - B. Fire extinguisher cabinets.
- 1.2 Related Requirements
  - A. Section 06 10 00 - Rough Carpentry: Wood blocking.
  - B. Section 09 91 23 - Interior Painting.
- 1.3 Reference Standards
  - A. FM (AG) - FM Approval Guide; Current Edition.
  - B. NFPA 10 - Standard for Portable Fire Extinguishers; 2017, with Errata (2018).
  - C. UL (DIR) - Online Certifications Directory; Current Edition.
- 1.4 Submittals
  - A. See Section 01 31 50 - Submittals for submittal procedures.
  - B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
  - C. Product Data: Provide extinguisher operational features, extinguisher ratings and classifications, color and finish, and installation instructions.
- 1.5 Field Conditions
  - A. Do not install extinguishers when ambient temperature causes freezing of extinguisher ingredients.

### **PART 2 PRODUCTS**

- 2.1 Manufacturers
  - A. Fire Extinguishers:
    - 1. Activar Construction Products Group, Inc. - JL Industries; Cosmic Extinguisher - Multipurpose Chemical: [www.activarcpg.com/#sle](http://www.activarcpg.com/#sle).
    - 2. Ansul, a Tyco Business; Cleanguard: [www.ansul.com/#sle](http://www.ansul.com/#sle).
    - 3. Fire-End & Croker Corporation: [www.croker.com/#sle](http://www.croker.com/#sle).
    - 4. Oval Brand Fire Products; Oval Dry Chemical Fire Extinguisher - Multipurpose ABC: [www.ovalfireproducts.com/#sle](http://www.ovalfireproducts.com/#sle).
    - 5. Substitutions: See Section 01 60 00 - Product Requirements.
  - B. Fire Extinguisher Cabinets and Accessories:
    - 1. Activar Construction Products Group, Inc. - JL Industries; Ambassador Series: [www.activarcpg.com/#sle](http://www.activarcpg.com/#sle).
    - 2. Fire-End & Croker Corporation: [www.croker.com/#sle](http://www.croker.com/#sle).
    - 3. Larsen's Manufacturing Co: [www.larsensmfg.com/#sle](http://www.larsensmfg.com/#sle).

4. Oval Brand Fire Products; Cabinets for Low Profile Extinguishers: [www.ovalfireproducts.com/#sle](http://www.ovalfireproducts.com/#sle).
5. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.2 Fire Extinguishers

- A. General Requirements: 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 on drawings.
- B. Multipurpose Dry-Chemical-Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
  1. Class: A:B:C.
  2. Size: 5 pound.
  3. Temperature Range: Minus 65 to 120 degrees F.
- C. Wet Chemical Type Fire Extinguishers: Stainless steel tank, with pressure gauge.
  1. Class: K.
  2. Size: 1.6 gal.
  3. Finish: Polished stainless steel.
  4. Temperature Range: Minus 20 to 120 degrees F.

## 2.3 Fire Extinguisher Cabinets

- A. Cabinet Construction: Non-fire rated.
  1. Formed primed steel sheet; 20-gauge, 0.036-inch thick base metal.
- B. Cabinet Configuration: Semi-recessed type.
  1. Size to accommodate accessories.
  2. Trim: Flat rolled edge, with 2-1/2" inch wide face.
  3. Provide cabinet enclosure with right-angle inside corners and seams and with formed perimeter trim and door stiles.
- C. Door: 20-gauge, 0.036-inch metal thickness, reinforced for flatness and rigidity with nylon catch. Hinge doors for 180-degree opening with two butt hinges.
- D. Door Glazing: Float glass, clear, 1/8 inch thick, and set in resilient channel glazing gasket.
- E. Cabinet Mounting Hardware: Appropriate to cabinet, with predrilled holes for placement of anchors.
- F. Fabrication: Weld, fill, and grind components smooth.
- G. Finish of Cabinet Exterior Trim and Door: Primed for field paint finish.
  1. See Section 09 91 23 for field painting.
- H. Finish of Cabinet Interior: White colored enamel.

## 2.4 Accessories

- A. Lettering: FIRE EXTINGUISHER text on decal or self-adhesive vinyl, prespaced black lettering in accordance with authorities having jurisdiction.

## PART 3 EXECUTION

### 3.1 Examination

- A. Verify dimensions, tolerances, and interfaces with other work.
- B. Verify substrate and site conditions for product installation are in accordance with manufacturer's written instructions.

- C. Verify rough openings for cabinet are sized and located in accordance with manufacturer's written instructions.
- D. Notify Architect in writing of conditions detrimental to completion of work. Do not proceed with installation until detrimental conditions are corrected.

3.2 Installation

- A. Install in accordance with manufacturer's instructions.

3.3 Maintenance

- A. See Section 01 70 00 - Execution Requirements for additional requirements.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 10 55 00 - POSTAL SPECIALTIES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Central mail delivery boxes.

#### **1.2 REFERENCE STANDARDS**

- A. 39 CFR 111 - U.S. Postal Service Standard 4C; Current Edition.

#### **1.3 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Provide manufacturer's specifications and descriptive literature, installation instructions, maintenance information, and current USPS approval documentation.
- D. Shop Drawings: Indicate plans for each unit or groups of units, front elevations with compartment layout and model number, overall dimensions, rough-in opening sizes, construction and anchorage details.

### **PART 2 PRODUCTS**

#### **2.1 CENTRAL MAIL DELIVERY BOXES**

- A. Manufacturers:
  - 1. Florence Manufacturing Company: [www.florencemailboxes.com/#sle](http://www.florencemailboxes.com/#sle).
  - 2. Jensen Mailboxes; \_\_\_\_\_: [www.jensenmailboxes.com/#sle](http://www.jensenmailboxes.com/#sle).
  - 3. Postal Products Unlimited, Inc; \_\_\_\_\_: [www.postalproducts.com/#sle](http://www.postalproducts.com/#sle).
  - 4. Salsbury Industries: [www.mailboxes.com/#sle](http://www.mailboxes.com/#sle).
  - 5. Security Manufacturing Corp; \_\_\_\_\_: [www.securitymanufacturing.com/#sle](http://www.securitymanufacturing.com/#sle).
  - 6. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Central Mail Delivery Boxes: Provide products approved for United States Postal Service (USPS) delivery.
  - 1. Materials: Aluminum with stainless steel hardware.
  - 2. Finish: Powder coat in color selected by Architect from manufacturer's standard colors.
  - 3. Unit Types and Sizes: As indicated on drawings.
  - 4. Configurations: See drawings for overall dimensions and layouts.
- C. Wall-Mounted Mailboxes: Fully-recessed, complying with 39 CFR 111 (USPS-STD-4C).

#### **2.2 COMPONENTS**

- A. Locking - Front Loading Master Door: Three-point latching mechanism with USPS master lock furnished and installed by postmaster.
- B. Identification - Customer and Parcel Compartments: Sequential numerical or alphabetic characters, top to bottom, left to right; factory-installed.
  - 1. Customer Name Marking: Name card holder, sized to hold 3/4 inch high by minimum 2-1/2 inch long name card; attach above or inside each compartment.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that rough-openings are ready to receive wall-mounted units.
- B. Do not begin installation until unacceptable conditions are corrected.

3.2 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 10 75 00 - FLAGPOLES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Aluminum Flagpoles.

#### **1.2 REFERENCE STANDARDS**

- A. AASHTO M 36 - Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains; 2024.
- B. ASTM B241/B241M - Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube; 2022.
- C. NAAMM FP 1001 - Guide Specifications for Design Loads of Metal Flagpoles; 2007.

#### **1.3 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Provide data on pole, accessories, and configurations.

### **PART 2 PRODUCTS**

#### **2.1 MANUFACTURERS**

- A. Flagpoles:
  - 1. Concord American Flagpole; Internal - Independence: [www.concordamericanflagpole.com/#sle](http://www.concordamericanflagpole.com/#sle).
  - 2. Morgan-Francis Flagpoles & Accessories; \_\_\_\_: [www.morgan-francis.com/#sle](http://www.morgan-francis.com/#sle).
  - 3. Pole-Tech Co, Inc; \_\_\_\_: [www.poletech.com/#sle](http://www.poletech.com/#sle).
  - 4. Substitutions: See Section 01 60 00 - Product Requirements.

#### **2.2 FLAGPOLES**

- A. Flagpoles: Designed in accordance with NAAMM FP 1001
  - 1. Material: Aluminum.
  - 2. Design: Cone tapered.
  - 3. Mounting: Ground mounted type.
  - 4. Nominal Height: 30 ft; measured from nominal ground elevation.
  - 5. Halyard: Internal type, manual winch operation.

#### **2.3 POLE MATERIALS**

- A. Aluminum: ASTM B241/B241M , 6063 alloy , T6 temper.

#### **2.4 ACCESSORIES**

- A. Finial Ball: Aluminum, 6 inch diameter.
- B. Halyard: 5/16 inch diameter nylon, braided, white.

2.5 OPERATORS

- A. Hand Crank: Removable \_\_\_\_\_ type.

2.6 MOUNTING COMPONENTS

- A. Foundation Tube Sleeve: AASHTO M 36, corrugated 16 gauge, 0.0598 inch steel, galvanized, depth of \_\_\_\_\_ inches as indicated.

2.7 FINISHING

- A. Aluminum: Mill finish.

PART 3 EXECUTION

3.1 EXAMINATION

3.2 PREPARATION

3.3 INSTALLATION

- A. Install flagpole , base assembly, and fittings in accordance with manufacturer's instructions.
- B. Install foundation plate and centering wedges for flagpoles base set in concrete base and fasten.

3.4 TOLERANCES

- A. Maximum Variation From Plumb: 1 inch.

3.5 ADJUSTING

- A. Adjust operating devices so that halyard and flag function smoothly.

END OF SECTION



## **SECTION 11 30 13 - RESIDENTIAL APPLIANCES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Kitchen appliances.
- B. Laundry appliances.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 22 10 05 - Plumbing Piping: Plumbing connections for appliances.
- B. Section 26 05 83 - Wiring Connections: Electrical connections for appliances.

#### **1.3 REFERENCE STANDARDS**

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.
- D. Copies of Warranties: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

### **PART 2 PRODUCTS**

#### **2.1 KITCHEN APPLIANCES**

- A. Provide Equipment Eligible for Energy Star Rating: Energy Star Rated.

#### **2.2 LAUNDRY APPLIANCES**

- A. Provide Equipment Eligible for Energy Star Rating: Energy Star Rated.

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify utility rough-ins are provided and correctly located.

#### **3.2 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.

#### **3.3 ADJUSTING**

- A. Adjust equipment to provide efficient operation.

3.4 CLEANING

- A. Remove packing materials from equipment and properly discard.
- B. Wash and clean equipment.

END OF SECTION

## **SECTION 12 24 00 - WINDOW SHADES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Concealed wood blocking for attachment of headrail brackets.

#### **1.3 REFERENCE STANDARDS**

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets, including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver shades in manufacturer's unopened packaging, labeled to identify each shade for each opening.
- B. Handle and store shades in accordance with manufacturer's recommendations.

#### **1.6 FIELD CONDITIONS**

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

### **PART 2 PRODUCTS**

#### **2.1 Manufacturers**

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine finished openings for deficiencies that may preclude satisfactory installation.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Start of installation shall be considered acceptance of substrates.

#### **3.2 PREPARATION**

- A. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.
- B. Coordinate with window installation and placement of concealed blocking to support shades.

#### **3.3 INSTALLATION**

- A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.
- B. Replace shades that exceed specified dimensional tolerances at no extra cost to Owner.

- C. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric. Ensure smooth shade operation.

3.4 CLEANING

- A. Clean soiled shades and exposed components as recommended by manufacturer.
- B. Replace shades that cannot be cleaned to "like new" condition.

3.5 CLOSEOUT ACTIVITIES

- A. Demonstration: Demonstrate operation and maintenance of window shade system to Owner's personnel.

3.6 PROTECTION

- A. Protect installed products from subsequent construction operations.
- B. Touch-up, repair, or replace damaged products before Substantial Completion.

END OF SECTION

## **SECTION 12 35 30 - RESIDENTIAL CASEWORK**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Kitchen cabinets.
- B. Vanity cabinets.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 07 92 00 - Joint Sealants: Sealing joints between casework and countertops and adjacent walls, floors, and ceilings.
- B. Section 12 36 00 - Countertops.

#### **1.3 SUBMITTALS**

- A. See Section 01 31 50 - Submittals, for submittal procedures.
- B. Product Data: Provide component dimensions, configurations, construction details, and joint details.
- C. Shop Drawings: Indicate casework locations, elevations, clearances required, rough-in and anchor placement dimensions and tolerances, and \_\_\_\_\_.
- D. Cabinet Finish Sample: Submit two samples of each type of finish, 2 inches by 3 inches in size, illustrating color, texture, gloss, and wood species.

#### **1.4 MOCK-UP**

- A. Provide full size mock-up of casework base unit.
- B. Locate where directed.
- C. Mock-up may remain as part of the Work.

### **PART 2 PRODUCTS**

#### **2.1 Cabinets**

- A. Manufacturers:
  - 1. Kountry Wood, As indicated on the drawings.
- B. Kitchen and Vanity Cabinets: Premanufactured and factory-finished, complying with construction and testing requirements in KCMA A161.1.
- C. Cabinet Box: Manufacturer's standard materials and construction as determined by selected product line.

#### **2.2 FABRICATION**

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. Fabricate corners and joints without gaps.
- C. Fabricate each unit to be rigid and not dependent on adjacent units for rigidity.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify adequacy of support framing.

3.2 INSTALLATION

- A. Install casework, components and accessories in accordance with manufacturer's instructions.
- B. Use anchoring devices to suit conditions and substrate materials encountered.
- C. Set casework items plumb and square, securely anchored to building structure.

3.3 ADJUSTING

- A. Adjust doors, drawers, hardware, and other moving or operating parts to function smoothly.

3.4 CLEANING

- A. Clean casework, countertops, shelves, and hardware.

3.5 PROTECTION

- A. Do not permit finished casework to be exposed to continued construction activity.

END OF SECTION

## **SECTION 12 36 00 - COUNTERTOPS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Countertops for manufactured casework.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 12 32 00 - Manufactured Wood Casework.

#### **1.3 REFERENCE STANDARDS**

- A. ANSI A208.1 - American National Standard for Particleboard; 2022.
- B. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications; 2022.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- D. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- E. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- F. ISFA 3-01 - Classification and Standards for Quartz Surfacing Material; 2013.
- G. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- H. NSI (DSDM) - Dimensional Stone Design Manual, Version VIII; 2016.
- I. PS 1 - Structural Plywood; 2023.

#### **1.4 SUBMITTALS**

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.
- D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.
- F. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

#### **1.5 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Natural Stone Institute (NSI) Accredited Natural Stone Fabricator; [www.naturalstoneinstitute.org/#sle](http://www.naturalstoneinstitute.org/#sle).
- B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 FIELD CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 COUNTERTOPS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMA/WI (AWS) or AWMA/WI (NAAWS), unless noted otherwise.
- B. Natural Quartz and Resin Composite Countertops: Sheet or slab of natural quartz and plastic resin over continuous substrate.
  - 1. Flat Sheet Thickness: 1-1/4 inch, minimum.
  - 2. Natural Quartz and Resin Composite Sheets, Slabs and Castings: Complying with ISFA 3-01 and NEMA LD 3; orthophthalic polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard stone fabrication tools; no surface coating; color and pattern consistent throughout thickness.
    - a. Manufacturers:
      - 1) As indicated on the drawings
    - b. Factory fabricate components to the greatest extent practical in sizes and shapes indicated; comply with NSI (DSDM).
    - c. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
    - d. Finish on Exposed Surfaces: Polished.
    - e. Color and Pattern: As selected by Architect from manufacturer's full line.
  - 3. Other Components Thickness: 3/4 inch, minimum.
  - 4. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; radiused edge; use marine edge at sinks.
  - 5. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.
  - 6. Fabricate in accordance with manufacturer's standard requirements.

2.2 MATERIALS

- A. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.
- B. Particleboard for Supporting Substrate: ANSI A208.1 Grade 2-M-2, 45 pcf minimum density; minimum 3/4 inch thick; join lengths using metal splines.
- C. Medium Density Fiberboard for Supporting Substrate: ANSI A208.2.
- D. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

2.3 ACCESSORIES

- A. Grommets for Cable Passage through Countertops: 2-inch OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage.
  - 1. Products:
    - a. Doug Mockett & Company, Inc.



2.4 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.
  - 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
  - 2. Height: 4 inches, unless otherwise indicated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Seal joint between back/end splashes and vertical surfaces.

3.4 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.

3.5 CLEANING

- A. Clean countertops surfaces thoroughly.

3.6 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

This Page is Intentionally Left Blank

## **SECTION 14 24 00 - HYDRAULIC ELEVATORS**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Complete hydraulic elevator systems.
  - 1. Passenger type.
  - 2. Service type.
- B. Elevator Maintenance Contract.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Includes elevator machine foundation, enclosed hoistway, elevator pit, divider beams, overhead hoist beams, grouting thresholds, grouting hoistway entrance frames, and \_\_\_\_\_.
- B. Section 04 20 00 - Unit Masonry: Masonry hoistway enclosure; building-in and grouting hoistway door frames.
- C. Section 05 12 00 - Structural Steel Framing: Includes hoistway framing, divider beams, overhead hoist beams, and \_\_\_\_\_.
- D. Section 05 50 00 - Metal Fabrications: Includes elevator pit ladder, sill supports, divider beams, overhead hoist beams, and \_\_\_\_\_.
- E. Section 07 84 00 - Firestopping: Fire rated sealant in hoistway.
- F. Section 08 31 00 - Access Doors and Panels: Fire rated access doors into hoistway.
- G. Section 09 65 00 - Resilient Flooring: Floor finish in car.
- H. Section 10 44 00 - Fire Protection Specialties: Fire extinguisher in elevator machine room.
- I. Section 21 13 00 - Fire-Suppression Sprinkler Systems: Sprinkler heads in hoistway.
- J. Section 22 05 13 - Common Motor Requirements for Plumbing Equipment: Motor for sump pump in pit.
- K. Section 26 05 33.13 - Conduit for Electrical Systems:
- L. Section 26 05 83 - Wiring Connections:

#### **1.3 REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. AAMA 611 - Specification for Anodized Architectural Aluminum; 2026.
- C. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- D. AISC 360 - Specification for Structural Steel Buildings; 2022, with Errata (2025).
- E. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- F. ASME A17.1 - Safety Code for Elevators and Escalators Includes Requirements for Elevators, Escalators, Dumbwaiters, Moving Walks, Material Lifts, and Dumbwaiters with Automatic Transfer Devices; 2022.
- G. ASME A17.2 - Guide for Inspection of Elevators, Escalators, and Moving Walks Includes Inspection Procedures for Electric Traction and Winding Drum Elevators, Hydraulic Elevators, Inclined Elevators,

Limited-Use/Limited-Application Elevators, Private Residence Elevators, Escalators, Moving Walks, Dumbwaiters, and Material Lifts; 2023.

- H. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.
- I. ASTM A139/A139M - Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe (NPS 4 and Over); 2022.
- J. ASTM A276/A276M - Standard Specification for Stainless Steel Bars and Shapes; 2025.
- K. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.
- L. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- M. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2025.
- N. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.
- O. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.
- P. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2025.
- Q. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025.
- R. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- S. NEMA MG 00001 - Motors and Generators; 2024.
- T. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- U. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- V. NFPA 13 - Standard for the Installation of Sprinkler Systems; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- W. PS 1 - Structural Plywood; 2023.

#### 1.4 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
  - 1. Coordinate work with other installers to provide conduits necessary for installation of wiring including but not limited to:
    - a. Elevator equipment devices remote from elevator machine room or hoistway.
    - b. Telephone service for machine room.
    - c. Elevator pit for lighting and sump pump.
    - d. Automatic transfer switch from controller cabinet.
    - e. Fire alarm panel from controller cabinet.
- B. Preinstallation Meeting: Convene meeting at least one week prior to start of this work.
  - 1. Review schedule of installation, proper procedures and conditions, and coordination with related work.
- C. Construction Use of Elevator: Not permitted.

1.5 SUBMITTALS

- A. See Section 01 31 50 - Submittals for submittal procedures.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Submit data on following items:
  - 1. Signal and operating fixtures, operating panels, and indicators.
  - 2. Car design, dimensions, layout, and components.
  - 3. Car and hoistway door and frame details.
  - 4. Electrical characteristics and connection requirements.
- D. Shop Drawings: Include appropriate plans, elevations, sections, diagrams, and details on following items:
  - 1. Elevator Equipment and Machines: Size and location of driving machines, power units, controllers, governors, and other components.
  - 2. Hoistway Components: Size and location of car guide rails, buffers, jack unit and other components.
  - 3. Rail bracket spacing; maximum loads imposed on guide rails requiring load transfer to building structural framing.
  - 4. Individual weight of principal components; load reaction at points of support.
  - 5. Clearances and over-travel of car.
  - 6. Locations in hoistway and machine room of traveling cables and connections for car lighting and telephone.
  - 7. Location and sizes of hoistway and car doors and frames.
  - 8. Calculated heat dissipation of elevator equipment in machine room.
  - 9. Electrical characteristics and connection requirements.
  - 10. Indicate arrangement of elevator equipment and allow for clear passage of equipment through access openings.
- E. Samples: Submit samples illustrating car interior finishes, car and hoistway door and frame finishes, and handrail material and finish in the form of cut sheets or finish color selection brochures.
- F. Initial Maintenance Contract.
- G. Maintenance Contract: Submit proposal to Owner for standard one year continuing maintenance contract agreement in accordance with ASME A17.1 and requirements as indicated, starting on date initial maintenance contract is scheduled to expire.
  - 1. Indicate in proposal the services, obligations, conditions, and terms for agreement period and for renewal options.
- H. Operation and Maintenance Data:
  - 1. Parts catalog with complete list of equipment replacement parts; identify each entry with equipment description and identifying code.
  - 2. Operation and maintenance manual.
  - 3. Schematic drawings of equipment and hydraulic piping, and wiring diagrams of installed electrical equipment with list of corresponding symbols to identify markings on machine room and hoistway apparatus.
- I. Specimen warranty.
- J. Executed warranty.

1.6 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide 1-year manufacturer warranty for elevator operating equipment and devices. Complete forms in Owner's name and register with manufacturer.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Hydraulic Elevator Manufacturers:
  - 1. Otis Elevator Company; HydroFit: [www.otis.com/#sle](http://www.otis.com/#sle).
  - 2. TK Elevator; Endura: [www.tkelevator.com/#sle](http://www.tkelevator.com/#sle).
  - 3. Alliance Elevator Solutions; ADVANTAGE Hydraulic : <https://www.allianceelevator.net/hydraulic.htm>.
- B. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Source Limitations: Provide elevator and associated equipment and components produced by a single manufacturer and obtained from a single supplier.
  - 1. Controllers are to be non-proprietary from the following:
    - a. GAL
    - b. ECS
    - c. Smartrise
    - d. Approved Equal

### 2.2 HYDRAULIC ELEVATORS

- A. Hydraulic Passenger Elevator, No. 2:
  - 1. Hydraulic Elevator Equipment:
    - a. Holeless hydraulic with cylinder mounted within hoistway.
  - 2. Drive System:
    - a. Variable voltage variable frequency (VVVF) to modulate motor speed.
  - 3. Operation Control Type:
    - a. Two-Car Selective Collective Automatic (Duplex Collective Automatic) Operation Control.
  - 4. Service Control Types:
    - a. Standard service control.
    - b. Independent service control.
  - 5. Interior Car Height: 95 inch.
  - 6. Electrical Power: 208 volts; alternating current (AC); three phase; 60 Hz.
  - 7. Rated Net Capacity: 3500 pounds.
  - 8. Rated Speed: 150 feet per minute.
  - 9. Hoistway Size: As indicated on drawings.
  - 10. Interior Car Platform Size: As indicated on drawings.
  - 11. Elevator Pit Depth: 48 inch.
  - 12. Overhead Clearance at Top Floor: 154 inch.
  - 13. Travel Distance: As indicated on drawings.
  - 14. Number of Stops: 3.
  - 15. Number of Openings: 3 Front.
  - 16. Hydraulic Equipment Location: As indicated on drawings
- B. Hydraulic Service Elevator, No. 1:
  - 1. Hydraulic Elevator Equipment:
    - a. Holeless hydraulic with cylinder mounted within hoistway.
  - 2. Drive System:
    - a. Variable voltage variable frequency (VVVF) to modulate motor speed.
  - 3. Operation Control Type:
    - a. Two-Car Selective Collective Automatic (Duplex Collective Automatic) Operation Control.
  - 4. Service Control Types:
    - a. Standard service control.
    - b. Independent service control.
    - c. Restricted Access service control.
  - 5. Interior Car Height: 95 inch.
  - 6. Electrical Power: 208 volts; alternating current (AC); three phase; 60 Hz.

7. Freight Car Loading Classification: Class A - General Freight Loading in compliance with ASME A17.1.
8. Rated Net Capacity: 4500 pounds.
9. Rated Speed: 150 feet per minute.
10. Hoistway Size: As indicated on drawings.
11. Interior Car Platform Size: As indicated on drawings.
12. Elevator Pit Depth: 48 inch.
13. Overhead Clearance at Top Floor: 154 inch.
14. Travel Distance: As indicated on drawings.
15. Number of Stops: 3.
16. Number of Openings: 3 Front; 1 Rear.
17. Hydraulic Equipment Location: As indicated on drawings.

## 2.3 COMPONENTS

### A. Elevator Equipment:

1. Motors, Hydraulic Equipment, Controllers, Controls, Buttons, Wiring, Devices, and Indicators: Comply with NFPA 70.
2. Guide Rails, Cables, Buffers, Attachment Brackets and Anchors: Design criteria for components includes safety factors in accordance with applicable requirements of Elevator Code, ASME A17.1.
3. Buffers:
  - a. Spring type for elevators with speed less than or equal to 200 fpm.
4. Lubrication Equipment:
  - a. Provide grease fittings for periodic lubrication of bearings.
  - b. Lubrication Points: Visible and easily accessible.

### B. Electrical Equipment:

1. Motors: NEMA MG 1.
2. Boxes, Conduit, Wiring, and Devices: As required by NFPA 70.
3. Sump Pump in Pit: See Section 22 05 13.
4. Spare Conductors: Provide ten percent in extra conductors and two pairs of shielded audio cables in traveling cables.
5. Include wiring and connections to elevator devices remote from hoistway and between elevator machine room. Provide additional components and wiring to suit machine room layout. See Section 26 05 83.

## 2.4 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with ASME A17.1, applicable local codes, and authorities having jurisdiction (AHJ).
- B. Accessibility Requirements: Comply with ADA Standards.
- C. Perform structural steel design, fabrication, and installation in accordance with AISC 360.
- D. Perform welding of steel in accordance with AWS D1.1/D1.1M.
- E. Fabricate and install door and frame assemblies in accordance with NFPA 80 and in compliance with requirements of authorities having jurisdiction.
- F. Perform electrical work in accordance with NFPA 70.
- G. Comply with venting or pressurization of hoistway design in accordance with HVAC system requirements and authorities having jurisdiction (AHJ).
- H. Comply with fire protection sprinkler system of hoistway design in accordance with NFPA 13 requirements and authorities having jurisdiction (AHJ).

## 2.5 OPERATION CONTROLS

- A. Elevator Controls: Provide landing operating panels and landing indicator panels.

1. Landing Operating Panels: Metallic type, one for originating "Up" and one for originating "Down" calls, one button only at terminating landings; with illuminating indicators.
  2. Landing Indicator Panels: Illuminating.
  3. Comply with ADA Standards for elevator controls.
- B. Interconnect elevator control system with building fire alarm and smoke alarm systems.
- C. Door Operation Controls:
1. Program door control to open doors automatically when car arrives at floor landing.
  2. Render "Door Close" button inoperative when car is standing at dispatch landing with doors open.
  3. Door Safety Devices: Moveable, retractable safety edges, quiet in operation; equipped with photo-electric light rays.
- D. Provide "Firefighter's Emergency Operation" in accordance with ASME A17.1, applicable building codes, and authorities having jurisdiction (AHJ).
1. Designated Landing: Main Lobby.

## 2.6 OPERATION CONTROL TYPE

- A. Two-Car Selective Collective Automatic (Duplex Collective Automatic) Operation Control: Applies to cars in two elevator shafts .
1. Park one car at main floor and designate other as free car, at landing last served or at a predetermined upper floor landing.
  2. Arrange free car to answer landing calls either above or below landing where car is standing except main floor landing calls.
  3. When free car is answering calls, automatically start an alternate car to answer landing calls under any of the following conditions:
    - a. Registration of up calls from landings below the free car while it is traveling up by alternate car below.
    - b. Registration of up or down calls from landings above the free car while it is traveling down by alternate car.
    - c. Free car fails to clear registered landing calls within 40 seconds, or to move alternate car in response to registered landing calls within this time frame.
  4. Register and answer calls by momentary pressure on one or more car buttons; cause car to respond.
  5. Once started, either in response to car button calls, or to landing button calls, respond to calls registered for the direction of the traveling car in the order that landings are reached, regardless of sequence that calls were registered.
  6. Allow only one car to stop in response to any one landing call.
  7. Return first free car to main floor after answering landing calls.
  8. Should both cars finish their calls at main floor, designate one car as the free car.
  9. If no car buttons are pressed and car starts up in response to several landing down calls, proceed first to the highest landing down call, then reverse to collect other landing down calls. Collect up calls similarly when car starts down in response to such calls.
  10. If a car stops for a landing call, and car button matching direction the car was traveling is pressed within a predetermined time interval after a landing stop, proceed in the same direction regardless of other landing calls that are registered.
  11. If down landing buttons are pressed while car is traveling up, do not stop at those landings but allow those calls to remain registered for answering by the next down traveling car.
  12. After the highest car has responded to up landing calls, reverse car automatically and respond to down landing calls.
  13. When traveling down, a car will not respond to up calls. Allow those up calls to remain registered to be answered by next available car on an up trip.
  14. Include a time delay to hold car for an adjustable time interval at landings where stops are made to enable passengers to enter or leave the car. Cancel the time interval upon registration of a car call or pressure on the car door close button.
  15. Permit a registered car call to establish the direction of travel when a car has answered the farthest car call, even if other landing calls are registered.
  16. Answer calls to the basement landing with the car that is normally parked at the main floor unless the free car is at the basement.
  17. If a car is removed from service, the other car shall answer landing calls.



2.7 SERVICE CONTROL TYPE

- A. Independent Service Control:
  - 1. Provide key operated "Independent Service" on car operating panel. Key activation will remove that car from normal operation and cancel pre-registered car calls.
  - 2. Car will respond to selected floor. Car will not respond to any calls from landing call buttons. Car will only respond to calls placed on the car operating panel. Doors will remain open at last landing requested. Doors will close with a constant pressure on "Door Close" button.
  - 3. Key activation to normal operation will return car to normal operation.
- B. Restricted Access Service Control:

2.8 MATERIALS

- A. Steel Cylinder Casing: ASTM A139/A139M, Grade A steel.
- B. Rolled Steel Sections, Shapes, Rods: ASTM A36/A36M.
- C. Steel Sheet: ASTM A1008/A1008M, Designation CS (commercial steel), with matte finish.
- D. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- E. Stainless Steel Sheet: ASTM A666/A666M, Type 304; No. 4 Brushed finish unless otherwise indicated.
- F. Stainless Steel Bars, Shapes and Moldings: ASTM A276/A276M, Type 304.
- G. Extruded Aluminum: ASTM B221 (ASTM B221M), natural anodized finish unless otherwise indicated.
- H. Plywood: PS 1, Structural I, Grade C-D or better, sanded.
- I. Tempered Glass: 3/8 inch minimum thickness, fully tempered in compliance with ASME A17.1, 16 CFR 1201, ANSI Z97.1, and ASTM C1048 tempered glass requirements.
- J. Resilient Flooring: Vinyl tile flooring and Resilient base, see Section 09 65 00, Type \_\_\_\_.
- K. Plastic Laminate: NEMA LD 3, Type HGS, color as selected by Architect from manufacturer's standard line of colors.

2.9 CAR AND HOISTWAY ENTRANCES

- A. Elevator, No. 1:
  - 1. Car and Hoistway Entrances, Each Elevator Floor Lobby:
    - a. Hoistway Fire Rating: 1 Hour.
    - b. Framed Opening Finish and Material: Brushed stainless steel.
    - c. Car Door Material: Stainless steel, with rigid sandwich panel construction.
    - d. Hoistway Door Material: Stainless steel, with rigid sandwich panel construction.
    - e. Door Type: Double leaf.
    - f. Door Operation: Side opening, two speed.
    - g. Door Width: 48 inches.
    - h. Door Height: 84 inches.
    - i. Sills: Extruded aluminum.
- B. Elevator, No. 2:
  - 1. Car and Hoistway Entrances, Each Elevator Floor Lobby:
    - a. Hoistway Fire Rating: 1 Hour.
    - b. Framed Opening Finish and Material: Brushed stainless steel.
    - c. Car Door Material: Stainless steel, with rigid sandwich panel construction.
    - d. Hoistway Door Material: Stainless steel, with rigid sandwich panel construction.
    - e. Door Type: Single leaf.
    - f. Door Operation: side opening, one speed.
    - g. Door Width: 42 inches.
    - h. Door Height: 84 inches.

- C. Sills/Thresholds: Configure to align with frame return and coordinate with floor finish.
- D. Gasketing: Provide acoustic type gasketing at hoistway doors and frames to minimize audible noise due to car activities in the hoistway, and air pressure differential between hoistway and landing floors.

## 2.10 CAR EQUIPMENT AND MATERIALS

- A. Elevator Car:
  - 1. Car Operating Panel: Provide main and auxiliary; flush-mounted applied face plate, with illuminated call buttons corresponding to floors served with "Door Open" button, "Door Close" button, alarm button, and \_\_\_\_\_.
    - a. Panel Material: Integral with front return; one per car.
    - b. Car Floor Position Indicator: Above door with illuminating position indicators.
    - c. Locate alarm button where it is unlikely to be accidentally actuated; not more than 54 inch above car finished floor.
    - d. Provide matching service cabinet integral with front return panel, with hinged door and keyed lock in each car.
    - e. Provide following within service cabinet as part of car operating panel:
      - 1) Switch for each auxiliary operational control, keyed.
      - 2) Switches for fan, light, and inspection control.
      - 3) Telephone cabinet and hard-wired connection with hands-free telephone.
  - 2. Ventilation: Single speed fan with grille in ceiling.
  - 3. Flooring: Resilient vinyl tile.
  - 4. Front Return Panel: Match material of car door.
  - 5. Door Wall: Stainless steel.
  - 6. Side Walls: Plastic laminate on plywood.
  - 7. Rear Wall: Plastic laminate on plywood.
  - 8. Hand Rail: Stainless steel, at all three sides. Provide open clearance space 1-1/2 inch (38 mm) wide to face of wall.
    - a. Stainless Steel Finish: No. 4 Brushed.
  - 9. Ceiling:
    - a. Exposed Frame Suspended Ceiling: Plastic laminate on plywood, mount 7 inch below car canopy with 1-1/2 inch nominal space between edge of ceiling and wall.
    - b. Frame Finish: Color anodized aluminum.
    - c. Panel Finish: Finish as selected from manufacturers standard line.
    - d. Lighting: As selected from manufacturer's standard line.
- B. Car Accessories:
  - 1. Certificate Frame: Stainless steel frame glazed with tempered glass, and attached with tamper-proof screws.
  - 2. Protective Pads: Canvas cover, padded with impact-resistant fill material, sewn with piping edges; fire resistant in compliance with ASME A17.1; brass grommets for supports, covering side and rear walls and front return, with cut-out for control panel; provide one set for each elevator.
    - a. Color: Tan.
    - b. Provide at least 4 inch clearance from bottom of pad to finished floor.
    - c. Pad Supports: Stainless steel studs, and mounted from ceiling frame.

## 2.11 MACHINE ROOM FITTINGS

- A. Wall-Mounted Frames: Glazed with clear plastic; sized as required. Provide one chart each for master electric and hydraulic schematic and for lubrication chart. Install charts.
- B. Key Cabinet: Wall-mounted, lockable, keyed to building keying system, for control and operating panel keys.
  - 1. Provide two key cabinet keys.
  - 2. Provide two control/operating panel keys.

2.12 FINISHES

- A. Color Anodized Finish: Class I, AAMA 611 AA-M12C22A44, electrolytically deposited colored anodic coating not less than 0.7 mil, 0.0007 inch thick.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting this work.
- B. Verify that hoistway, pit, and machine room are ready for work of this section.
- C. Verify hoistway shaft and openings are of correct size and within tolerance.
- D. Verify location and size of machine foundation and position of machine foundation bolts.
- E. Verify that electrical power is available and of correct characteristics.

3.2 PREPARATION

- A. Arrange for temporary electrical power for installation work and testing of elevator components; see Section 01 50 00 - Temporary Facilities and Controls for additional requirements.
- B. Excavate for in-ground hydraulic cylinder casing and remove subsoil from site; see Section 31 23 16.
- C. Maintain in-ground shaft alignment of 1/2 inch maximum from plumb.
  - 1. Fill over-excavated shaft depth with lean concrete.
- D. Maintain elevator pit excavation free of water.
- E. Maintain in-ground elevator shaft excavation free of water.
- F. Place in-ground plunger casing full depth of shaft. Align to 1/4 inch from plumb. Cut top of casing at hoistway pit slab elevation.
- G. Backfill around in-ground cylinder casing; see Section 31 23 23.

3.3 INSTALLATION

- A. Coordinate this work with installation of hoistway wall construction.
- B. Install system components, and connect equipment to building utilities.
- C. Provide conduit, electrical boxes, wiring, and accessories; see Sections 26 05 33.13 and 26 05 83.
- D. Install hydraulic piping between cylinder and pump unit.
- E. Mount machines, motors, pumps, and \_\_\_\_\_ on vibration and acoustic isolators.
  - 1. Place on structural supports and bearing plates.
  - 2. Securely fasten to building supports.
  - 3. Prevent lateral displacement.
- F. Install hoistway, elevator equipment, and components in accordance with approved shop drawings.
- G. Install guide rails to allow for thermal expansion and contraction movement of guide rails.
- H. Accurately machine and align guide rails, forming smooth joints with machined splice plates.
- I. Field Welds: Chip and clean away oxidation and residue with wire brush; spot prime surface with two coats.

- J. Install hoistway door sills, frames, and headers in hoistway walls; grout sills in place, set hoistway floor entrances in alignment with car openings, and align plumb with hoistway.
- K. Structural Metal Surfaces: Clean surfaces of rust, oil or grease; wipe clean with solvent; prime two coats.
- L. Wood Surfaces not Exposed to Public View: Finish with one coat primer; one coat enamel.
- M. Adjust equipment for smooth and quiet operation.

#### 3.4 TOLERANCES

- A. Guide Rail Alignment: Plumb and parallel to each other in accordance with ASME A17.1 and ASME A17.2.
- B. Car Movement on Aligned Guide Rails: Smooth movement, without any objectionable lateral or oscillating movement or vibration.

#### 3.5 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Testing and inspection performed at discretion of regulatory agencies certified in accordance with ASME QEI 1.
- C. Operational Tests:
  - 1. Perform operational tests in the presence of Owner and Architect.
  - 2. At an agreed time, and the building occupied with normal building traffic, conduct tests to verify performance.
    - a. Furnish event recording of each landing call registrations, time initiated, and response time throughout entire working day.
  - 3. Set period of time elevator takes to travel between typical floor landings at not more than \_\_\_\_ seconds.
    - a. Measure time from moment doors start to close until car has stopped level at next floor landing and doors are opening.

#### 3.6 ADJUSTING

- A. Adjust for smooth acceleration and deceleration of car to minimize passenger discomfort.
- B. Adjust with automatic floor leveling feature at each floor landing to reach 1/4 inch maximum from flush with sill.

#### 3.7 CLEANING

- A. Remove protective coverings from finished surfaces.
- B. Clean surfaces and components in accordance with manufacturers written instructions.

#### 3.8 CLOSEOUT ACTIVITIES

- A. Demonstrate proper operation of equipment to Owner's designated representative.

#### 3.9 PROTECTION

- A. Do not permit construction traffic within car after cleaning.
- B. Protect installed products until Date of Substantial Completion.
- C. Touch-up, repair, or replace damaged products and materials prior to Date of Substantial Completion.

3.10 MAINTENANCE

- A. Provide Initial Maintenance Contract of elevator system and components in accordance with ASME A17.1 and requirements as indicated for 12 months from Date of Substantial Completion.
- B. Perform maintenance contract services using competent and qualified personnel under the supervision and direct employ of the elevator manufacturer or original installer.
- C. Include systematic examination, adjustment, and lubrication of elevator equipment.
- D. Maintain and repair or replace parts, whenever required, using parts produced by original equipment manufacturer.
- E. Perform work without removing cars from use during peak traffic periods.

END OF SECTION

This Page is Intentionally Left Blank

## **SECTION 14 91 00 - FACILITY CHUTES**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Trash chutes.

#### **1.2 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Wood curb at roof vent.
- B. Section 07 62 00 - Sheet Metal Flashing and Trim: Counterflashing at chute roof vent.
- C. Section 21 13 00 - Fire-Suppression Sprinkler Systems: Connection to sprinklers inside chute.
- D. Section 22 10 05 - Plumbing Piping:
  - 1. Water piping connections to spray cleaning equipment.
- E. Section 26 05 83 - Wiring Connections:
  - 1. Connection of control panels to 110 VAC electrical power.
  - 2. Wiring and conduit between control panels and controlled components.
  - 3. Wiring and conduit between discharge room spray cleaning switch and flushing spray head.

#### **1.3 REFERENCE STANDARDS**

- A. ITS (DIR) - Directory of Listed Products; Current Edition.
- B. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025.
- C. NFPA 82 - Standard on Incinerators and Waste and Linen Handling Systems and Equipment; 2024.
- D. NFPA 13 - Standard for the Installation of Sprinkler Systems; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL (DIR) - Online Certifications Directory; Current Edition.

#### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene seven days before start of installation to review local building code requirements, manufacturer's recommendations, and related work.

#### **1.5 SUBMITTALS**

- A. See Section 01 31 50 - Submittal for additional requirements.
- B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
- C. Product Data: Manufacturer's printed data sheets on each component, indicating which options are provided.
- D. Shop Drawings: Provide detailed layout of chute and components, indicating interface with structure, enclosing walls, and utilities; include the following:
  - 1. Openings in floors and required clearances.
  - 2. Location and size of each field connection to structure.
  - 3. Pipe sizes and locations.
  - 4. Electrical wiring sizes, conduits, and location of connections.

- 5. Clearly indicate components required but not furnished by chute installer.
  - E. Test Reports: Submit for each test/inspection.
  - F. Executed warranty.
- 1.6 QUALITY ASSURANCE
- A. See Section 01 40 00 - Quality Requirements for additional requirements.
  - B. Products Requiring Electrical Connection: Listed and classified by UL (DIR), ITS (DIR), or testing agency acceptable to authorities having jurisdiction as suitable for indicated purpose being specified.
  - C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 for fire ratings indicated, that are listed and labeled by testing and inspecting agency acceptable to authorities having jurisdiction.
- 1.7 WARRANTY
- A. Manufacturer Warranty: Provide 2-year manufacturer warranty for facility chutes. Complete forms in Owner's name and register with manufacturer.
  - B. Installer Warranty: Provide 1-year warranty for facility chutes commencing on Date of Substantial Completion. Complete forms in Owner's name and register with installer.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Facility Chutes:
  - 1. Wilkinson Hi-Rise; \_\_\_\_\_: [www.whrise.com/#sle](http://www.whrise.com/#sle).
  - 2. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.2 FACILITY CHUTES

- A. Trash Chutes: Sheet metal, round, constant diameter extending from above roof to lowest floor, with chute intake doors at each floor and bottom of chute discharge door into designated room as indicated on drawings; comply with requirements of NFPA 82 and authorities having jurisdiction (AHJ).
  - 1. Chute Inside Diameter: 24 inches, minimum.
  - 2. Intake Doors: Bottom-hinged, self-closing and self-latching, with no locks.
  - 3. Intake Door Size: 15 inches wide by 18 inches high, nominal.
  - 4. Intake Door Operator: Latch handle that unlatches and opens door.
    - a. Locate highest component used for door operation lower than 48 inches above finished floor.
    - b. Provide latch handle with shape that is easy to grasp with one hand, does not require tight grasping or pinching, or twisting of wrist to operate.
  - 5. Provide manual controls in discharge room to activate spray cleaning equipment inside trash chute.

### 2.3 COMPONENTS

- A. Chute: Factory-fabricated to the greatest extent possible, with continuously welded or lock-seamed joints and smooth, nonsnag interior; no protruding bolts, rivets, or hardware and no sharp edges or corners.
  - 1. Sheet Metal Thickness: 16 gauge, 0.06 inch.
  - 2. Fire Rating: In compliance with local building code requirements.
  - 3. Chute Offsets: At maximum of 15 degrees and limited to one offset per two floors in accordance with NFPA 82.
  - 4. Throat Sections: Provide sloped throat sections for chute intake doors, of same material and construction as chute.
  - 5. Fabricate with support frames at each floor with sound isolator pads and expansion joints in chute between each support point.



- a. Sound Isolator Pads: Provide manufacturer's standard; 1/4 inch top and bottom waffle design, oil resistant, neoprene with 3/8 inch close grained cork core
- B. Chute Intake Doors: Factory-assembled, UL (DIR) listed and labeled door and frame, with self- or automatic-closing and positive latching; frame designed for chase construction, and flush-mounted.
  - 1. Material: Stainless steel, brushed or satin finish.
  - 2. Fire Rating: In compliance with local building code requirements.
  - 3. Pulls: Provide single action door hardware that is operable without pinching or twisting; polished stainless steel finish.
  - 4. Signs: Provide markings on frame or face of door that indicates purpose of chute; use engravings, integral raised lettering, or other permanent notation markings.
- C. Chute Discharge Doors: Factory-assembled, UL (DIR) listed and labeled door and frame, with self- or automatic-closing and positive latching, upon activation of smoke detector or fusible link; style as required for facility chute configuration indicated.
  - 1. Material: Aluminum-coated steel.
  - 2. Fire Rating: In compliance with local building code requirements.
  - 3. Vertical Discharge Style: Horizontally closing accordion fire damper, spring-closed.
- D. Chute Access Doors: Provide same construction and fire rating as chute intake doors with locks; provide wherever equipment requiring maintenance is located inside chute, including sprinklers, plumbing, and electrical connections.
- E. Chute Intake and Access Door Locks: Mortise or rim cylinder locks keyed alike; key removable only when door is locked.
- F. Through-Wall Chute Intake Door: Provide matching intake door at first floor level, for access to bin.
- G. Roof Vent: Full diameter, extending at least 48 inches above roof level, with roof deck flange.
  - 1. Material: Manufacturer's standard.
  - 2. Provide counterflashing and clamping ring of nonferrous metal compatible with chute material; see Section 07 62 00.
  - 3. Top Unit: Screened vent.
  - 4. Roof Curb: Provide wood curb at chute roof vent; see Section 06 10 00.
- H. Fire Suppression Sprinklers: Comply with requirements of NFPA 82 and NFPA 13; provide 1/2 inch NPS sprinkler heads mounted inside chute intake throats at following locations:
  - 1. At or above top intake opening.
  - 2. At lowest intake opening.
  - 3. In buildings of more than two stories, at every other floor.
- I. Spray Cleaning Equipment:
  - 1. Flushing Spray Unit: Solenoid controlled 3/4-inch NPS spray head mounted above top intake door; see Section 22 10 05 for water piping connections and Section 26 05 83 for wiring connections.
- J. Electrical Controls: 110 VAC; see Section 26 05 83 for wiring connections.

## 2.4 FABRICATION

- A. Factory fabricate chute sections with fully welded vertical seams, and locate sleeve inside each lower section without bolts, clips, or other projections to inside of chute that could snag on materials; spiral shaped sections within chute are not permitted.
  - 1. Provide prepositioned support clips to ensure proper intake levels.
  - 2. Provide expansion joint in chute between support joints.
  - 3. Reinforce discharge offsets, where allowed, with 11-gauge, 0.090-inch thick aluminum sheet material at area of impact.
- B. Vent: Matching diameter aluminum chute vent, 12 gauge, 0.080 inch thick, and extending at least 48 inches above roof surface with aluminum hinged metal safety cap in accordance with NFPA 82.
- C. Standard Floor Frames: Corrosion resistant, industrial grade enamel painted, 1-1/2 by 1-1/2 by 3/16 inch thick steel angles.

PART 3 EXECUTION

3.1 EXAMINATION

3.2 INTERFACE WITH OTHER WORK

- A. Complete installation and testing of facility chutes and equipment prior to completion of enclosing construction.
- B. Ensure that sprinkler and spray cleaning devices are coordinated with size, location, and installation of related service utilities.
- C. Schedule installation of components to ensure that utility connections are provided in an orderly and expeditious manner.

3.3 INSTALLATION

- A. Install facility chutes and equipment in accordance with NFPA 82, requirements of local authorities having jurisdiction (AHJ), and manufacturer's instructions.
- B. Maintain fire-resistive capacity of enclosing walls.
- C. Install facility chute plumb and without offsets or obstructions that might prevent free fall of materials, except as indicated on drawings in compliance with requirements.
- D. Securely anchor chute components as required to withstand impact and weight of materials placed within chute.
- E. Install roof vent flange to roof deck prior to installation of roofing.
- F. Install counterflashing after roofing installation.
- G. Adjust doors and other operating components for smooth operation.

3.4 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Place bagged material of expected size in chute to verify free fall.
- C. Test facility chute components for proper operation.
  - 1. Operate doors, locks, and interlocks.
  - 2. Operate spray cleaning devices.
  - 3. Simulate fire conditions inside chute to verify sprinkler and detector operation.

END OF SECTION

## **SECTION 31 31 16 - TERMITE CONTROL**

### **PART 1 GENERAL**

- 1.1 Section Includes
  - A. Soil-applied chemical treatment.
- 1.2 Related Requirements
  - A. Section 31 22 00 - Grading.
- 1.3 Reference Standards
  - A. Title 7, United States Code, 136 through 136y - Federal Insecticide, Fungicide and Rodenticide Act; 2022.
- 1.4 Submittals
  - A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
  - B. Products and materials specified in this Section are subject to the Build America, Buy America (BABA) requirements described in Division 01. Submit BABA Compliance Documentation demonstrating that products comply with HUD BABA requirements prior to procurement. Products not meeting BABA requirements shall not be incorporated into the Work.
  - C. Product Data: Indicate toxicants to be used, composition by percentage, dilution schedule, intended application rate.
  - D. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.
  - E. Manufacturer's Instructions: Indicate caution requirement.
  - F. Maintenance contract.
  - G. Maintenance Data: Indicate re-treatment schedule.
  - H. Executed warranty.
- 1.5 Warranty
  - A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
  - B. Installer Warranty: Provide 10 year warranty for termite control commencing on Date of Substantial Completion. Complete forms in Owner's name and register with installer.

### **PART 2 PRODUCTS**

- 2.1 Materials
  - A. Soil-Applied Chemical Treatment:
    - 1. Toxicant: Comply with Title 7, United States Code, 136 through 136y.
    - 2. Color: Synthetically dyed for visual identification of treated soil.
    - 3. Diluent: Recommended by toxicant manufacturer.
    - 4. Mixes: Mix toxicant in accordance with manufacturer's instructions.
    - 5. Manufacturers:
      - a. Bayer Environmental Science Corp; \_\_\_\_: [www.bayer.com/en/agriculture/environmental-science/#sle](http://www.bayer.com/en/agriculture/environmental-science/#sle).

- b. FMC Professional Solutions; \_\_\_\_: [www.fmcprosolutions.com/#sle](http://www.fmcprosolutions.com/#sle).

### PART 3 EXECUTION

#### 3.1 Examination

- A. Verify that soil surfaces are unfrozen and dry to absorb toxicant, ready to receive treatment.
- B. Verify final grading is complete; see Section 31 22 00.
- C. Verify utility trenches are wide enough to receive application.

#### 3.2 Preparation

- A. Identify presence of live termites or evidence of termite damage and map areas to receive application.
- B. Removal:
  - 1. Remove woody materials from mapped areas.

#### 3.3 Application

- A. Comply with manufacturer's written instructions.
- B. Soil-Applied Chemical Treatment:
  - 1. Comply with requirements of U.S. EPA and applicable state and local codes.
  - 2. Spray-apply toxicant in accordance with manufacturer's instructions.

#### 3.4 Protection

- A. Do not permit soil grading over treated work.
- B. Protect applications from damage after completion. Repair disturbances according to manufacturer's written instructions.

END OF SECTION

# APPENDIX A - GEOTECHNICAL REPORT

Salem Avenue Senior Community  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

PROJECT # 2025-21  
1/15/2025

PAGE INTENTIONALLY LEFT BLANK



GEOTECHNICAL  
CONSULTANTS INC.



**GCI PROJECT No. 26-G-30983**

## Subsurface Exploration and Geotechnical Engineering Report

Salem Avenue Senior Community  
1038 Salem Avenue  
Dayton, Ohio

**Prepared for:**  
National Church Residences

February 10, 2026

---



**GEOTECHNICAL  
CONSULTANTS INC.**

**MAIN OFFICE**  
720 Green Crest Drive  
Westerville, OH 43081  
614.895.1400 **phone**  
614.895.1171 **fax**

**YOUNGSTOWN OFFICE**  
8433 South Avenue  
Building 1, Suite 1  
Boardman, OH 44514  
330.965.1400 **phone**  
330.965.1410 **fax**

**DAYTON OFFICE**  
2155 Bellbrook Avenue  
Xenia, OH 45385  
937.736.2053 **phone**

[www.gci2000.com](http://www.gci2000.com)

February 10, 2026

Andrea Jerome  
National Church Residences  
2245 North Bank Drive  
Columbus, Ohio 43220

**Reference: Salem Avenue Senior Community  
1038 Salem Avenue - Dayton, Ohio  
GCI Project No. 26-G-30938**

Geotechnical Consultants, Inc. has performed a subsurface exploration and prepared this geotechnical engineering report for the above referenced project. Our borings generally encountered a surface cover of topsoil (1 to 4 inches) and/or fill (1' to 4'), underlain by natural lean clay soils (including glacial till) and silty sand and gravel. We encountered groundwater in 8 of the 13 borings at depths of 8 to 20 feet below grade. We did not encounter bedrock within the maximum drilled depth of 25 feet below grade.

In our opinion, the encountered soils are generally suitable to support the proposed construction. Geotechnical considerations for the project include proper removal of existing/prior construction elements, surface preparation, remediating existing fill (as needed), general subgrade stability, new structural fill placement, and proper foundation, slab, pavement, and utility installation. We discuss geotechnical considerations in the report.

After you have reviewed the report, feel free to contact us with any questions you may have. We appreciate the opportunity to provide our services for this project and hope to continue our services through construction.

Respectfully submitted,  
**Geotechnical Consultants, Inc.**

Curtis L. Miller, P.E.  
Principal



Kevin M. O'Connor, P.E.  
In-House Reviewer

Distribution: Andrea Jerome at NCR – pdf via email  
GCI File



## TABLE OF CONTENTS

|                                                     |    |
|-----------------------------------------------------|----|
| INTRODUCTION .....                                  | 1  |
| SITE AND PROJECT DESCRIPTIONS .....                 | 2  |
| SUBSURFACE CONDITIONS .....                         | 4  |
| ANALYSES AND CONCLUSIONS.....                       | 6  |
| GEOTECHNICAL EVALUATION - BUILDING FOUNDATIONS      |    |
| SITE PREPARATION                                    |    |
| SLABS                                               |    |
| BELOW GRADE WALLS / ELEVATOR PITS                   |    |
| SEISMIC FACTOR                                      |    |
| PAVEMENTS                                           |    |
| SITE PREPARATION AND EARTHWORK                      |    |
| CONSTRUCTION MATERIALS ENGINEERING AND TESTING..... | 15 |
| FINAL.....                                          | 16 |
| APPENDIX FOLLOWING PAGE NUMBER.....                 | 16 |
| General Notes for Soil Sampling and Classifications |    |
| Site Location Map and Boring Location Plan          |    |
| Summary of Encountered Subsurface Conditions        |    |
| Test Boring Logs (B-1 to B-13)                      |    |

## **INTRODUCTION**

As requested by Andrea Jerome and authorized by Jason Gaulden, both representing National Church Residences (NCR), Geotechnical Consultants, Inc. (GCI) performed a subsurface exploration and prepared this geotechnical engineering report for the proposed Salem Avenue Senior Community development to be located on Salem Avenue in Dayton, Ohio. The client provided GCI with a “soil boring plan” showing the proposed development layout (prepared by pH7 Architects, dated 6-11-2024) and requested boring locations.

Our study consisted of thirteen (13) standard penetration borings performed at the requested locations. GCI field located the borings in reference to site features and landmarks, using GIS coordinates and hand-held GPS equipment. Locations should be considered approximate. We attach the test boring logs, a summary table of the encountered subsurface conditions, and a plan showing the approximate boring locations in the appendix.

The intent of this study was to evaluate subsurface conditions and offer geotechnical recommendations relative to site preparation, earthwork, foundations, slabs, and pavements for the proposed development. We issue this report prior to the receipt of final site development and grading plans. GCI should review these plans when available, and provide additional borings and recommendations, if necessary.

This report has been prepared for the exclusive use of National Church Residences and their consultants for specific application to the proposed project in Dayton, Ohio in

accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

### **SITE LOCATION AND PROJECT DESCRIPTIONS**

The project site is located west off Salem Avenue, north of Dartmouth Drive in Dayton, Ohio. The property has an address listed as 1038 Salem Avenue. The site location is shown on the plan attached in the appendix.

Review of aerial imagery for the property shows the site was once occupied by 2 structures. The below aerial photograph shows conditions at the site prior to removal of the previously existing structures.



**Aerial Photograph of Site (Google.com maps)**

The following two photos show the site prior to and after the structure removals.



**Photo of Site Looking North Prior to Structure Removal (Google.com Maps)**



**Photo of Site Looking North After Structure Removal (Google.com Maps)**

Based on the provided RFP, we understand the structure will be three-stories, wood-framed, with slab-on-grade, and will include elevator(s). The building will be L-shaped and will be located along the north and east borders of the site. Paved parking and drive areas will be located in the southwest portion of the site.

## **SUBSURFACE CONDITIONS**

GCI mobilized truck-mounted rotary drilling rigs (with automatic sampling hammers) to the site on February 4, 2026. We drilled thirteen standard penetration borings (B-1 to B-13) across the property, at the requested locations. We extended borings to depths ranging from 10 to 25 feet below grade.

We have attached boring logs, a boring location plan, and a summary of encountered subsurface conditions table to the appendix of this report. We summarize our subsurface findings in the attached table and in the discussion below. Refer to individual boring logs for more detailed subsurface information at specific boring locations.

### **Surface Cover and Fill**

The borings (except B-2, B-3, and B-6) encountered a topsoil cover, with topsoil thicknesses ranging from 1 inch to 4 inches. Based on the regrading of the site after the structures were removed, we anticipate the topsoil will not be consistent across the site; the thicknesses could be less than or greater than those encountered in our borings.

Except at borings B-4 and B-5, we encountered fill material, consisting of a mixture of lean clay, sand, silt, and trace topsoil. The fill extended to depths ranging from about 0.7 feet to 4 feet below grade. We did not note prior construction elements in the borings.

Standard penetration testing in the fill indicated generally medium stiff in consistency, with some softer and harder zones noted.

### **Natural Soils**

Below the surface cover, in borings B-2, B-4 and B-5, we encountered natural brown mottled gray lean clay (CL under the ASTM/Unified Soil Classification System). The upper portion of this soil was stained, which is typically associated with water filtering down through the overlying topsoil over the years. The soil was noted as moderately plastic. Standard penetration testing and hand penetrometer readings indicated variably medium stiff to stiff consistencies. We noted some softer and stiffer zones as well.

At depths of 0.7 to 8 feet, we encountered moderate plasticity, brown glacial till, described as lean clay with sand (CL). The till graded to a gray color in borings B-1, B-2, B-4, B-7, B-8, B-9, and B-11 at depths of 8 to 18 feet. Standard penetration testing indicated the glacial till was generally medium stiff to hard in cohesive consistency. Borings B-1, B-2, and B-7 to B-13 terminated in the brown and gray glacial till at depths of 10 to 25 feet below grade.

Below the till soils in borings B-3 to B-6 at depths of 8 to 18 feet, we encountered brown and gray silty sand with gravel (SM). The granular soils were noted as medium dense to very dense in cohesionless density. These borings terminated in the granular soils at 25 feet below grade.

### **Bedrock**

We did not encounter bedrock within the maximum depth of the borings (25 feet).



## **Groundwater**

We encountered groundwater seepage in borings B-1 to B-5 and B-7 to B-9, at depths ranging from 8 to 23 feet below grade. By completion of drilling, we measured water in borings B-1 to B-9, at depths ranging from 7 to 21 feet below grade.

Soil moisture conditions were noted as variably moist and very moist, with a few wet samples noted. Note that soil moisture conditions and groundwater levels fluctuate in response to precipitation events, seasonal climate changes, stabilization time, and other factors that may differ from the time the measurements were made.

## **ANALYSES AND CONCLUSIONS**

### **GEOTECHNICAL EVALUATION - BUILDING FOUNDATIONS**

Our borings revealed a variable depth of topsoil and existing fill across the site. The depth of the fill was relatively shallow but did extend to a depth of about 4 feet in one boring. We expect the fill is associated with backfilling and grading when the prior construction was removed.

The existing fills in their current state, pose a risk to foundations in terms of total and differential settlement. We provide the following options to mitigate this risk and summarize some of the potential challenges with each option.

#### **Option 1: Fill Removal and Replacement**

The first option is to remove the existing fill, any buried former structural elements (if and where encountered), and soft or heavily stained natural soils from within the building footprint plus 10 feet laterally beyond (where possible). The

excavation would then be backfilled with structural fill (as we describe in the *Site Preparation and Earthwork* section of this report). Prior to new fill placement, the undercut subgrade should be carefully proof-rolled to assess the stability of the natural soils. Soft subgrades should be brought to a firm and stable condition prior to new fill placement.

In our opinion, existing non-organic fill and the natural, non-organic site soils can be re-used as structural fill. Fill with excessive amounts of organic material and other deleterious material is not suitable for reuse in controlled fill; these materials can be disposed of at an off-site location, wasted to green spaces, or reused in landscaping mounds.

Once this procedure is completed, foundations could be placed in the new, controlled fill or firm and stable natural soils at design grades with no unusual undercuts anticipated, and the floor slab would be constructed on the engineered fill. This option would mitigate the risk of foundation and slab settlement associated with the existing fill. We note that it will be difficult to implement this approach during long periods of wet or cold weather conditions.

#### Option 2: Extend Foundations

The second option for building construction is to leave the existing, non-organic fill in-place for slab support, and to extend the foundations downward (through the new and existing fill and any local soft or heavily stained zones in the natural soils) to bear directly on firm and stable, natural soils. Undercuts can be backfilled to grade with a controlled density fill (CDF) such as K-krete or lean



concrete to allow footings to be constructed at design grade. Depth of undercuts will depend on final site grades and encountered conditions.

With this procedure, there is some risk of slab settlement due to the existing fill that would remain in-place. In our opinion, this risk is low, provided the subgrade is brought to a firm and stable condition, as judged by a proof-roll. The owner must assume the risk of possible settlement and slab cracking when constructing over the existing fill materials. At a minimum, a partial remove and replace (to a minimum depth of 12 inches) along with several passes with a large vibratory roller should be budgeted to help create a firm and stable subgrade for construction and to further mitigate the potential for differential settlement in the slabs.

#### *Bearing Capacity*

All footings should bear on firm and stable natural soils or on new, controlled fills placed directly over firm and stable, natural soils. Foundations bearing on acceptable soils can be designed for an allowable bearing capacity of **3,000 pounds per square foot (psf)**. We recommend placement of longitudinal reinforcing steel in the bottoms of continuous footings.

Regardless of calculated sizes, we recommend minimum sizes of 16 inches wide for wall footings and 30 inches square for column pads to prevent a “punch” effect. All exterior footings should extend to local frost bearing depth (32 inches) or to stable bearing (as stated above), whichever is deeper. Interior footings in heated areas may be placed as shallow as feasible, if bearing on acceptable soils. If foundations will be exposed to

winter weather and freezing temperatures, interior footings should be extended to the local frost depth.

## **SITE PREPARATION**

### ***Existing and Previous Development***

GCI recommends all utilities be removed and rerouted from below the proposed building footprint areas plus 10 feet laterally. Abandoned utility lines (outside the zone of influence) should be capped to prevent loss of soil. Remove existing asphalt below the proposed building area. When preparing the site, remove old foundations, below-grade structures, and obstacles that interfere with new construction. Properly backfill resultant excavations with structural fill to proposed grade (as described below in the discussion of new fill placement). A partial remove and replace of the existing fill could be useful in identifying areas of rubble or prior construction that could interfere with foundation undercuts.

Topsoil, vegetation, roots, stumps from removed trees, and other organic materials should be completely removed to expose stable soils prior to placing new fill, underslab aggregate, or pavement base aggregate. Stripping should extend to a minimum of 5 feet laterally beyond proposed buildings and pavement areas. Topsoil and organic matter can be stockpiled for reuse in landscaping mounds, redistributed in proposed green spaces areas, or disposed at an off-site location.

### ***Excavations***

Bedrock was not located within 25 feet of the surface, and, as such, rock excavation is not an issue for the project. The natural site soils and fill can be excavated with conventional

track hoe equipment. Any granular soils will require some additional laybacks or shoring to maintain stable excavations. Temporary excavation support in the form of a temporary earth retention system may be needed to complete the project. **All site excavations should comply with current OSHA regulations.**

### ***Impact of Groundwater on Construction***

We encountered groundwater seepage in the borings at depths ranging from 8 to 23 feet below grade. Based on this information, we do not expect that groundwater will be a significant issue during construction with the exception of the elevator excavations or deep utilities. Water seepage from the sand and silt lenses of the glacial till should be expected. We anticipate that seepage can be controlled using strategically placed sumps and stone mats. Contact GCI if excavations deeper than 10 feet below the existing ground surface are planned.

### ***Subgrade Preparation and Stabilization***

The project will include slab-on-grade construction and new pavements. Once the stripping is completed, the exposed subgrades (stone base, existing fill, or natural lean clay including glacial till) should be thoroughly proof-rolled using a fully-loaded, tandem-axle dump truck (or equivalent) to identify potential soft, yielding subgrade areas. Soft or unstable areas identified during the proof-roll should be undercut to firm, stable conditions or otherwise stabilized prior to placing new fill or underslab aggregate. Unstable areas encountered during proof-rolling should be stabilized or removed and replaced with structural fill.

Stabilization of soft subgrades by diskings, aerating/drying, and re-compaction may be feasible during traditionally drier times of the year. During wet seasons, partial

undercutting and replacing of wet soils with structural fill, drying with soil additives such as lime, or use of geosynthetics may be needed to create a stable subgrade before placing controlled fills. The use of soil additives, such as lime and flyash, or installation of geosynthetics should be reviewed by GCI prior to use in the field. Fewer problems with soft subgrades are expected if work is performed during traditionally drier times of the year (i.e., late spring, summer, and early fall). Traditionally wetter seasons (i.e., late fall, winter, and early spring) will contribute to more problems associated with soft, very moist subgrades.

### ***New Fill Placement***

With stable subgrades, structural fill can be placed. In our opinion, excavated non-organic fill and natural site soils can be reused as structural fill with proper moisture control. Off-site borrow materials should be reviewed by our office prior to use.

Place controlled fills in maximum 8-inch thick loose lifts and compact to a minimum of 98% of the maximum Standard Proctor dry density (ASTM D-698). The moisture in the site soils should be controlled to within  $\pm 3\%$  of the optimum Standard Proctor moisture content. Depending on the time of year of earthwork, moisture adjustment of the site soils may be required to achieve proper compaction. Cohesive soils will compact best with a sheepsfoot roller, while granular soils will compact best with a vibratory smooth-drum roller.

### **SLABS**

Provided the site is prepared as discussed, conventional slab-on-grade is feasible for the building. As discussed previously, if the existing fill is left in place, the upper 12 inches of

subgrade should be reworked (disked, moisture conditioned, and compacted) to provide a more stable subgrade. GCI recommends a minimum of 4 inches of underslab gravel beneath lightly loaded slab-on-grade floors to provide uniform support for the slab and a capillary cut-off for moisture. We recommend thicker and well-draining aggregate with drains be used below the elevator pit slab as discussed below. We recommend placing a vapor retarder directly below the slab in areas where moisture may be a problem with slab-on-grade floor coverings.

### **BELOW-GRADE WALLS / ELEVATOR PITS**

The multi-story building will include elevators with pits below the slab(s). Retaining walls allowed to move freely at the top of the wall should be designed using active lateral earth pressure. Walls restrained at both top and bottom (conventional elevator pit walls) should be designed to resist an at-rest lateral soil pressure. The design loading depends on the type of backfill material used and boundary support conditions. The recommended equivalent fluid pressures for two types of soils and loading conditions (without surcharge loads) are shown on the following table:

| <b>Soil Type</b>                     | <b>Equivalent Active Fluid Pressure (pcf)</b> | <b>Equivalent At-Rest Fluid Pressure (pcf)</b> |
|--------------------------------------|-----------------------------------------------|------------------------------------------------|
| Lean Clay (site soils)               | 55                                            | 70                                             |
| Sand and Gravel (properly compacted) | 35                                            | 55                                             |

**Cohesive soils are not recommended as wall backfill due to their poor drainage characteristics and potential for lateral wall loads resulting from surface frost.** We recommend that granular material (less than 15% passing the No. 200 sieve) be used for all wall backfill. The stone should be placed in a wedge defined by a line extend upward from the footing at a 35° angle from the vertical to allow use of the lower values above.

As noted above, use granular backfill around the elevator pit walls, and install perimeter drains tied into permanent sumps. Alternatively, design the pits for full hydrostatic pressure. We recommend damp-proofing below grade walls.

## **SEISMIC FACTOR**

GCI evaluated the Seismic Site Classification using guidelines set forth in the Ohio Building Code (OBC) "Site classification for seismic design". Based on the encountered soil conditions, we estimate the site has a Site Class D – "stiff soil profile".

## **PAVEMENTS**

We encountered shallow fill in the pavement area borings. Based on the borings, we are of the opinion that the fill should be suitable to support anticipated pavement loads, provided the fill is stable below a thorough proof roll. We also recommend the upper 12 inches of subgrade be reworked (disked, moisture conditioned, and compacted) to provide a more stable subgrade. Provided the site is properly prepared, conventional aggregate base and flexible asphalt wearing course pavements can be used. Prior to pavement construction, the subgrade should be carefully proof-rolled, and stabilized as necessary to provide a CBR value of at least 3. We provide recommendations for minimum pavement sections below, but a specific pavement design is beyond the scope of work of this report; GCI can provide one if requested. A site-specific pavement design would require additional laboratory testing and pavement use criteria.

### ***New Pavement Areas***

We assume that traffic will consist of automobiles and occasional trucks. Based on our experience with similar projects and soils, and assuming properly prepared subgrades,

we recommend a minimum light-duty pavement section consisting of 3 inches of asphalt over 8 inches of aggregate base. For heavy-duty traffic areas, including the main traffic aisles and areas subjected to occasional refuse truck traffic, and occasional truck deliveries, we suggest a pavement section consisting of a minimum of 4 inches of asphalt over 10 inches of aggregate base. We recommend a minimum of 8 inches of air-entrained, Portland cement concrete for the dumpster pad and the dumpster pad approach area.

Providing adequate subbase drainage is important to future pavement performance. Finger drains connecting to weep-holes in inlets, proper grading of pavement subgrades and surfaces to shed run-off, and underdrains in pavement swales are suggested subbase drainage methods and should be designed by the site civil engineer. Installing a medium-duty geogrid below the base aggregate course in areas subjected to stopping and turning traffic or concentrated traffic flow, such as the main entrance/exit drives, will increase the structural number of the pavement section and improve the pavement performance.

## **SITE PREPARATION AND EARTHWORK**

We provide below general guidelines for site preparation and earthwork operations.

1. Remove any existing construction (old foundations and slabs, pavements, subsurface utilities, etc.) from within the construction limits plus 10 feet laterally. Properly backfill resulting excavations, as needed, with compacted structural fill. Existing subsurface utilities located outside of the proposed building footprint can be abandoned in place, provided the demolition contractor caps the ends of the abandoned lines to prevent loss of soil.
2. Remove topsoil and vegetation from the site plus 5 feet laterally.
3. If a remove and replace option is chosen, remove existing fill from below the proposed building footprint, plus 10 feet laterally beyond.
4. Thoroughly and carefully proof-roll exposed subgrades to identify potential soft/unstable areas. Undercut soft spots identified in the proof-roll or otherwise

stabilize soft spots prior to placing controlled fill or underslab aggregate. Budget for reworking the subgrade soils to 12 inches, if existing fill is left in place.

5. Place controlled fills to design grade within the proposed building pads and pavement areas, as required. Non-organic site soils are suitable for reuse in controlled fills. Borrow materials should be reviewed by our office prior to use.
6. Place controlled fills in maximum 8-inch thick loose lifts and compact to a minimum of 98% of the maximum Standard Proctor dry density (ASTM D-698). The moisture in the site soils should be controlled to within  $\pm 3\%$  of the optimum Standard Proctor moisture content. Depending on the time of year of earthwork, moisture adjustment of the site soils may be required to achieve proper compaction.

Cohesive soils will compact best with a static-weight sheepsfoot roller and granular materials will compact best with a vibratory smooth drum roller. Clay-based soils that are at or slightly over the optimum moisture content will tend to pump if exposed to vibratory sheepsfoot compaction equipment.

7. Construct foundations and start building construction after the building pads are filled to design grade, as required. Refer to the *Geotechnical Evaluation and Foundations* sections of this report for specific foundation design parameters.
8. The building pad and new pavement areas should be steel-wheel rolled to a smooth surface prior to placement of underslab or base course aggregate. Subgrade preparation during wet seasons may require the use of engineering fabric or geogrid.
9. It is recommended that GCI be retained to observe proof-rolling operations, cut and fill operations, and footing excavations.
10. If work is performed during the winter (e.g., when freezing temperatures occur), special protective measures will be required during filling and foundation construction procedures. Contact GCI for additional recommendations on cold-weather earthwork operations, if applicable.

## **CONSTRUCTION MATERIALS ENGINEERING AND TESTING**

GCI provides construction materials engineering and testing services. For project continuity throughout construction, we recommend that GCI be retained to observe, test, and document:

- earthwork procedures (stripping, fill placement, compaction, utility trench backfill, etc.),
- slab preparation (proof-rolling, excavations, undercuts, etc.),
- geopier installations,



- concrete placement and compressive strength testing (footings, slabs, pavements, etc.), and
- structural steel (welds, bolts, etc.).

The purpose of this work is to assess that the intent of our recommendations is being followed and to make timely changes to our recommendations (as needed) in the event site conditions vary from those encountered in our borings. Please contact our field department to initiate these services.

### **FINAL**

The recommendations presented in this report are based on the borings that were drilled, and information provided. Note that if any changes in the nature, design or locations of the construction are planned, conclusions and recommendations should not be considered valid unless verified in writing by GCI. The recommendations contained in this report are the opinion of GCI based on the subsurface conditions found in the borings and available development information.

This report has been issued to the client for design purposes. It should be noted that the nature and extent of variations between borings might not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

If you have any questions or need for any additional information, please contact our office. It has been a pleasure to be of service to you on this project, and we hope to continue our services through construction.



GEOTECHNICAL  
CONSULTANTS INC.



## **APPENDIX – Salem Avenue Senior Community**

**General Notes for Soil Sampling and Classifications  
Site Location Map and Boring Location Plan  
Summary of Encountered Subsurface Conditions  
Test Boring Logs (B-1 to B-13)**



**GEOTECHNICAL  
CONSULTANTS INC.**

**MAIN OFFICE**  
720 Green Crest Drive  
Westerville, OH 43081  
614.895.1400 **phone**  
614.895.1171 **fax**

**YOUNGSTOWN OFFICE**  
8433 South Avenue  
Building 1, Suite 1  
Boardman, OH 44514  
330.965.1400 **phone**  
330.965.1410 **fax**

**DAYTON OFFICE**  
2155 Bellbrook Avenue  
Xenia, OH 45385  
937.736.2053 **phone**

[www.gci2000.com](http://www.gci2000.com)

**GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS**

**BORINGS, SAMPLING AND GROUNDWATER OBSERVATIONS:**

Drilling and sampling were conducted in accordance with procedures generally recognized and accepted as standard methods of exploration of subsurface conditions. The borings were drilled using a truck-mounted drill rig using auger boring methods with standard penetration testing performed in each boring at intervals ranging from 1.5 to 5.0 feet. The stratification lines on the logs represent the approximate boundary between soil types at that specific location and the transition may be gradual.

Water levels were measured at drill locations under conditions stated on the logs. This data has been reviewed and interpretations made in the text of the report. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time the measurements were made.

The Standard Penetration Test (ASTM-D-1586) is performed by driving a 2.0 inch O.D. split barrel sampler a distance of 18 inches utilizing a 140 pound hammer free falling 30 inches. The number of blows required to drive the sampler each 6 inches of penetration are recorded. The summation of the blows required to drive the sampler for the final 12 inches of penetration is termed the Standard Penetration Resistance (N). Soil density/consistency in terms of the N-value is as follows:

| COHESIONLESS DENSITY |              | COHESIVE CONSISTENCY |              |
|----------------------|--------------|----------------------|--------------|
| 0-10                 | Loose        | 0-4                  | Soft         |
| 10-30                | Medium Dense | 4-8                  | Medium Stiff |
| 30-50                | Dense        | 8-15                 | Stiff        |
| 50 +                 | Very Dense   | 15-30                | Very Stiff   |
|                      |              | 30 +                 | Hard         |

**SOIL MOISTURE TERMS**

Soil Samples obtained during the drilling process are visually characterized for moisture content as follows:

| MOISTURE CONTENT | DESCRIPTION                                                                                                                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Damp             | Soil moisture is much drier than the Atterberg plastic limit (where soils are cohesive) and generally more than 3% below Standard Proctor "optimum" moisture conditions. Soils of this moisture generally require added moisture to achieve proper compaction.                         |
| Moist            | Soil moisture is near the Atterberg plastic limit (cohesive soils) and generally within $\pm 3\%$ of the Standard Proctor "optimum" moisture content. Little to no moisture conditioning is anticipated to be required to achieve proper compaction and stable subgrades.              |
| Very Moist       | Soil moisture conditions are above the Atterberg plastic limit (cohesive soils) and generally greater than 3% above Standard Proctor "optimum" moisture conditions. Drying of the soils to near "optimum" conditions is anticipated to achieve proper compaction and stable subgrades. |
| Wet              | Soils are saturated. Significant drying of soils is anticipated to achieve proper compaction and stable subgrades.                                                                                                                                                                     |

**SOIL CLASSIFICATION PROCEDURE:**

Soil samples obtained during the drilling process are preserved in plastic bags and visually classified in the laboratory. Select soil samples may be subjected to laboratory testing to determine natural moisture content, gradation, Atterberg limits and unit weight. Soil classifications on logs may be adjusted based on results of laboratory testing.

Soils are classified in accordance with the ASTM version of the Unified Soil Classification System. ASTM D-2487 "Classification of Soils for Engineering Purposes (Unified Soil Classification System) describes a system for classifying soils based on laboratory testing. ASTM D-2488 "Description and Identification of Soil (Visual-Manual Procedure) describes a system for classifying soils based on visual examination and manual tests.

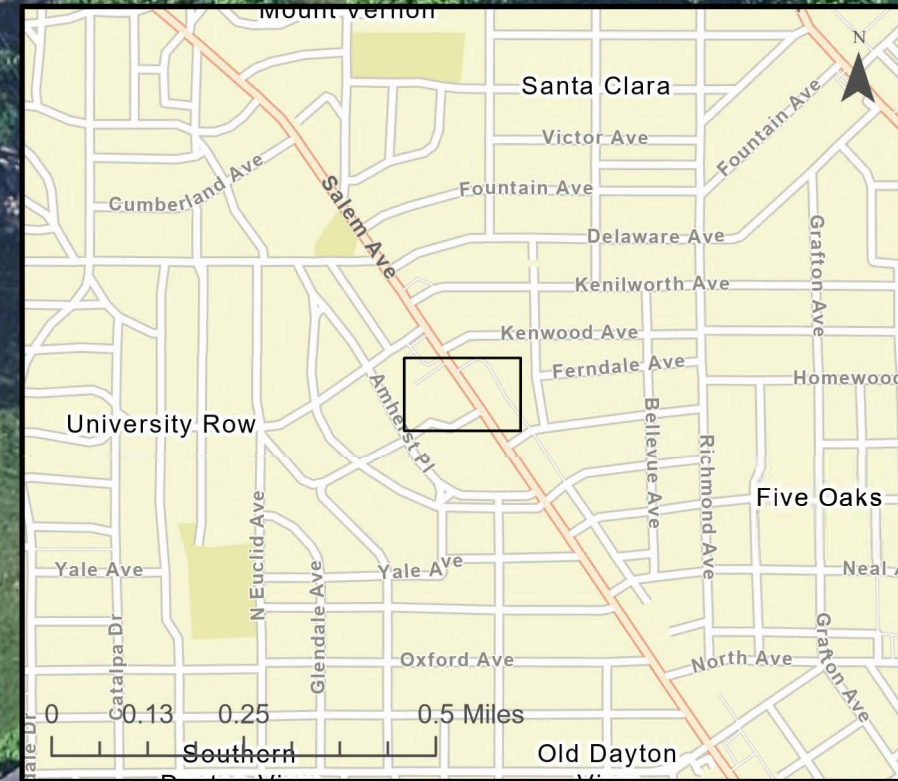
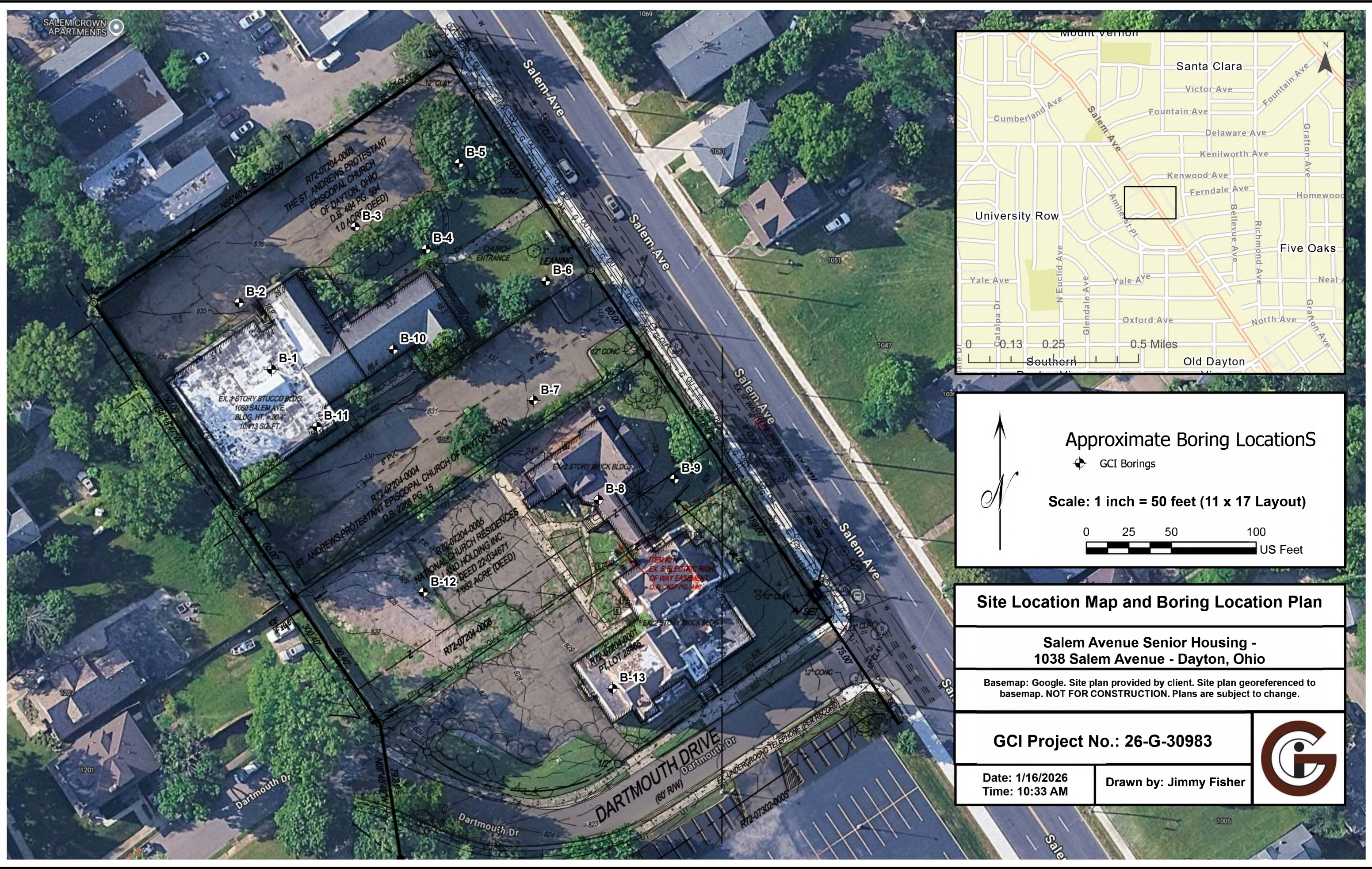
Soil classifications are based on the following tables (see reverse side):

## GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS

| PARTICLE SIZE DEFINITION |         |                                                                                           | CONSTITUENT MODIFIERS |              |
|--------------------------|---------|-------------------------------------------------------------------------------------------|-----------------------|--------------|
| Boulders:                |         | >12"                                                                                      | Trace                 | Less than 5% |
| Cobbles:                 |         | 3" to 12"                                                                                 | Few                   | 5-10%        |
| Gravel:                  | Coarse: | 3/4" to 3"                                                                                | Little                | 15-25%       |
|                          | Fine:   | No. 4 (3/16") to 3/4"                                                                     | Some                  | 30-45%       |
| Sand:                    | Coarse  | No. 10 (2.0mm) to No. 4 (4.75mm)                                                          | Mostly                | 50-100%      |
|                          | Medium  | No. 40 (0.425mm) to No. 10 (2.0mm)                                                        |                       |              |
|                          | Fine    | No. 200 (0.074mm) to No. 40 (0.425mm)                                                     |                       |              |
| Silt & Clay              |         | <0.074mm; classification based on overall plasticity; in general clay particles <0.005mm. |                       |              |

| ASTM/UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART                                                                                                                                                                                                                                                              |                                                 |                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>COARSE-GRAINED SOILS</b><br>(more than 50% of materials is larger than No. 200 sieve size)                                                                                                                                                                                                                  |                                                 |                                                                                                                    |
| <b>GRAVELS</b><br>More than 50% of coarse fraction larger than No. 4 sieve size                                                                                                                                                                                                                                | <i>Clean Gravel (less than 5% fines)</i>        |                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                | GW                                              | Well-graded gravel, gravel-sand mixtures, little or no fines                                                       |
|                                                                                                                                                                                                                                                                                                                | GP                                              | Poorly-graded gravels, gravel sand mixtures, little or no fines                                                    |
|                                                                                                                                                                                                                                                                                                                | <i>Gravels with fines (more than 12% fines)</i> |                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                | GM                                              | Silty gravels, gravel-sand-silt mixtures                                                                           |
| <b>SANDS</b><br>More than 50% of coarse fraction smaller than No. 4 sieve size                                                                                                                                                                                                                                 | GC                                              | Clayey gravels, gravel-sand-clay mixtures                                                                          |
|                                                                                                                                                                                                                                                                                                                | <i>Clean Sands (Less than 5% fines)</i>         |                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                | SW                                              | Well-graded sands, gravelly sands, little or no fines                                                              |
|                                                                                                                                                                                                                                                                                                                | SP                                              | Poorly-graded sands, gravelly sands, little or no fines                                                            |
|                                                                                                                                                                                                                                                                                                                | <i>Sands with fines (More than 12% fines)</i>   |                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                | SM                                              | Silty sands, sand-silt mixtures                                                                                    |
|                                                                                                                                                                                                                                                                                                                | SC                                              | Clayey sands, sand-clay mixtures                                                                                   |
| Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:<br><br>Less than 5 percent .....GW, GP, SW, SP<br>Greater than 12 percent .....GM, GC, SM, SC<br>5 to 12 percent .....Borderline cases requiring dual symbols: SP-SM, GP-GM, etc. |                                                 |                                                                                                                    |
| <b>FINE-GRAINED SOILS</b><br>(50% or more of material is smaller than No. 200 sieve size)                                                                                                                                                                                                                      |                                                 |                                                                                                                    |
| <b>SILTS AND CLAYS</b><br>Liquid Limit less than 50%                                                                                                                                                                                                                                                           | ML                                              | Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity |
|                                                                                                                                                                                                                                                                                                                | CL                                              | Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays                  |
|                                                                                                                                                                                                                                                                                                                | CL-ML                                           | Inorganic silty clay of slight plasticity, P.I. between 4 and 7                                                    |
|                                                                                                                                                                                                                                                                                                                | OL                                              | Organic silts and organic silty clays of low plasticity                                                            |
| <b>SILTS AND CLAYS</b><br>Liquid Limit 50% or greater                                                                                                                                                                                                                                                          | MH                                              | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts                                |
|                                                                                                                                                                                                                                                                                                                | CH                                              | Inorganic clays of high plasticity, fat clays                                                                      |
|                                                                                                                                                                                                                                                                                                                | OH                                              | Organic clays or medium to high plasticity, organic silts                                                          |
| <b>HIGHLY ORGANIC SOILS</b>                                                                                                                                                                                                                                                                                    | PT                                              | Peat and other highly organic soils                                                                                |





**Approximate Boring Locations**

◆ GCI Borings

**Scale: 1 inch = 50 feet (11 x 17 Layout)**

0 25 50 100 US Feet

|                                                                                                                                       |                        |
|---------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Site Location Map and Boring Location Plan</b>                                                                                     |                        |
| <b>Salem Avenue Senior Housing -<br/>1038 Salem Avenue - Dayton, Ohio</b>                                                             |                        |
| Basemap: Google. Site plan provided by client. Site plan georeferenced to basemap. NOT FOR CONSTRUCTION. Plans are subject to change. |                        |
| <b>GCI Project No.: 26-G-30983</b>                                                                                                    |                        |
| Date: 1/16/2026<br>Time: 10:33 AM                                                                                                     | Drawn by: Jimmy Fisher |





## Summary of Encountered Subsurface Conditions

Salem Avenue Senior Community  
1038 Salem Avenue - Dayton, Ohio  
GCI Job Number 26-G-30983

| Boring | Topsoil Thickness (in) | Bottom of Fill (ft) | Depth to Groundwater |                             | Depth to Mottled Lean Clay (ft) | Depth to Brown Till (ft) | Depth to Gray Till (ft) | Silty Sand and Gravel (ft) | Bottom of Boring (ft) |
|--------|------------------------|---------------------|----------------------|-----------------------------|---------------------------------|--------------------------|-------------------------|----------------------------|-----------------------|
|        |                        |                     | During Drilling (ft) | At Drilling Completion (ft) |                                 |                          |                         |                            |                       |
| B-1    | 3                      | 2                   | 23                   | 18                          | ---                             | 2                        | 17                      | ---                        | 25                    |
| B-2    | ---                    | 2                   | 12                   | 16                          | 2                               | 8                        | 18                      | ---                        | 25                    |
| B-3    | ---                    | 2                   | 12                   | 7                           | ---                             | 2                        | ---                     | 13                         | 25                    |
| B-4    | 3                      | ---                 | 8                    | 21                          | 0.3                             | 8                        | 13                      | 18                         | 25                    |
| B-5    | 4                      | ---                 | 12                   | 13                          | 0.3                             | 4                        | ---                     | 13                         | 25                    |
| B-6    | ---                    | 2                   | ---                  | 17                          | ---                             | 2                        | ---                     | 8                          | 25                    |
| B-7    | 1                      | 2                   | 12                   | 12                          | ---                             | 2                        | 8                       | ---                        | 25                    |
| B-8    | 1                      | 4                   | 20                   | 9                           | ---                             | 4                        | 8                       | ---                        | 25                    |
| B-9    | 1                      | 1.5                 | 18                   | 15                          | ---                             | 1.5                      | 12                      | ---                        | 25                    |
| B-10   | 1                      | 2                   | ---                  | ---                         | ---                             | 2                        | ---                     | ---                        | 15                    |
| B-11   | 2                      | 2                   | ---                  | ---                         | ---                             | 2                        | 12                      | ---                        | 15                    |
| B-12   | 1                      | 2                   | ---                  | ---                         | ---                             | 2                        | ---                     | ---                        | 10                    |
| B-13   | 1                      | 0.7                 | ---                  | ---                         | ---                             | 0.7                      | ---                     | ---                        | 10                    |

NOTES:      --- indicates not encountered



# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-1

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations             |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|--------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                          |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| ▽ Water at Time of Drill | 23' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| ▼ Water After Drilling   | 18' | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours     | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                  | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                          |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                            |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
|            | 2.5                       | 0-1.5                | SS          | 4-3-3       | Moist      |            |             | Topsoil 0.3                                                                                                             |
|            |                           |                      |             |             |            |            |             | FILL: Brown Lean Clay - trace sand 2.0                                                                                  |
|            | 2.5                       | 2-3.5                | SS          | 3-2-2       | Moist      |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel            |
| 5          | 2                         | 4-5.5                | SS          | 3-4-5       | Very Moist | 5          |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 10         | 4.5                       | 8.5-10               | SS          | 5-7-10      | Very Moist | 10         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 15         | cuttings                  | 13.5-15              | SS          | 5-7-14      | Moist      | 15         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 17.0                                                                                                                    |
|            |                           |                      |             |             |            |            |             | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel |
| 20         | 4.5                       | 18.5-20              | SS          | 9-8-10      | Moist      | 20         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 25         | 4                         | 23.5-25              | SS          | 8-12-19     | Very Moist | 25         |             | Water Seepage at 23 ft 25.0                                                                                             |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                                  |



**GEOTECHNICAL  
CONSULTANTS INC.**

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-2

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations             |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|--------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                          |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| ▽ Water at Time of Drill | 12' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| ▼ Water After Drilling   | 16' | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours     | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                  | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                          |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                            |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
|            | 1                         | 0-1.5                | SS          | 5-6-5       | Moist      |            |             | FILL: Brown Lean Clay - trace sand                                                                                      |
|            |                           |                      |             |             |            |            |             | 2.0                                                                                                                     |
|            | 4                         | 2-3.5                | SS          | 3-3-4       | Very Moist |            |             | Stained Brown Mottled Gray Lean Clay (CL) - trace sand                                                                  |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 5          | 4                         | 4-5.5                | SS          | 5-6-6       | Moist      | 5          |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 8.0                                                                                                                     |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 10         | 4.5                       | 8.5-10               | SS          | 7-7-9       | Moist      | 10         |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel            |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            | ▽           | Water Seepage at 12 ft                                                                                                  |
| 15         | 3                         | 13.5-15              | SS          | 8-8-13      | Very Moist | 15         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            | ▼           |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 18.0                                                                                                                    |
| 20         | 4.5                       | 18.5-20              | SS          | 7-7-7       | Very Moist | 20         |             | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 25         | low return                | 23.5-25              | SS          | 7-10-10     | Very Moist | 25         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 25.0                                                                                                                    |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                                  |



\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-3

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | 12' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | 7'  | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                 |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|--------------------------------------------------------------------------------------------------------------|
|            | --                        | 0-1.5                | SS          | 6-7-3       | Very Moist |            |             | FILL: Brown Lean Clay - trace sand                                                                           |
|            |                           |                      |             |             |            |            |             | 2.0                                                                                                          |
|            | 4.5                       | 2-3.5                | SS          | 6-6-7       | Moist      |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel |
| 5          | 4.5                       | 4-5.5                | SS          | 4-5-8       | Moist      | 5          |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 10         | 4.5                       | 8.5-10               | SS          | 6-6-9       | Moist      | 10         |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             | Water Seepage at 12 ft                                                                                       |
|            |                           |                      |             |             |            |            |             | 13.0                                                                                                         |
| 15         | --                        | 13.5-15              | SS          | 7-7-10      | Wet        | 15         |             | Brown to Gray Silty Sand and Gravel (SM) - little silt, little gravel                                        |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 20         | --                        | 18.5-20              | SS          | 8-7-7       | Wet        | 20         |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 25         | --                        | 23.5-25              | SS          | 17-12-15    | Wet        | 25         |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             | 25.0                                                                                                         |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                       |



**GEOTECHNICAL  
CONSULTANTS INC.**

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-4

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations             |     |  | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|--------------------------|-----|--|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                          |     |  |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| ▽ Water at Time of Drill | 8'  |  | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| ▼ Water After Drilling   | 21' |  | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours     | N/A |  | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                  | N/A |  | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                          |     |  | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                                          |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------|
|            | 2.5                       | 0-1.5                | SS          | 4-3-3       | Moist      |            |             | Topsoil 0.3                                                                                                                           |
|            |                           |                      |             |             |            |            |             | Stained Brown Mottled Gray Lean Clay (CL) - moderate plasticity; trace sand                                                           |
|            | 2.5                       | 2-3.5                | SS          | 2-2-3       | Moist      |            |             |                                                                                                                                       |
| 5          | 3                         | 4-5.5                | SS          | 4-3-4       | Moist      | 5          |             |                                                                                                                                       |
|            |                           |                      |             |             |            |            |             |                                                                                                                                       |
|            |                           |                      |             |             |            |            |             | 8.0                                                                                                                                   |
| 10         | 4                         | 8.5-10               | SS          | 10-7-10     | Very Moist | 10         |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel<br>Water Seepage at 8 ft |
|            |                           |                      |             |             |            |            |             |                                                                                                                                       |
|            |                           |                      |             |             |            |            |             | 13.0                                                                                                                                  |
| 15         | 4                         | 13.5-15              | SS          | 10-12-14    | Very Moist | 15         |             | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel               |
|            |                           |                      |             |             |            |            |             |                                                                                                                                       |
|            |                           |                      |             |             |            |            |             | 18.0                                                                                                                                  |
| 20         | --                        | 18.5-20              | SS          | 16-20-30    | Wet        | 20         |             | Gray Silty Sand and Gravel (SM) - little silt, little gravel                                                                          |
|            |                           |                      |             |             |            |            |             |                                                                                                                                       |
|            |                           |                      |             |             |            |            |             |                                                                                                                                       |
| 25         | no return                 | 23.5-25              | SS          | 12-16-23    | NR         | 25         |             | 25.0                                                                                                                                  |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                                                |



**GEOTECHNICAL  
CONSULTANTS INC.**

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

## SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**BORING NO.** B-5

**SURF. ELEV.** N/A

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

WEATHER -

| Observations                                                                     |                        |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|----------------------------------------------------------------------------------|------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                                                                                  |                        |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
|  | Water at Time of Drill | 12' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
|  | Water After Drilling   | 13' | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours                                                             |                        | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                                                                          |                        | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                                                                                  |                        |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

[illegible]

GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-6

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | N/A | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | 17" | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                 |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|--------------------------------------------------------------------------------------------------------------|
|            | 4                         | 0-1.5                | SS          | 6-5-6       | Moist      |            |             | FILL: Brown Lean Clay - trace sand                                                                           |
|            |                           |                      |             |             |            |            |             | 2.0                                                                                                          |
|            | 4.5                       | 2-3.5                | SS          | 10-17-10    | Moist      |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 5          | --                        | 4-5.5                | SS          | 9-9-9       | Moist      | 5          |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             | 8.0                                                                                                          |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 10         | 4.5                       | 8.5-10               | SS          | 5-7-7       | Moist      | 10         |             | Brown to Gray Silty Sand and Gravel (SM) - little silt, little gravel                                        |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 15         | 4                         | 13.5-15              | SS          | 12-13-14    | Moist      | 15         |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 20         | 4                         | 18.5-20              | SS          | 15-21-30    | Wet        | 20         |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
| 25         | 4.5                       | 23.5-25              | SS          | 7-10-12     | Very Moist | 25         |             | 25.0                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                       |



GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-7

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | 12' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | 12' | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                            |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
|            | 0.5                       | 0-1.5                | SS          | 9-7-4       | Moist      |            |             | Topsoil <0.1                                                                                                            |
|            |                           |                      |             |             |            |            |             | FILL: Brown Lean Clay - trace sand 2.0                                                                                  |
|            | 4                         | 2-3.5                | SS          | 4-7-7       | Moist      |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel            |
| 5          | 4                         | 4-5.5                | SS          | 6-7-7       | Very Moist | 5          |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 8.0                                                                                                                     |
| 10         | 4.5                       | 8.5-10               | SS          | 7-11-11     | Moist      | 10         |             | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 15         | 4.5                       | 13.5-15              | SS          | 9-11-14     | Very Moist | 15         |             | Water Seepage at 12 ft                                                                                                  |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 20         | 4                         | 18.5-20              | SS          | 7-11-13     | Wet        | 20         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 25         | 4.5                       | 23.5-25              | SS          | 29-21-19    | Wet        | 25         |             | 25.0                                                                                                                    |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                                  |



**GEOTECHNICAL  
CONSULTANTS INC.**

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-8

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations             |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|--------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                          |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| ▽ Water at Time of Drill | 20' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| ▼ Water After Drilling   | 9'  | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours     | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                  | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                          |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                            |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
|            | 2                         | 0-1.5                | SS          | 3-3-2       | Moist      |            |             | Topsoil <0.1                                                                                                            |
|            | cuttings                  | 2-3.5                | SS          | 2-1-3       | Moist      |            |             | FILL: Brown Lean Clay - trace sand                                                                                      |
| 5          | 4.5                       | 4-5.5                | SS          | 4-7-8       | Moist      | 5          |             | 4.0                                                                                                                     |
|            |                           |                      |             |             |            |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel            |
| 10         | 4.5                       | 8.5-10               | SS          | 7-9-8       | Moist      | 10         |             | 8.0                                                                                                                     |
|            |                           |                      |             |             |            |            |             | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel |
| 15         | 4.5                       | 13.5-15              | SS          | 3-4-13      | Very Moist | 15         |             |                                                                                                                         |
| 20         | --                        | 18.5-20              | SS          | 10-11-10    | Wet        | 20         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | Water Seepage at 20 ft                                                                                                  |
| 25         | 4                         | 23.5-25              | SS          | 5-6-9       | Wet        | 25         |             | 25.0                                                                                                                    |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                                  |



**GEOTECHNICAL  
CONSULTANTS INC.**

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-9

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations |                        |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|--------------|------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|              |                        |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| ▽            | Water at Time of Drill | 18' | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| ▼            | Water After Drilling   | 15' | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
|              | Water After 24-Hours   | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
|              | Cave In                | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|              |                        |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                            |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
|            | 3                         | 0-1.5                | SS          | 2-3-3       | Moist      |            |             | Topsoil <0.1                                                                                                            |
|            | cuttings                  | 2-3.5                | SS          | 6-10-9      | Moist      |            |             | FILL: Brown Lean Clay - trace sand 1.5                                                                                  |
|            |                           |                      |             |             |            |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel            |
| 5          | 4.5                       | 4-5.5                | SS          | 6-6-7       | Moist      | 5          |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 10         | 4.5                       | 8.5-10               | SS          | 5-8-8       | Moist      | 10         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 12.0                                                                                                                    |
| 15         | low return                | 13.5-14.9            | SS          | 19-23-50/5" | Very Moist | 15         |             | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 20         | 4.5                       | 18.5-20              | SS          | 19-21-20    | Wet        | 20         |             | Water Seepage at 18 ft                                                                                                  |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             |                                                                                                                         |
| 25         | 4.5                       | 23.5-25              | SS          | 13-7-8      | Wet        | 25         |             |                                                                                                                         |
|            |                           |                      |             |             |            |            |             | 25.0                                                                                                                    |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 25'                                                                                                  |



GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-10

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | N/A | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | N/A | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture            | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                 |
|------------|---------------------------|----------------------|-------------|-------------|---------------------|------------|-------------|--------------------------------------------------------------------------------------------------------------|
|            | 3                         | 0-1.5                | SS          | 3-3-2       | Moist               |            |             | Topsoil <0.1                                                                                                 |
|            |                           |                      |             |             |                     |            |             | FILL: Brown Lean Clay - trace sand                                                                           |
|            |                           |                      |             |             |                     |            |             | 2.0                                                                                                          |
|            | 4                         | 2-3.5                | SS          | 2-3-4       | Moist               |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
| 5          | low return                | 4-5.5                | SS          | 6-9-9       | Moist               | 5          |             |                                                                                                              |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
| 10         | 4.5                       | 8.5-10               | SS          | 4-5-7       | Moist to Very Moist | 10         |             |                                                                                                              |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
| 15         | 4.5                       | 13.5-15              | SS          | 13-21-12    | Very Moist          | 15         |             | 15.0                                                                                                         |
|            |                           |                      |             |             |                     |            |             |                                                                                                              |
|            |                           |                      |             |             |                     |            |             | Bottom of Boring @ 15'                                                                                       |



GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



## SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-11

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

WEATHER -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | N/A | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | N/A | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log                                                                         | Soil Description and Remarks                                                                                            |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|            | 2                         | 0-1.5                | SS          | 2-1-1       | Moist      |            |    | Topsoil<br>FILL: Brown Lean Clay - trace sand                                                                           |
|            |                           |                      |             |             |            |            |                                                                                     | 0.2                                                                                                                     |
|            | 4.5                       | 2-3.5                | SS          | 4-5-7       | Moist      |            |    | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel            |
|            |                           |                      |             |             |            |            |                                                                                     | 2.0                                                                                                                     |
| 5          | 4.5                       | 4-5.5                | SS          | 7-8-8       | Moist      | 5          |    |                                                                                                                         |
|            |                           |                      |             |             |            |            |                                                                                     |                                                                                                                         |
|            | 4.5                       | 8.5-10               | SS          | 5-6-7       | Moist      | 10         |    |                                                                                                                         |
| 10         |                           |                      |             |             |            | 10         |                                                                                     |                                                                                                                         |
|            |                           |                      |             |             |            |            |                                                                                     | 12.0                                                                                                                    |
|            | 4.5                       | 13.5-15              | SS          | 4-6-6       | Very Moist | 15         |  | Gray Sandy Lean Clay with Gravel (CL); glacial till - low plasticity; little to some fine to coarse sand, little gravel |
| 15         |                           |                      |             |             |            | 15         |                                                                                     | 15.0                                                                                                                    |
|            |                           |                      |             |             |            |            |                                                                                     | Bottom of Boring @ 15'                                                                                                  |



GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

## SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-12

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

WEATHER -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | N/A | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | N/A | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

[illegible]

GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# SOIL BORING

**PROJECT NAME** Salem Avenue Senior Community

**BORING NO.** B-13

**CLIENT** National Church Residences

**PROJ. NO.** 26-G-30983

**SURF. ELEV.** N/A

**PROJECT ADDRESS** 1038 Salem Avenue - Dayton, Ohio

**DATE DRILLED** 02/04/2026

**BORING LOCATION** See Boring Location Plan

**WEATHER** -

| Observations              |     | Proportions Used |              | 140 lb Wt. x 30" fall on 2" O.D. Sample |       |                      |       |
|---------------------------|-----|------------------|--------------|-----------------------------------------|-------|----------------------|-------|
|                           |     |                  |              | Cohesionless Density                    |       | Cohesive Consistency |       |
| Water at Time of Drilling | N/A | Trace            | Less than 5% | Very Loose                              | 0-5   | Soft                 | 0-4   |
| Water After Drilling      | N/A | Few              | 5 to 10%     | Loose                                   | 5-10  | Medium Stiff         | 4-8   |
| Water After 24-Hours      | N/A | Little           | 15 to 25%    | Medium Dense                            | 10-30 | Stiff                | 8-15  |
| Cave In                   | N/A | Some             | 30 to 45%    | Dense                                   | 30-50 | Very Stiff           | 15-30 |
|                           |     | Mostly           | 50 to 100%   | Very Dense                              | +50   | Hard                 | +30   |

| Depth (ft) | Pocket Penetrometer (tsf) | Sample Interval (ft) | Sample Type | Blow Counts | Moisture   | Depth (ft) | Graphic Log | Soil Description and Remarks                                                                                 |
|------------|---------------------------|----------------------|-------------|-------------|------------|------------|-------------|--------------------------------------------------------------------------------------------------------------|
|            | 4                         | 0-1.5                | SS          | 2-3-3       | Moist      |            |             | Topsoil <0.1                                                                                                 |
|            |                           |                      |             |             |            |            |             | FILL: Brown Lean Clay - trace sand 0.7                                                                       |
|            |                           |                      |             |             |            |            |             | Brown Lean Clay with Sand (CL); glacial till - moderate plasticity; little fine to coarse sand, trace gravel |
|            | 4                         | 2-3.5                | SS          | 2-2-3       | Moist      |            |             |                                                                                                              |
| 5          | cuttings                  | 4-5.5                | SS          | 2-3-3       | Moist      | 5          |             |                                                                                                              |
|            |                           |                      |             |             |            |            |             |                                                                                                              |
|            | 4.5                       | 8.5-10               | SS          | 5-5-6       | Very Moist | 10         |             |                                                                                                              |
| 10         |                           |                      |             |             |            | 10         |             | 10.0                                                                                                         |
|            |                           |                      |             |             |            |            |             | Bottom of Boring @ 10'                                                                                       |



GEOTECHNICAL  
CONSULTANTS INC.

\*The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# APPENDIX B - AIA A201 General Conditions of the Contract for Construction

Salem Avenue Senior Community  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

PROJECT # 2025-21  
1/15/2025

PAGE INTENTIONALLY LEFT BLANK



# AIA® Document A201® – 2017

## General Conditions of the Contract for Construction

for the following PROJECT:

*(Name and location or address)*

**Gracious Manor Senior Housing**

1038 Salem Ave.  
Dayton, Ohio 45406

**THE OWNER:**

*(Name, legal status and address)*

**Grace Dayton Senior Housing Limited Partnership, an Ohio limited partnership**

2245 North Bank Drive  
Columbus, OH 43220

**THE ARCHITECT:**

*(Name, legal status and address)*

**pH7 Architects, Inc.**

448 W. Nationwide Blvd.  
Columbus, Ohio 43215

### TABLE OF ARTICLES

- |    |                                                  |
|----|--------------------------------------------------|
| 1  | GENERAL PROVISIONS                               |
| 2  | OWNER                                            |
| 3  | CONTRACTOR                                       |
| 4  | ARCHITECT                                        |
| 5  | SUBCONTRACTORS                                   |
| 6  | CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS |
| 7  | CHANGES IN THE WORK                              |
| 8  | TIME                                             |
| 9  | PAYMENTS AND COMPLETION                          |
| 10 | PROTECTION OF PERSONS AND PROPERTY               |
| 11 | INSURANCE AND BONDS                              |
| 12 | UNCOVERING AND CORRECTION OF WORK                |
| 13 | MISCELLANEOUS PROVISIONS                         |

### ADDITIONS AND DELETIONS:

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

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

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

Init.

/

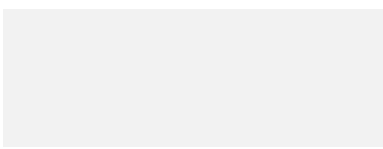
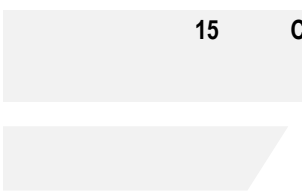
AIA Document A201 – 2017. Copyright © 1911, 1915, 1918, 1925, 1937, 1951, 1958, 1961, 1963, 1966, 1970, 1976, 1987, 1997, 2007 and 2017. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 11:53:00 ET on 04/21/2026 under Order No.2114462182 which expires on 12/31/2026, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail [docinfo@aiacontracts.com](mailto:docinfo@aiacontracts.com).

User Notes:

(910635896)

14      **TERMINATION OR SUSPENSION OF THE CONTRACT**

15      **CLAIMS AND DISPUTES**



**Init.**

/

**User Notes:**

(910635896)

## INDEX

(Topics and numbers in bold are Section headings.)

### **Acceptance of Nonconforming Work**

9.6.6, 9.9.3, **12.3**

Acceptance of Work

9.6.6, 9.8.2, 9.9.3, 9.10.1, 9.10.3, 12.3

### **Access to Work**

**3.16**, 6.2.1, 12.1

Accident Prevention

10

Acts and Omissions

3.2, 3.3.2, 3.12.8, 3.18, 4.2.3, 8.3.1, 9.5.1, 10.2.5,

10.2.8, 13.3.2, 14.1, 15.1.2, 15.2

Addenda

1.1.1

Additional Costs, Claims for

3.7.4, 3.7.5, 10.3.2, 15.1.5

### **Additional Inspections and Testing**

9.4.2, 9.8.3, 12.2.1, **13.4**

### **Additional Time, Claims for**

3.2.4, 3.7.4, 3.7.5, 3.10.2, 8.3.2, **15.1.6**

### **Administration of the Contract**

3.1.3, **4.2**, 9.4, 9.5

Advertisement or Invitation to Bid

1.1.1

Aesthetic Effect

4.2.13

### **Allowances**

**3.8**

### **Applications for Payment**

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5.1, 9.5.4, 9.6.3, 9.7, 9.10

Approvals

2.1.1, 2.3.1, 2.5, 3.1.3, 3.10.2, 3.12.8, 3.12.9,

3.12.10.1, 4.2.7, 9.3.2, 13.4.1

### **Arbitration**

8.3.1, 15.3.2, **15.4**

## **ARCHITECT**

**4**

**Architect**, Definition of

**4.1.1**

Architect, Extent of Authority

2.5, 3.12.7, 4.1.2, 4.2, 5.2, 6.3, 7.1.2, 7.3.4, 7.4, 9.2,  
9.3.1, 9.4, 9.5, 9.6.3, 9.8, 9.10.1, 9.10.3, 12.1, 12.2.1,  
13.4.1, 13.4.2, 14.2.2, 14.2.4, 15.1.4, 15.2.1

Architect, Limitations of Authority and Responsibility

2.1.1, 3.12.4, 3.12.8, 3.12.10, 4.1.2, 4.2.1, 4.2.2, 4.2.3,  
4.2.6, 4.2.7, 4.2.10, 4.2.12, 4.2.13, 5.2.1, 7.4, 9.4.2,  
9.5.4, 9.6.4, 15.1.4, 15.2

Architect's Additional Services and Expenses

2.5, 12.2.1, 13.4.2, 13.4.3, 14.2.4

Architect's Administration of the Contract

3.1.3, 3.7.4, 15.2, 9.4.1, 9.5

Architect's Approvals

2.5, 3.1.3, 3.5, 3.10.2, 4.2.7

Architect's Authority to Reject Work

3.5, 4.2.6, 12.1.2, 12.2.1

Architect's Copyright

1.1.7, 1.5

Architect's Decisions

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 6.3,  
7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4.1, 9.5, 9.8.4, 9.9.1,  
13.4.2, 15.2

Architect's Inspections

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 13.4

Architect's Instructions

3.2.4, 3.3.1, 4.2.6, 4.2.7, 13.4.2

Architect's Interpretations

4.2.11, 4.2.12

Architect's Project Representative

4.2.10

Architect's Relationship with Contractor

1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2,  
3.5, 3.7.4, 3.7.5, 3.9.2, 3.9.3, 3.10, 3.11, 3.12, 3.16,  
3.18, 4.1.2, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5,  
9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.3.2, 13.4, 15.2

Architect's Relationship with Subcontractors

1.1.2, 4.2.3, 4.2.4, 4.2.6, 9.6.3, 9.6.4, 11.3

Architect's Representations

9.4.2, 9.5.1, 9.10.1

Architect's Site Visits

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

Asbestos

10.3.1

Attorneys' Fees

3.18.1, 9.6.8, 9.10.2, 10.3.3

Award of Separate Contracts

6.1.1, 6.1.2

### **Award of Subcontracts and Other Contracts for Portions of the Work**

**5.2**

### **Basic Definitions**

**1.1**

Bidding Requirements

1.1.1

Binding Dispute Resolution

8.3.1, 9.7, 11.5, 13.1, 15.1.2, 15.1.3, 15.2.1, 15.2.5,  
15.2.6.1, 15.3.1, 15.3.2, 15.3.3, 15.4.1

Bonds, Lien

7.3.4.4, 9.6.8, 9.10.2, 9.10.3

### **Bonds, Performance, and Payment**

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**, 11.1.3, **11.5**

### **Building Information Models Use and Reliance**

**1.8**

Building Permit

3.7.1

### **Capitalization**

**1.3**

Certificate of Substantial Completion

9.8.3, 9.8.4, 9.8.5



## **Certificates for Payment**

4.2.1, 4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4, 15.1.4

Certificates of Inspection, Testing or Approval  
13.4.4

Certificates of Insurance  
9.10.2

## **Change Orders**

1.1.1, 3.4.2, 3.7.4, 3.8.2.3, 3.11, 3.12.8, 4.2.8, 5.2.3, 7.1.2, 7.1.3, **7.2**, 7.3.2, 7.3.7, 7.3.9, 7.3.10, 8.3.1, 9.3.1.1, 9.10.3, 10.3.2, 11.2, 11.5, 12.1.2

**Change Orders**, Definition of  
**7.2.1**

## **CHANGES IN THE WORK**

2.2.2, 3.11, 4.2.8, 7, 7.2.1, 7.3.1, 7.4, 8.3.1, 9.3.1.1, 11.5

**Claims**, Definition of  
**15.1.1**

Claims, Notice of  
1.6.2, 15.1.3

## **CLAIMS AND DISPUTES**

3.2.4, 6.1.1, 6.3, 7.3.9, 9.3.3, 9.10.4, 10.3.3, **15**, 15.4  
Claims and Timely Assertion of Claims  
15.4.1

## **Claims for Additional Cost**

3.2.4, 3.3.1, 3.7.4, 7.3.9, 9.5.2, 10.2.5, 10.3.2, **15.1.5**

## **Claims for Additional Time**

3.2.4, 3.3.1, 3.7.4, 6.1.1, 8.3.2, 9.5.2, 10.3.2, **15.1.6**

## **Concealed or Unknown Conditions, Claims for** **3.7.4**

Claims for Damages

3.2.4, 3.18, 8.3.3, 9.5.1, 9.6.7, 10.2.5, 10.3.3, 11.3, 11.3.2, 14.2.4, 15.1.7

Claims Subject to Arbitration  
15.4.1

## **Cleaning Up**

**3.15**, 6.3

Commencement of the Work, Conditions Relating to  
2.2.1, 3.2.2, 3.4.1, 3.7.1, 3.10.1, 3.12.6, 5.2.1, 5.2.3, 6.2.2, 8.1.2, 8.2.2, 8.3.1, 11.1, 11.2, **15.1.5**

**Commencement of the Work**, Definition of  
**8.1.2**

## **Communications**

3.9.1, **4.2.4**

Completion, Conditions Relating to

3.4.1, 3.11, 3.15, 4.2.2, 4.2.9, 8.2, 9.4.2, 9.8, 9.9.1, 9.10, 12.2, 14.1.2, 15.1.2

## **COMPLETION, PAYMENTS AND** **9**

Completion, Substantial

3.10.1, 4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1, 9.10.3, 12.2, 15.1.2

Compliance with Laws

2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14.1.1, 14.2.1.3, 15.2.8, 15.4.2, 15.4.3

Concealed or Unknown Conditions

3.7.4, 4.2.8, 8.3.1, 10.3

Conditions of the Contract

1.1.1, 6.1.1, 6.1.4

Consent, Written

3.4.2, 3.14.2, 4.1.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 13.2, 15.4.4.2

## **Consolidation or Joinder**

**15.4.4**

## **CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

1.1.4, **6**

**Construction Change Directive**, Definition of  
**7.3.1**

## **Construction Change Directives**

1.1.1, 3.4.2, 3.11, 3.12.8, 4.2.8, 7.1.1, 7.1.2, 7.1.3, **7.3**, 9.3.1.1

Construction Schedules, Contractor's

3.10, 3.11, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

**Contingent Assignment of Subcontracts**  
**5.4**, 14.2.2.2

**Continuing Contract Performance**  
**15.1.4**

**Contract**, Definition of  
**1.1.2**

## **CONTRACT, TERMINATION OR SUSPENSION OF THE**

5.4.1.1, 5.4.2, 11.5, **14**

Contract Administration

3.1.3, 4, 9.4, 9.5

Contract Award and Execution, Conditions Relating to

3.7.1, 3.10, 5.2, 6.1

Contract Documents, Copies Furnished and Use of  
1.5.2, 2.3.6, 5.3

**Contract Documents**, Definition of  
**1.1.1**

## **Contract Sum**

2.2.2, 2.2.4, 3.7.4, 3.7.5, 3.8, 3.10.2, 5.2.3, 7.3, 7.4, **9.1**, 9.2, 9.4.2, 9.5.1.4, 9.6.7, 9.7, 10.3.2, 11.5, 12.1.2, 12.3, 14.2.4, 14.3.2, 15.1.4.2, **15.1.5**, **15.2.5**

**Contract Sum**, Definition of  
**9.1**

Contract Time

1.1.4, 2.2.1, 2.2.2, 3.7.4, 3.7.5, 3.10.2, 5.2.3, 6.1.5, 7.2.1.3, 7.3.1, 7.3.5, 7.3.6, 7, 7.3.10, 7.4, 8.1.1, 8.2.1, 8.2.3, 8.3.1, 9.5.1, 9.7, 10.3.2, 12.1.1, 12.1.2, 14.3.2, 15.1.4.2, 15.1.6.1, 15.2.5

**Contract Time**, Definition of  
8.1.1

## **CONTRACTOR**

**3**

Contractor, Definition of

**3.1**, **6.1.2**

**Contractor's Construction and Submittal Schedules**  
**3.10**, 3.12.1, 3.12.2, 4.2.3, 6.1.3, 15.1.6.2

Contractor's Employees  
2.2.4, 3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3, 11.3, 14.1, 14.2.1.1

**Contractor's Liability Insurance**  
**11.1**  
Contractor's Relationship with Separate Contractors and Owner's Forces  
3.12.5, 3.14.2, 4.2.4, 6, 11.3, 12.2.4  
Contractor's Relationship with Subcontractors  
1.2.2, 2.2.4, 3.3.2, 3.18.1, 3.18.2, 4.2.4, 5, 9.6.2, 9.6.7, 9.10.2, 11.2, 11.3, 11.4  
Contractor's Relationship with the Architect  
1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2, 3.5.1, 3.7.4, 3.10, 3.11, 3.12, 3.16, 3.18, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.4, 15.1.3, 15.2.1  
Contractor's Representations  
3.2.1, 3.2.2, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.8.2  
Contractor's Responsibility for Those Performing the Work  
3.3.2, 3.18, 5.3, 6.1.3, 6.2, 9.5.1, 10.2.8  
Contractor's Review of Contract Documents  
3.2  
Contractor's Right to Stop the Work  
2.2.2, 9.7  
Contractor's Right to Terminate the Contract  
14.1  
Contractor's Submittals  
3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 9.2, 9.3, 9.8.2, 9.8.3, 9.9.1, 9.10.2, 9.10.3  
Contractor's Superintendent  
3.9, 10.2.6  
Contractor's Supervision and Construction Procedures  
1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 7.3.6, 8.2, 10, 12, 14, 15.1.4  
Coordination and Correlation  
1.2, 3.2.1, 3.3.1, 3.10, 3.12.6, 6.1.3, 6.2.1  
Copies Furnished of Drawings and Specifications  
1.5, 2.3.6, 3.11  
Copyrights  
1.5, **3.17**  
Correction of Work  
2.5, 3.7.3, 9.4.2, 9.8.2, 9.8.3, 9.9.1, 12.1.2, **12.2**, 12.3, 15.1.3.1, 15.1.3.2, 15.2.1  
**Correlation and Intent of the Contract Documents**  
**1.2**  
**Cost**, Definition of  
**7.3.4**  
Costs  
2.5, 3.2.4, 3.7.3, 3.8.2, 3.15.2, 5.4.2, 6.1.1, 6.2.3, 7.3.3.3, 7.3.4, 7.3.8, 7.3.9, 9.10.2, 10.3.2, 10.3.6, 11.2, 12.1.2, 12.2.1, 12.2.4, 13.4, 14  
**Cutting and Patching**  
**3.14**, 6.2.5

Damage to Construction of Owner or Separate Contractors  
3.14.2, 6.2.4, 10.2.1.2, 10.2.5, 10.4, 12.2.4  
Damage to the Work  
3.14.2, 9.9.1, 10.2.1.2, 10.2.5, 10.4, 12.2.4  
Damages, Claims for  
3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.3.2, 11.3, 14.2.4, 15.1.7  
Damages for Delay  
6.2.3, 8.3.3, 9.5.1.6, 9.7, 10.3.2, 14.3.2  
**Date of Commencement of the Work**, Definition of  
**8.1.2**  
**Date of Substantial Completion**, Definition of  
**8.1.3**  
**Day**, Definition of  
**8.1.4**  
Decisions of the Architect  
3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 6.3, 7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4, 9.5.1, 9.8.4, 9.9.1, 13.4.2, 14.2.2, 14.2.4, 15.1, 15.2  
**Decisions to Withhold Certification**  
9.4.1, **9.5**, 9.7, 14.1.1.3  
Defective or Nonconforming Work, Acceptance, Rejection and Correction of  
2.5, 3.5, 4.2.6, 6.2.3, 9.5.1, 9.5.3, 9.6.6, 9.8.2, 9.9.3, 9.10.4, 12.2.1  
Definitions  
1.1, 2.1.1, 3.1.1, 3.5, 3.12.1, 3.12.2, 3.12.3, 4.1.1, 5.1, 6.1.2, 7.2.1, 7.3.1, 8.1, 9.1, 9.8.1, 15.1.1  
**Delays and Extensions of Time**  
**3.2**, **3.7.4**, 5.2.3, 7.2.1, 7.3.1, **7.4**, **8.3**, 9.5.1, **9.7**, 10.3.2, **10.4**, 14.3.2, **15.1.6**, 15.2.5  
**Digital Data Use and Transmission**  
**1.7**  
Disputes  
6.3, 7.3.9, 15.1, 15.2  
**Documents and Samples at the Site**  
**3.11**  
**Drawings**, Definition of  
**1.1.5**  
Drawings and Specifications, Use and Ownership of  
3.11  
Effective Date of Insurance  
8.2.2  
**Emergencies**  
**10.4**, 14.1.1.2, **15.1.5**  
Employees, Contractor's  
3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3.3, 11.3, 14.1, 14.2.1.1  
Equipment, Labor, or Materials  
1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2  
Execution and Progress of the Work  
1.1.3, 1.2.1, 1.2.2, 2.3.4, 2.3.6, 3.1, 3.3.1, 3.4.1, 3.7.1, 3.10.1, 3.12, 3.14, 4.2, 6.2.2, 7.1.3, 7.3.6, 8.2, 9.5.1, 9.9.1, 10.2, 10.3, 12.1, 12.2, 14.2, 14.3.1, 15.1.4

Extensions of Time  
3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3, 7.4, 9.5.1, 9.7, 10.3.2, 10.4, 14.3, 15.1.6, **15.2.5**

**Failure of Payment**  
9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Faulty Work  
(See Defective or Nonconforming Work)

**Final Completion and Final Payment**  
4.2.1, 4.2.9, 9.8.2, **9.10**, 12.3, 14.2.4, 14.4.3

Financial Arrangements, Owner's  
2.2.1, 13.2.2, 14.1.1.4

**GENERAL PROVISIONS**

**1**

**Governing Law**

**13.1**  
Guarantees (See Warranty)

**Hazardous Materials and Substances**  
10.2.4, **10.3**

Identification of Subcontractors and Suppliers  
5.2.1

**Indemnification**  
3.17, **3.18**, 9.6.8, 9.10.2, 10.3.3, 11.3

**Information and Services Required of the Owner**  
2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10.1, 6.1.3, 6.1.4, 6.2.5, 9.6.1, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

**Initial Decision**  
**15.2**

**Initial Decision Maker, Definition of**  
1.1.8  
Initial Decision Maker, Decisions  
14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5  
Initial Decision Maker, Extent of Authority  
14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

**Injury or Damage to Person or Property**  
**10.2.8**, 10.4

Inspections  
3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 12.2.1, 13.4

Instructions to Bidders  
1.1.1

Instructions to the Contractor  
3.2.4, 3.3.1, 3.8.1, 5.2.1, 7, 8.2.2, 12, 13.4.2

**Instruments of Service, Definition of**  
**1.1.7**

Insurance  
6.1.1, 7.3.4, 8.2.2, 9.3.2, 9.8.4, 9.9.1, 9.10.2, 10.2.5, **11**

Insurance, Notice of Cancellation or Expiration  
11.1.4, 11.2.3

**Insurance, Contractor's Liability**  
**11.1**  
Insurance, Effective Date of  
8.2.2, 14.4.2

**Insurance, Owner's Liability**  
**11.2**

**Insurance, Property**  
**10.2.5**, 11.2, 11.4, 11.5

Insurance, Stored Materials  
9.3.2

**INSURANCE AND BONDS**  
**11**

Insurance Companies, Consent to Partial Occupancy  
9.9.1

Insured loss, Adjustment and Settlement of  
11.5

Intent of the Contract Documents  
1.2.1, 4.2.7, 4.2.12, 4.2.13

**Interest**  
**13.5**

**Interpretation**  
1.1.8, 1.2.3, **1.4**, 4.1.1, 5.1, 6.1.2, 15.1.1  
Interpretations, Written  
4.2.11, 4.2.12  
Judgment on Final Award  
15.4.2

**Labor and Materials, Equipment**  
1.1.3, 1.1.6, **3.4**, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2

Labor Disputes  
8.3.1

Laws and Regulations  
1.5, 2.3.2, 3.2.3, 3.2.4, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

Liens  
2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

Limitations, Statutes of  
12.2.5, 15.1.2, 15.4.1.1

Limitations of Liability  
3.2.2, 3.5, 3.12.10, 3.12.10.1, 3.17, 3.18.1, 4.2.6, 4.2.7, 6.2.2, 9.4.2, 9.6.4, 9.6.7, 9.6.8, 10.2.5, 10.3.3, 11.3, 12.2.5, 13.3.1

Limitations of Time  
2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2.7, 5.2, 5.3, 5.4.1, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3, 9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15, 15.1.2, 15.1.3, 15.1.5

**Materials, Hazardous**  
**10.2.4**, **10.3**

Materials, Labor, Equipment and  
1.1.3, 1.1.6, 3.4.1, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1.2, 10.2.4, 14.2.1.1, 14.2.1.2

Means, Methods, Techniques, Sequences and Procedures of Construction  
3.3.1, 3.12.10, 4.2.2, 4.2.7, 9.4.2

Mechanic's Lien  
2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

**Mediation**  
8.3.1, 15.1.3.2, 15.2.1, 15.2.5, 15.2.6, **15.3**, 15.4.1, 15.4.1.1

**Minor Changes in the Work**  
1.1.1, 3.4.2, 3.12.8, 4.2.8, 7.1, **7.4**

## MISCELLANEOUS PROVISIONS

### 13

#### Modifications, Definition of

##### 1.1.1

#### Modifications to the Contract

1.1.1, 1.1.2, 2.5, 3.11, 4.1.2, 4.2.1, 5.2.3, 7, 8.3.1, 9.7, 10.3.2

#### Mutual Responsibility

### 6.2

#### Nonconforming Work, Acceptance of

9.6.6, 9.9.3, **12.3**

Nonconforming Work, Rejection and Correction of  
2.4, 2.5, 3.5, 4.2.6, 6.2.4, 9.5.1, 9.8.2, 9.9.3, 9.10.4, 12.2

#### Notice

**1.6**, 1.6.1, 1.6.2, 2.1.2, 2.2.2., 2.2.3, 2.2.4, 2.5, 3.2.4, 3.3.1, 3.7.4, 3.7.5, 3.9.2, 3.12.9, 3.12.10, 5.2.1, 7.4, 8.2.2, 9.6.8, 9.7, 9.10.1, 10.2.8, 10.3.2, 11.5, 12.2.2.1, 13.4.1, 13.4.2, 14.1, 14.2.2, 14.4.2, 15.1.3, 15.1.5, 15.1.6, 15.4.1

Notice of Cancellation or Expiration of Insurance

11.1.4, 11.2.3

#### Notice of Claims

1.6.2, 2.1.2, 3.7.4, 9.6.8, 10.2.8, **15.1.3**, 15.1.5, 15.1.6, 15.2.8, 15.3.2, 15.4.1

Notice of Testing and Inspections

13.4.1, 13.4.2

Observations, Contractor's

3.2, 3.7.4

Occupancy

2.3.1, 9.6.6, 9.8

Orders, Written

1.1.1, 2.4, 3.9.2, 7, 8.2.2, 11.5, 12.1, 12.2.2.1, 13.4.2, 14.3.1

## OWNER

### 2

#### Owner, Definition of

##### 2.1.1

#### Owner, Evidence of Financial Arrangements

**2.2**, 13.2.2, 14.1.1.4

#### Owner, Information and Services Required of the

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10, 6.1.3, 6.1.4, 6.2.5, 9.3.2, 9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

Owner's Authority

1.5, 2.1.1, 2.3.32.4, 2.5, 3.4.2, 3.8.1, 3.12.10, 3.14.2, 4.1.2, 4.2.4, 4.2.9, 5.2.1, 5.2.4, 5.4.1, 6.1, 6.3, 7.2.1, 7.3.1, 8.2.2, 8.3.1, 9.3.2, 9.5.1, 9.6.4, 9.9.1, 9.10.2, 10.3.2, 11.4, 11.5, 12.2.2, 12.3, 13.2.2, 14.3, 14.4, 15.2.7

#### Owner's Insurance

### 11.2

Owner's Relationship with Subcontractors

1.1.2, 5.2, 5.3, 5.4, 9.6.4, 9.10.2, 14.2.2

#### Owner's Right to Carry Out the Work

**2.5**, 14.2.2

#### Owner's Right to Clean Up

### 6.3

#### Owner's Right to Perform Construction and to Award Separate Contracts

### 6.1

#### Owner's Right to Stop the Work

### 2.4

Owner's Right to Suspend the Work

14.3

Owner's Right to Terminate the Contract

14.2, 14.4

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

1.1.1, 1.1.6, 1.1.7, **1.5**, 2.3.6, 3.2.2, 3.11, 3.17, 4.2.12, 5.3

#### Partial Occupancy or Use

9.6.6, **9.9**

#### Patching, Cutting and

**3.14**, 6.2.5

Patents

3.17

#### Payment, Applications for

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5, 9.6.3, 9.7, 9.8.5, 9.10.1, 14.2.3, 14.2.4, 14.4.3

#### Payment, Certificates for

4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4

#### Payment, Failure of

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Payment, Final

4.2.1, 4.2.9, **9.10**, 12.3, 14.2.4, 14.4.3

#### Payment Bond, Performance Bond and

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

#### Payments, Progress

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

## PAYMENTS AND COMPLETION

### 9

Payments to Subcontractors

5.4.2, 9.5.1.3, 9.6.2, 9.6.3, 9.6.4, 9.6.7, 14.2.1.2

PCB

10.3.1

#### Performance Bond and Payment Bond

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

#### Permits, Fees, Notices and Compliance with Laws

2.3.1, **3.7**, 3.13, 7.3.4.4, 10.2.2

## PERSONS AND PROPERTY, PROTECTION OF

### 10

Polychlorinated Biphenyl

10.3.1

#### Product Data, Definition of

### 3.12.2

#### Product Data and Samples, Shop Drawings

3.11, **3.12**, 4.2.7

#### Progress and Completion

4.2.2, **8.2**, 9.8, 9.9.1, 14.1.4, 15.1.4

#### Progress Payments

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

## **Project, Definition of**

### **1.1.4**

Project Representatives

4.2.10

## **Property Insurance**

10.2.5, 11.2

## **Proposal Requirements**

1.1.1

## **PROTECTION OF PERSONS AND PROPERTY**

### **10**

Regulations and Laws

1.5, 2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

Rejection of Work

4.2.6, 12.2.1

Releases and Waivers of Liens

9.3.1, 9.10.2

Representations

3.2.1, 3.5, 3.12.6, 8.2.1, 9.3.3, 9.4.2, 9.5.1, 9.10.1

Representatives

2.1.1, 3.1.1, 3.9, 4.1.1, 4.2.10, 13.2.1

Responsibility for Those Performing the Work

3.3.2, 3.18, 4.2.2, 4.2.3, 5.3, 6.1.3, 6.2, 6.3, 9.5.1, 10

Retainage

9.3.1, 9.6.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3

## **Review of Contract Documents and Field**

### **Conditions by Contractor**

3.2, 3.12.7, 6.1.3

Review of Contractor's Submittals by Owner and Architect

3.10.1, 3.10.2, 3.11, 3.12, 4.2, 5.2, 6.1.3, 9.2, 9.8.2

Review of Shop Drawings, Product Data and Samples by Contractor

3.12

## **Rights and Remedies**

1.1.2, 2.4, 2.5, 3.5, 3.7.4, 3.15.2, 4.2.6, 5.3, 5.4, 6.1, 6.3, 7.3.1, 8.3, 9.5.1, 9.7, 10.2.5, 10.3, 12.2.1, 12.2.2, 12.2.4, 13.3, 14, 15.4

## **Royalties, Patents and Copyrights**

3.17

Rules and Notices for Arbitration

15.4.1

## **Safety of Persons and Property**

10.2, 10.4

## **Safety Precautions and Programs**

3.3.1, 4.2.2, 4.2.7, 5.3, 10.1, 10.2, 10.4

## **Samples, Definition of**

3.12.3

## **Samples, Shop Drawings, Product Data and**

3.11, 3.12, 4.2.7

## **Samples at the Site, Documents and**

3.11

## **Schedule of Values**

9.2, 9.3.1

Schedules, Construction

3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

## **Separate Contracts and Contractors**

1.1.4, 3.12.5, 3.14.2, 4.2.4, 4.2.7, 6, 8.3.1, 12.1.2

## **Separate Contractors, Definition of**

6.1.1

## **Shop Drawings, Definition of**

3.12.1

## **Shop Drawings, Product Data and Samples**

3.11, 3.12, 4.2.7

## **Site, Use of**

3.13, 6.1.1, 6.2.1

Site Inspections

3.2.2, 3.3.3, 3.7.1, 3.7.4, 4.2, 9.9.2, 9.4.2, 9.10.1, 13.4

Site Visits, Architect's

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

Special Inspections and Testing

4.2.6, 12.2.1, 13.4

## **Specifications, Definition of**

1.1.6

## **Specifications**

1.1.1, 1.1.6, 1.2.2, 1.5, 3.12.10, 3.17, 4.2.14

Statute of Limitations

15.1.2, 15.4.1.1

Stopping the Work

2.2.2, 2.4, 9.7, 10.3, 14.1

Stored Materials

6.2.1, 9.3.2, 10.2.1.2, 10.2.4

## **Subcontractor, Definition of**

5.1.1

## **SUBCONTRACTORS**

### **5**

Subcontractors, Work by

1.2.2, 3.3.2, 3.12.1, 3.18, 4.2.3, 5.2.3, 5.3, 5.4, 9.3.1.2, 9.6.7

## **Subcontractual Relations**

5.3, 5.4, 9.3.1.2, 9.6, 9.10, 10.2.1, 14.1, 14.2.1

Submittals

3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 7.3.4, 9.2, 9.3, 9.8, 9.9.1, 9.10.2, 9.10.3

Submittal Schedule

3.10.2, 3.12.5, 4.2.7

## **Subrogation, Waivers of**

6.1.1, 11.3

## **Substances, Hazardous**

10.3

## **Substantial Completion**

4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1, 9.10.3, 12.2, 15.1.2

## **Substantial Completion, Definition of**

9.8.1

Substitution of Subcontractors

5.2.3, 5.2.4

Substitution of Architect

2.3.3

Substitutions of Materials

3.4.2, 3.5, 7.3.8

## **Sub-subcontractor, Definition of**

5.1.2

Subsurface Conditions

3.7.4

**Successors and Assigns**

**13.2**

**Superintendent**

3.9, 10.2.6

**Supervision and Construction Procedures**

1.2.2, **3.3**, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 8.2, 8.3.1, 9.4.2, 10, 12, 14, 15.1.4

Suppliers

1.5, 3.12.1, 4.2.4, 4.2.6, 5.2.1, 9.3, 9.4.2, 9.5.4, 9.6, 9.10.5, 14.2.1

Surety

5.4.1.2, 9.6.8, 9.8.5, 9.10.2, 9.10.3, 11.1.2, 14.2.2, 15.2.7

Surety, Consent of

9.8.5, 9.10.2, 9.10.3

Surveys

1.1.7, 2.3.4

**Suspension by the Owner for Convenience**

**14.3**

Suspension of the Work

3.7.5, 5.4.2, 14.3

Suspension or Termination of the Contract

5.4.1.1, 14

**Taxes**

3.6, 3.8.2.1, 7.3.4.4

**Termination by the Contractor**

14.1, 15.1.7

**Termination by the Owner for Cause**

5.4.1.1, **14.2**, 15.1.7

**Termination by the Owner for Convenience**

**14.4**

Termination of the Architect

2.3.3

Termination of the Contractor Employment

14.2.2

**TERMINATION OR SUSPENSION OF THE CONTRACT**

**14**

**Tests and Inspections**

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 10.3.2, 12.2.1, **13.4**

**TIME**

**8**

**Time, Delays and Extensions of**

3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, **8.3**, 9.5.1, 9.7, 10.3.2, 10.4, 14.3.2, 15.1.6, 15.2.5

Time Limits

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2, 5.2, 5.3, 5.4, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3, 9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15.1.2, 15.1.3, 15.4

**Time Limits on Claims**

3.7.4, 10.2.8, 15.1.2, 15.1.3

Title to Work

9.3.2, 9.3.3

**UNCOVERING AND CORRECTION OF WORK**

**12**

**Uncovering of Work**

**12.1**

Unforeseen Conditions, Concealed or Unknown

3.7.4, 8.3.1, 10.3

Unit Prices

7.3.3.2, 9.1.2

Use of Documents

1.1.1, 1.5, 2.3.6, 3.12.6, 5.3

**Use of Site**

**3.13**, 6.1.1, 6.2.1

**Values, Schedule of**

**9.2**, 9.3.1

Waiver of Claims by the Architect

13.3.2

Waiver of Claims by the Contractor

9.10.5, 13.3.2, **15.1.7**

Waiver of Claims by the Owner

9.9.3, 9.10.3, 9.10.4, 12.2.2.1, 13.3.2, 14.2.4, **15.1.7**

Waiver of Consequential Damages

14.2.4, 15.1.7

Waiver of Liens

9.3, 9.10.2, 9.10.4

**Waivers of Subrogation**

6.1.1, **11.3**

**Warranty**

**3.5**, 4.2.9, 9.3.3, 9.8.4, 9.9.1, 9.10.2, 9.10.4, 12.2.2, 15.1.2

Weather Delays

8.3, 15.1.6.2

**Work, Definition of**

**1.1.3**

Written Consent

1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.10.3, 13.2, 13.3.2, 15.4.4.2

Written Interpretations

4.2.11, 4.2.12

Written Orders

1.1.1, 2.4, 3.9, 7, 8.2.2, 12.1, 12.2, 13.4.2, 14.3.1

## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 Basic Definitions

#### § 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the "Agreement") and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, the Contractor's Assumptions & Qualifications included as **Attachment E** to the A201, 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 or Owner. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

#### § 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor (except as set forth in Section 5.3 and Section 5.4), (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### § 1.1.3 The Work

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

#### § 1.1.4 The Project

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

#### § 1.1.5 The Drawings

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

#### § 1.1.6 The Specifications

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

#### § 1.1.7 Instruments of Service

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

#### § 1.1.8 Initial Decision Maker

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

### § 1.2 Correlation and Intent of the Contract Documents

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

reasonably inferable from them as being necessary to produce the indicated results. If inconsistencies exist within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, or ordinances that are not the responsibility of the Architect or Engineers as the designers, the Contractor shall, in accordance with the Architect's interpretation, either (i) provide the better quality or greater quantity of Work, or (ii) comply with the more stringent requirement.

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

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

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

### **§ 1.3 Capitalization**

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

### **§ 1.4 Interpretation**

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

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

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

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

### **§ 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 properly addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

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

### **§ 1.7 Digital Data Use and Transmission**

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



### **§ 1.8 Building Information Models Use and Reliance**

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

## **ARTICLE 2 OWNER**

### **§ 2.1 General**

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

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

### **§ 2.2 Evidence of the Owner's Financial Arrangements**

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

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

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

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

### **§ 2.3 Information and Services Required of the Owner**

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

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

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

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one (1) copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

#### § 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. The right of the Owner to stop the Work as provided in this Section 2.4 shall be in addition to, and not in limitation of, the Owner's rights under Sections 12.2 and 14.2. If the Owner's exercise of its rights pursuant to this Section 2.4 are determined by a final judgment of a court of competent jurisdiction or if elected, by binding dispute resolution, to have been unjustified, such exercise shall be deemed to have been a suspension of the Work pursuant to Section 14.3.

#### § 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period (or a one day period in the case of a threat to the safety of persons or property, as determined by the Owner) after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. In that event, the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services, as well as charges of engineers, attorneys, and other professionals made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15. The Contractor shall allow the Owner and its agents such access to the site as may be necessary to enable the Owner to exercise its rights and remedies under this Section 2.5.

### ARTICLE 3 CONTRACTOR

#### § 3.1 General

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

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

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

### § 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. Prior to the execution of the Agreement, the Contractor and each Subcontractor and Sub-subcontractor have evaluated and satisfied themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation, (i) the location, condition, layout, and nature of the Project site and surrounding areas, (ii) generally prevailing climatic conditions, (iii) anticipated labor supply and costs, (iv) availability and cost of materials, tools, and equipment, and (v) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site, except as set forth in Section 10.3. Except as set forth in Section 10.3, the Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or the Contract Time in connection with any failure by the Contractor or any Subcontractor or Sub-subcontractor to have complied with the requirements of this Section 3.2.1.

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

§ 3.2.2.1 In all cases of interconnection of its Work with existing or other work, it shall verify at the Project site all dimensions relating to such existing or other work..

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

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

### § 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work consistent with the standard of care exercised by other professional contractors in the Contractor's trade in the region where the Project is located, and 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, Sub-subcontractors, 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 or Sub-subcontractors.

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

**§ 3.3.4** The Contractor shall use reasonable care in locating, before performing any Work, all above and below-ground utilities on or about the Project, and shall use reasonable care to avoid damaging any such utilities, including, but not limited to, service and transmission facilities for electricity, communication, water, sewer, and gas.

**§ 3.3.5** No signs or advertising of any kind will be permitted on or about the Site, except those appearing on trucks and trailers, without prior approval from the Owner.

**§ 3.3.6 Smoking and Tobacco Products.** All of the Owner's buildings are smoke free. Smoking and other tobacco products are not be permitted in any indoor, outdoor, or parking areas at the Project site throughout the Project duration. The Contractor shall enforce these restrictions on any individual employed by the Contractor or a Subcontractor or a Sub-Subcontractor.

**§ 3.3.7 Firearms and Weapons Prohibited**

**§ 3.3.7.1** No person, including any person licensed to carry a concealed weapon, shall bring or possess a firearm or any other weapon on the Project site or at any Project-related function or activity.

- .1** This prohibition does not apply to firearms or weapons during a hunting season if (1) the firearm or weapon may legally be used for hunting during a then-current hunting season in the state in which the Project is located; (2) the firearm or weapon remains locked in a vehicle at all times, (3) the ammunition or projectile (e.g., bullet or arrow), if any, for the firearm or weapon remains locked in a separate compartment of the vehicle at all times, (4) the vehicle is not used in the performance of the Work; and (5) the person responsible for the firearm or weapon gives the Owner advance notice of the presence of the firearm or weapon.
- .2** To monitor compliance with this Section 3.3.7, the Owner may conduct reasonable, unannounced searches of the site and all people and personal property entering, on, or leaving the site or a Project-related function or activity. Refusal to allow an inspection is a violation of this Section 3.3.7. A person who refuses to allow an inspection will not be detained or forced to submit to an inspection.
- .3** Any employee of the Contractor, any Subcontractor, or Sub-subcontractor, who violates this Section 3.3.7 shall be subject to immediate and permanent removal from the premises and may be subject to prosecution for criminal trespass.
- .4** The Contractor is primarily responsible for the enforcement of this Section 3.3.7. The Owner may terminate the Contract under Section 14.2 if the Contractor, any Subcontractor, or Sub-subcontractor, or any of their respective employees, (1) repeatedly violates this Section 3.3.7, or (2) fails to cure any violation of this Section 3.3.7 within three hours after being notified of the violation.
- .5** The term "firearm" means a weapon, a pistol, or a rifle, whether loaded or unloaded, capable of firing a projectile and using an explosive as a propellant; but does not include powder-actuated tools manufactured to fasten building materials. The term "weapon" means an instrument of attack or defense.

- .6 The Contractor shall include this Section 3.3.7 in every contract it enters into in furtherance of the Work, and shall communicate its provisions to every person employed in furtherance of the Work.

#### **§ 3.4 Labor and Materials**

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

**§ 3.4.1.1** Unless otherwise provided in the Contract Documents, the Contractor shall comply with all MBE/WBE/DBE, Section 3 and BABA requirements set forth in the Contract Documents. See **Attachment C** to the A201 for requirements.

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

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

**§ 3.4.3.1** If the Owner or the Architect deems any employee of the Contractor, Subcontractor, or Sub-subcontractor unsatisfactory, the Contractor shall transfer or require its Subcontractor or Sub-subcontractor to transfer such employee from the Project immediately.

#### **§ 3.5 Warranty**

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

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

#### **§ 3.6 Taxes**

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted and applicable to the Work when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. The Contractor shall withhold and pay, and require its Subcontractors and Sub-subcontractors to withhold and pay, all federal, state, and local taxes due or payable with respect to wages, salaries, commissions, and any other income subject to provisions of federal, state, and local law.

#### **§ 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, lawful orders, and all other requirements of public authorities applicable to performance of the Work. All notices, consents and approvals given by the Contractor under the Contract Documents shall be in writing unless otherwise expressly permitted.

§ 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. The failure to give the notices as required in this Section 3.7.4 shall constitute an irrevocable waiver of any related claim.

§ 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 and must be made by the Contractor within ten days after such suspension ends.

#### § 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

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

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

#### § 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site on a full-time basis 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. During the period between the date of commencement of the Work and the date of Substantial Completion, the Contractor's superintendent shall not be involved with any work other than the Project.

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

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

#### § 3.10 Contractor's Construction and Submittal Schedules

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

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Owner and Architect's approval. The 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. Attached hereto as **Attachment F** to the A201.

§ 3.10.4 On a monthly basis, the Contractor shall provide a Monthly Project Report to the Owner and Architect. The Monthly Project Report shall include recommendations for adjusting the construction schedule to meet milestone dates and the Substantial Completion date, if needed, and other content at the discretion of the Owner.

§ 3.10.5 In no event shall the Owner or Architect's review or approval of any schedule (1) impose on the Owner or Architect any responsibility for the progress, scheduling, sequencing, or timing of the Work, or (2) relieve the Contractor from full responsibility therefor as the Contractor is solely responsible for the preparation, accuracy, revision, and maintenance of the Construction Schedule.

#### § 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 at all reasonable times, and delivered to the Architect for submittal to the Owner upon the earlier of the termination of the Contract or completion of the Work as a record of the Work as constructed.

#### § 3.12 Shop Drawings, Product Data and Samples

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in

the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

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

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

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

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

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

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

**§ 3.12.10.1** If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify appropriate performance and design criteria that such services must satisfy. The Contractor shall be entitled absent its own negligence, 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, and who shall satisfy the Owner's requirements regarding qualifications and insurance.. 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 appropriate 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 Protection of construction materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the Work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions.

§ 3.13.3 The Contractor and any entity for whom the Contractor is responsible shall not erect any sign on the Project site or in the building in which the Work is being performed (the "Building") without the prior written consent of the Owner, which may be withheld in the sole discretion of the Owner.

§ 3.13.4 Without limitation of any other provision of the Contract Documents, the Contractor shall use best efforts to minimize any interference with the occupancy or beneficial use of (i) any areas and buildings adjacent to the site of the Work and (ii) the Building in the event of partial occupancy, as more specifically described in Section 9.9. Without prior approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project site, including, without limitation, lavatories, toilets, entrances, and parking areas other than those designated by the Owner.

.1 Without limitation of any other provision of the Contract Documents, the Contractor shall use its best efforts to comply with all rules and regulations, as amended from time to time, promulgated by the Owner in connection with the use and occupancy of the Project site and the Building. The Contractor shall immediately notify the Owner in writing if during the performance of the Work, the Contractor finds compliance of any portion of such rules and regulations to be impracticable, setting forth the problems of such compliance and suggesting alternatives through which the same results intended by such portions of the rules and regulations can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives, or require compliance with the existing requirements of the rules and regulations.

.2 The Contractor also shall comply with all insurance requirements and collective bargaining agreements applicable to the use and occupancy of the Project site and the Building.

### § 3.14 Cutting and Patching

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

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

### § 3.15 Cleaning Up

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

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

#### § 3.16 Access to Work

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

#### § 3.17 Royalties, Patents and Copyrights

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

#### § 3.18 Indemnification

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

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, a Sub-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, Subcontractor under workers' compensation acts, disability benefit acts, other employee benefit acts, or any insurance policy provided or required in connection with the Project. The Contractor hereby specifically and expressly waives any immunity afforded it by virtue of any applicable state constitutional or statutory protections, but only to the extent required to honor the indemnity obligations set forth in this Section 3.18.

§ 3.18.3 The Contractor's indemnity obligations under this Section 3.18 shall also specifically include, without limitation, all fines, penalties, damages, liability, costs, expenses (including, without limitation, reasonable attorneys' fees), and punitive damages (if any) arising out of, or in connection with, any (i) violation of or failure to comply with any law, statute, ordinance, rule, regulation, code, or requirement of a public authority that bears upon the performance of the Work by the Contractor, a Subcontractor, a Sub-subcontractor, or any person or entity for whom either is responsible, (ii) means, methods, procedures, techniques, or sequences of execution or performance of the Work, or (iii) failure to secure and pay for permits, fees, approvals, licenses, and inspections as required under the Contract Documents, or any violation of any permit or other approval of a public authority applicable to the Work, by the Contractor, a Subcontractor, a Sub-subcontractor, or any person or entity for whom either is responsible.

§ 3.18.4 The Contractor shall indemnify and hold harmless all of the parties indemnified under this Section 3.18 from and against any costs and expenses (including reasonable attorneys' fees) they incur in enforcing any of the Contractor's defense, indemnity, and hold-harmless obligations under this Contract.

### ARTICLE 4 ARCHITECT

#### § 4.1 General

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

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

#### § 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment (or for a longer period of time if so provided in the Owner's agreement with the Architect). 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, Sub-subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

#### § 4.2.4 Communications

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

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

§ 4.2.6 The Owner and Architect have authority to reject Work that does not conform to the Contract Documents. Whenever the Owner or Architect considers it necessary or advisable, the Owner or Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Owner or Architect to the Contractor, Subcontractors, Sub-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 Owner and Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of

safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

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

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

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

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

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

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

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

§ 4.3.2.15 The Architect's review is not a prerequisite for Owner's review and acceptance of Work. The reviews do not indicate the Owner's view, but provide the Architect with information for coordination of its responsibilities as outlined in its contract with the Owner.

## **ARTICLE 5 SUBCONTRACTORS**

### **§ 5.1 Definitions**

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site or to supply materials, equipment, or services in furtherance 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, regardless of tier, who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site or to supply materials, equipment, or services in furtherance 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, in writing, 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 Owner or 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 Owner or Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

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

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

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

### **§ 5.3 Subcontractual Relations**

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

### **§ 5.4 Contingent Assignment of Subcontracts**

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

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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

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

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

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

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

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

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

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

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

### **§ 6.2 Mutual Responsibility**

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

**§ 6.2.2** If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Owner and 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 promptly 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 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. Except as provided in Sections 15.1.5 and 15.1.6, the Contractor shall not be entitled to an increase in the Contract Sum or to an extension of the Contract Time, or both, on account of any change in the Work that is not the subject of a Change Order or Construction Change Directive prior to the commencement of such Work.

§ 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 Owner or Architect.

§ 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. Except as permitted in Section 7.3, a change in the Contract Sum or the Contract Time shall be accomplished only by Change Order.

### § 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, approved by HUD or other Project lender, 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 Upon Contractor's request, the Owner shall provide proof of change order approval by HUD or other Project lender.

### § 7.3 Construction Change Directives

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

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

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

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

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

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;

- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

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

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

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

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

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

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

#### § 7.4 Minor Changes in the Work

The Owner or 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 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. Any period of time referred to in the Contract Documents by a number of days is to be computed to exclude



the first and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday, or a day made a legal holiday by the law of the applicable jurisdiction, such day is omitted from the computation.

§ 8.1.5 Except as excluded in Section 8.1.4, the Contract Time includes Saturdays, Sundays, and all days made a legal holiday by the law of the applicable jurisdiction.

## § 8.2 Progress and Completion

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

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

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

## § 8.3 Delays and Extensions of Time

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

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15  
(Paragraph deleted)

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 Contract Sum

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

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

### § 9.2 Schedule of Values

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

### § 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be on AIA Document G701/703 (latest edition), notarized, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

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

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

**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance in writing 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.

- .1 The Contractor shall support each request for payment for materials stored off site with no less than a letter from the Contractor's surety (if any) indicating the surety's agreement to the procedures referenced in Section 9.3.2 and that payment to the Contractor shall not relieve either the Contractor or the surety of their responsibilities to complete the Work.
- .2 Title to materials stored off site shall be vested in the Owner, as evidenced by documentation satisfactory in form and substance to the Owner and the Owner's construction lender (if any), including, without limitation, recorded financial statements and UCC filings.
- .3 With each Application for Payment, the Contractor shall submit to the Owner a list identifying where materials are stored off site and the value of materials at each location. The Contractor shall procure insurance satisfactory to the Owner for material stored off site in an amount not less than the total value of that material.
- .4 Materials stored off-site shall be (i) protected from diversion, destruction, theft, and damage to the satisfaction of the Owner and the lender, (ii) specifically marked for use on the Project, and (iii) segregated from other materials at the storage facility

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

**§ 9.3.4** As a condition precedent to the Contractor's entitlement to payment on account of an Application for Payment, the Contractor shall submit with each Application for Payment:

- .1 a partial conditional lien waiver from the Contractor for the total payment requested in the Application for Payment;
- .2 a partial conditional lien waiver from all Subcontractors and Sub-subcontractors on whose account the Contractor is seeking payment in the Application for Payment for the total amount of such payment requested;
- .3 a partial unconditional lien waiver from the Contractor for the sum of all previously paid progress payments (not applicable to the Contractor's first Application for Payment) and not applicable to ;
- .4 unless previously provided, a partial or final unconditional lien waiver from each Subcontractor and Sub-subcontractor on whose account the Contractor previously sought and received payment for the sum of all such previously paid payments;
- .5 a notarized statement from the Contractor certifying that: (1) the Application for Payment is correct; (2) the Contractor is entitled to payment of the amounts requested; and (3) all due and payable bills with

respect to the Work have been paid in full or will be paid in full from the proceeds of the Application for Payment;

- .6 an application for payment on AIA Document G702/G703 to the Contractor from every Subcontractor on whose account the Contractor is seeking payment in the Application for Payment;
- .7 any other information required by the Contract Documents to be submitted with an Application for Payment; and
- .8 such other information substantiating the Contractor's right to payment as the Owner, Architect, or Owner's lender may reasonably require.

**§ 9.3.5** If a Subcontractor or Sub-subcontractor refuses to furnish a required lien waiver, the Contractor shall furnish a bond satisfactory to the Owner which indemnifies the Owner from the lien or potential lien from the Subcontractor or Sub-subcontractor. Such bond shall be in addition to the payment and performance bonds, if any, required under the Agreement. All lien waivers and bonds in lieu of lien waivers shall be on forms approved in advance by the Owner.

**§ 9.3.6** All lien waivers shall be on the forms attached hereto as **Attachment B** to the A201 unless a Project lender requires otherwise.

**§ 9.3.7** Notwithstanding any other provision of the Contract to the contrary, if this Contract involves the construction or rehabilitation of a Project financed by the United States Department of Housing and Urban Development ("HUD") or other Project lender, the Owner's receipt of authorization from HUD to disburse funds or the Owner's receipt of funds from the lender (as appropriate) is a condition precedent to the Owner's obligation to make the associated progress payment to the Contractor.

#### **§ 9.3.8 Retainage**

**§ 9.3.8.1** 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:  
10%

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

Subject to the retainage laws of the state in which the Project is located and the requirements of Owner's Lenders, which shall be disclosed to Contractor within 30 days of commencement of the Work, the Owner, shall release and reduce retainage to 5% on each Application for Payment submitted after the Work is 50% complete, provided that the Work is being completed in accordance with the Project Schedule and within the Project budget.

#### **§ 9.4 Certificates for Payment**

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

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

Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum. Notwithstanding the foregoing, the Owner may issue payment without a Certificate of Payment from the Architect.

**§ 9.4.3** If, subsequent to issuing any Certificate for Payment, the Architect determines that any previous Certificate for Payment was in error (whether by review of additional conditions or documents, discovery of mathematical error, or any other reason), then the Architect shall issue a revised Certificate for Payment, setting forth the changes in the amounts due the Contractor as well as a reason for such revision.

## **§ 9.5 Decisions to Withhold Certification**

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

- .1 defective Work not remedied;
- .2 liens or 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;
- .7 repeated failure to carry out the Work in accordance with the Contract Documents; or
- .8 representations made by the Contractor that are not true.

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

**§ 9.5.3** When the reasons for withholding certification are removed by the Contractor to the satisfaction of the Architect, certification will be made for amounts previously withheld.

**§ 9.5.4** If the Architect withholds certification for payment under Section 9.5.1, or at the Owner's own initiative, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor, Sub-subcontractor, or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

## **§ 9.6 Progress Payments**

**§ 9.6.1** After the Architect has issued a Certificate for Payment, but subject to the Owner's right to approve payment in whole or in part, or if the Owner approves payment in the absence of a Certificate for Payment issued by the Architect, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect. The Owner may decline to approve payment in whole or in part to such extent as may be necessary in the Owner's opinion to protect the Owner from loss for which the Contractor is or may be responsible.

- .1 Notwithstanding any other provision of the Contract Documents to the contrary, if the Contractor disputes any determination by the Owner or the Architect with regard to any Application or Certificate for Payment, the Contractor shall nevertheless proceed diligently with performance of the Contract as long as all undisputed amounts are paid in a timely manner

- .2 Neither the Owner nor the Architect is required to exercise its discretion pursuant to Section 9.5 or 9.6 for the benefit of any entity other than the Owner.

Notwithstanding any provisions of the Contract Documents to the contrary, the Owner's decision to approve an Application for Payment in whole or in part shall be consistent with the bases provided for the Architect's decision pursuant to Section 9.5.1.

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

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

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

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

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

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

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

§ 9.6.9 Notwithstanding any other provision of the Contract Documents to the contrary, if any claim or lien for which the Contractor is responsible is filed or asserted or there is any reason to believe that such a claim or lien may be filed or asserted at any time during the performance of the Work or the duration of the Contract, the Owner may withhold from any payment otherwise due to the Contractor a sum sufficient, in the Owner's reasonable opinion or as required by law, to pay all obligations and expenses necessary to satisfy such claim or lien until the Contractor furnishes such evidence satisfactory to the Owner that the indebtedness and the claim or lien in respect thereof, if any, has been satisfied, discharged, and released of record if and as provided by law pending the resolution of any such dispute between the Contractor and the entity asserting the claim or lien. The Owner may withhold final payment from the Contractor until the Work and the site are free and clear of any and all claims, liens, or rights thereto arising out of Work performed or materials furnished in furtherance of the Work. If the unpaid balance of the Contract Sum (or, if applicable, GMP) is insufficient to cover such losses, costs, damages, and fees, or if the lien claim arises from Contractor's failure to properly pass through any payment received from the Owner, the Contractor shall immediately pay the difference to the Owner. The Contractor shall have no responsibility under this Section for any lien or claim caused by Owner's failure to make payment to Contractor when due.

## **§ 9.7 Failure of Payment**

**§ 9.7.1** Subject to the other provisions of the Contract Documents to the contrary, if the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount (i) certified by the Architect and approved by the Owner, (ii) approved by the Owner in the absence of a Certificate for Payment by the Architect or (iii) awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, 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 when all government inspections have been successfully completed and all required permits and authorizations have been issued (unless inability to obtain any such permits is due to causes beyond the Contractor's control) 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 the Architect, if the Owner requests) 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 to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Owner or 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. The Contractor shall complete all items on the list which accompanies the Certificate of Substantial Completion within thirty (30) days of the date on which it receives the list or within such other time period set forth in the Certificate of Substantial Completion. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

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

**§ 9.8.6** A Certificate of Substantial Completion may be withdrawn by the Architect or Owner based on subsequently discovered information that would have otherwise permitted the Architect or Owner to determine that the Work was not Substantially Complete if known at the time of the issuance of the Certificate of Substantial Completion.

## **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance,

heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

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

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

### **§ 9.10 Final Completion and Final Payment**

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

- .1** If this Contract involves the construction or rehabilitation of a Project financed by the United States Department of Housing and Urban Development ("HUD") or other Project lender, the Owner's receipt of authorization from HUD to disburse funds or the Owner's receipt of funds from the Project lender (as appropriate) is a condition precedent to the Owner's obligation to make the final payment to the Contractor.
- .2** The date of final completion of the Work is the date determined by the Owner when all Work is complete, accessible, operable and usable by the Owner and all parts and systems are one hundred percent (100%) complete and cleaned for the Owner's full use and all drawings, certificates, bonds, guarantees, and documents required by the Contract Documents have been provided to the Owner by the Contractor.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect and Owner (1) an affidavit in form and substance reasonably acceptable to the Owner 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 and that all Work is complete in accordance with the requirements of the Contract Documents, (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) a final lien waiver from the Contractor and each Subcontractor; (7) all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, record documents, and other documents required by Contract Documents; (8) all warranties, guarantees and other documents required by the Contract Documents, (9) "as built" drawings for utilities and the Project in such format as the Owner specifies, (10) all sustainability compliance reports and other documentation required under any sustainability, green or LEED certification for with the Project is eligible; (11) all of the documents and information required under Section 9.3 in such format as the Owner specifies, and (12) all of the documents and information required under Section 9.3 to be included with Applications for Payment. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor shall 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 immediately refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

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

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

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

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

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

### § 10.1 Safety Precautions and Programs

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

### § 10.2 Safety of Persons and Property

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

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

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

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards. The Contractor also shall be responsible, at the Contractor's sole cost and expense, for all measures necessary to protect property adjacent to the Project and improvements within that adjacent property. The Contractor shall promptly repair any damage to such property or improvements.

§ 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 and to provide notice to insurers.

**§ 10.2.9** The Contractor shall promptly report in writing to the Owner and Architect all accidents arising out of or in connection with the Work that cause death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if an accident results in death, serious personal injury, or serious damage, the accident shall be reported immediately by telephone or messenger to the Owner and Architect.

**§ 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. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. Subject to the Contractor's compliance with Article 15, 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, which adjustments shall be accomplished as provided in Article 7.

**.1** The definition of "rendered harmless" as it relates to hazardous materials shall mean that in any affected area where these materials are present, the exposure concentration of them shall not exceed the Permissible Exposure Level as established by the Occupational Safety and Health Administration and/or any other agency having regulations governing the exposure to and handling of such materials.

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

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner

shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

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

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

#### **§ 10.4 Emergencies**

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

### **ARTICLE 11 INSURANCE AND BONDS**

#### **§ 11.1 Contractor's and Subcontractor's Insurance and Bonds**

**§ 11.1.1** The Contractor and all Subcontractors shall purchase and maintain insurance and bonds of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as set forth in the Insurance Requirements attached hereto as **Attachment A** to the A201.

*(Paragraphs deleted)*

#### **§ 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.

##### **§ 11.2.1.1 Property Insurance**

If the Project involves construction of a new building or an increase in the footprint of an existing building, the Owner shall provide and maintain a builder's risk insurance policy written on a special causes of loss form and an open-perils basis providing coverage for direct physical loss of or damage to covered property arising from insured perils that shall not exclude: theft; fire; vandalism; malicious mischief; earthquake; earth movement; tornado; lightning; explosion; breakage of glass; flood; windstorm; collapse; water damage; hot and cold testing; debris removal and/or demolition occasioned by enforcement of applicable law; sudden and accidental equipment breakdown; and resulting from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials.

- .1 The property insurance shall cover the Project in the course of construction including false-work, temporary buildings and structures, and materials used in the construction process, stored on or off-site, or while in transit.
- .2 The coverage shall be written on a replacement-cost basis in an amount equal to not less than the initial Contract Sum, plus the value or: (1) all subsequent Modifications; (2) materials supplied and installed by others; and (3) any furnishings, fixtures, materials, or equipment located at the Site. All sub-limits of coverage are subject to the prior written approval of the Owner.
- .3 The property insurance shall not include any deductible of more than \$25,000 per occurrence for the "all-risk perils." Deductibles for other perils may be higher.
- .4 The insureds under the policy shall include the Owner, Contractor, Subcontractors at all tiers, and Separate Contractors.
- .5 Coverage shall include the reasonable extra costs of acceleration and expediting temporary and permanent repairs to, or permanent replacement of, damaged property. Those covered costs shall include overtime wages and the extra costs of "express" or other means for rapidly transporting materials and supplies necessary to the repair or replacement.
- .6 Coverage shall include provisions for mechanical or electrical breakdown, or boiler system testing if a boiler system is part of the Work.

- .7 Coverage shall include temporary structures and scaffolding, along with collapse coverage.
- .8 Coverage shall be primary to all other applicable insurance.
- .9 The policy shall specifically permit and allow for partial occupancy as defined under the Contract Documents and for partial occupancy or a similar term as used under the policy.
- .10 The policy shall be maintained in effect until Substantial Completion of all Work.
- .11 The tools and equipment of the Contractor and all Subcontractor's at every tier shall not be covered under the property insurance. It is the sole responsibility of the Contractor and all Subcontractor's at every tier to maintain such coverage.

**§ 11.2.1.2** If the Project is solely the installation of material and equipment and not new building construction, the Owner may in its discretion purchase and maintain a builder's risk, builder's risk-renovations, or installation floater insurance policy meeting the requirements below. Owner's standard property insurance shall be maintained:

- .1 The Contractor shall be named as an additional insured on the insurance policy.
- .2 The property insurance shall not include any deductible of more than \$25,000 per occurrence for the "all-risk perils." Deductibles for other perils may be higher.
- .3 Coverage for property while at a temporary location.
- .4 Coverage for property while in transit.
- .5 Coverage shall include testing.
- .6 Coverage shall include business income and extra expense.
- .7 Coverage shall include earth movement.
- .8 Coverage shall include flood insurance (this does not apply to covered property at any Project Site or temporary location in any area designated by the Federal Emergency Management Agency as Flood Zones A, B, Shaded X, D, or V as designated as a "Special Flood Hazard Area (SFHA), "Flood Prone Area," "Not Mapped," or "Undesignated Flood Hazard."
- .9 Coverage shall include a limited mold policy.
- .10 Coverage shall include water intrusion.

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

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

### **§ 11.3 Waivers of Subrogation**

**§ 11.3.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages

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

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

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

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

#### **§11.5 Adjustment and Settlement of Insured Loss**

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

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

### **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

#### **§ 12.1 Uncovering of Work**

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

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

## **§ 12.2 Correction of Work**

### **§ 12.2.1 Before Substantial Completion**

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

### **§ 12.2.2 After Substantial Completion**

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

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

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

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

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

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

## **§ 12.3 Acceptance of Nonconforming Work**

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

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### **§ 13.1 Governing Law**

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

### **§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, or elsewhere in the Contract Documents, 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 or credit enhancement. The Contractor shall execute all consents reasonably required to facilitate the assignment.

### **§ 13.3 Rights and Remedies**

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

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

### **§ 13.4 Tests and Inspections**

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

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

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

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

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

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

### **§ 13.5 Interest**

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

### **§ 13.6 Captions**

The captions or headings in the Contract Documents are for convenience and reference only and in no way define, describe, extend, or limit the scope, meaning, or intent of the Contract Documents.

### **§ 13.7 Severability**

If any part of this Contract is held as a matter of law to be unenforceable or unconscionable, the remainder of this Contract will be enforceable without that part.

### **§ 13.8 Survivability**

All representations, indemnity obligations, and necessarily continuing obligations under this Contract, will survive final payment, completion and acceptance of the Contractor's services, and termination or completion of this Contract.

### **§ 13.9 Publicity, Photography, and Awards**

**§ 13.9.1** Before completion of the Project, the Owner alone shall control all public relations or publicity about the Project, and the Contractor shall not make any public statement about the Project without the Owner's prior written consent.

**§ 13.9.2** After completion of the Project, the Contractor may exercise reasonable public relations and marketing efforts related to the Project, provided that the Contractor (1) properly identifies the Owner and the Architect and their participation in the Project and (2) complies with the Owner's related requests and requirements.

**§ 13.9.3** The Contractor shall obtain the Owner's prior written consent and will be subject to the Owner's related requirements before the Contractor commissions, takes, publishes, or otherwise uses any photographs of the Project. The foregoing requirement does not apply to the photographs taken in the normal course of construction or the use of those photographs to facilitate the completion of the Work.

### **§ 13.10 OHFA Funding Requirements (See Attachment D to the A201)**

The Project is subject to Ohio Housing Finance Agency (OHFA) low income housing tax credit funding requirements including final Contractor's Cost Certification as further described in Attachment D included herewith.

### **§ 13.11 Section 3 Requirements (See Attachment C to the A201 – Section 3 Clause Part 135.38)**

The Contractor shall be responsible for complying with Section 3 requirements and any reporting as required per the HUD 92554M and Section 3 clause attachments.

### **§ 13.12 Build America / Buy America - BABA Requirements (See Attachment C to the A201 – BABA)**

The Contractor shall be responsible for complying with BABA requirements and any reporting as required per the BABA clause attachment.

## **ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

### **§ 14.1 Termination by the Contractor**

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

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work executed, and costs incurred by reason of such termination.

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

## § 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise fails to perform any of its material duties or obligations under the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate all or a portion of the Contract 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;
- .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; and
- .4 Require the Contractor to remove any part or all of the Contractor's or a Subcontractor's or a Sub-Subcontractor's equipment, machinery, and supplies from the site, and in the event that the Contractor fails to do so within three (3) days from the date of such request, the Owner may remove and/or store such equipment, machinery, and supplies at the Contractor's expense.

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

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.2.5 After termination pursuant to this Section 14.2, the Contractor shall, unless the notice of termination directs otherwise, (1) immediately discontinue the Work on that date, place no further orders or Subcontracts for materials, equipment, services, facilities, or otherwise, except as may be necessary for completion of such portion of the Work as is not discontinued; (2) promptly make every effort to procure cancellation upon terms satisfactory to the Owner of all orders and Subcontracts to the extent they relate to the performance of a discontinued portion of the Work; and (3) thereafter do only such Work as may be necessary to protect the Work already in progress and to protect materials and equipment on the Project site or in transit thereto.

§ 14.2.6 When the Contractor's services have been terminated by the Owner pursuant to this Section 14.2, the termination shall not affect any rights or remedies of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of funds due the Contractor by the Owner shall not release the Contractor from liability for performance of the Work in accordance with the requirements of the Contract Documents.



§ 14.2.7 In the event that the Owner's termination for cause pursuant to this Section 14.2 is determined by binding dispute resolution to have been unjustified, such termination shall be deemed to have been a termination pursuant to Section 14.4.

#### § 14.3 Suspension by the Owner for Convenience

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

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

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

#### § 14.4 Termination by the Owner for Convenience

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

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

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination but in no event will the Contractor be entitled to any recovery on account of any Work the Contractor did not perform as a result of the termination.

§ 14.4.4 When the Owner terminates the Contractor's services pursuant to this Section, the termination shall not affect the rights or remedies of the Owner against the Contractor then existing or which may thereafter accrue.

§ 14.4.5 Notwithstanding the provisions of Section 14.4.3 to the contrary, if the Owner terminates the Contract pursuant to this Section 14.4, but there exists an event of the Contractor's default, the Contractor will be entitled to receive only such sums as it would be entitled to receive following the occurrence of an event of default as provided in Section 14.2.

### ARTICLE 15 CLAIMS AND DISPUTES

#### § 15.1 Claims

##### § 15.1.1 Definition

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

##### § 15.1.2 Time Limits on Claims

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

##### § 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the

other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

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

**§ 15.1.3.3** Unless otherwise agreed in writing by the Owner, within forty-five (45) days after the initiation of a Claim, the Contractor shall submit in writing to the Owner and Architect all information and statements which substantiate the Claim and which satisfy the requirements of Sections 15.1.5 and 15.1.6.

#### **§ 15.1.4 Continuing Contract Performance**

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.5, Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

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

#### **§ 15.1.5 Claims for Additional Cost**

**§ 15.1.5.1** Except for a Claim relating to an emergency endangering life or property arising under Section 10, but notwithstanding any other provision of the Contract Documents to the contrary, the Contractor shall obtain the Owner's specific written authorization prior to proceeding with any change in the Work that may entitle the Contractor to an increase in the Contract Sum. The Contractor's failure to obtain such prior written authorization shall constitute an irrevocable waiver of any related Claim. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

**§ 15.1.5.2** The Contractor shall substantiate each Claim for an increase in the Contract Sum with (1) written documentation of the actual additional direct costs to the Contractor due to the event giving rise to the Claim; and (2) a written statement from the Contractor that the increase requested is the entire increase in the Contract Sum associated with the Claim.

#### **§ 15.1.6 Claims for Additional Time**

**§ 15.1.6.1** The Contractor shall substantiate each Claim for an extension of the Contract Time with (1) a written description of the effect of the delay on the progress of the Work; (2) a detailed schedule which identifies the critical portions of the Work impacted by the delaying event and the dates of such impact; (3) a detailed written proposal for an increase in the Contract Sum which would fully compensate the Contractor for all costs of acceleration of the Work needed to completely overcome the associated delay together with a statement consistent with Section 15.1.5.2; and (4) a written statement from the Contractor that the extension requested is the entire extension of the Contract Time associated with the Claim.

- .1 In the case of a continuing delay occurring on consecutive days, only one Claim is necessary; provided, however, that within ten days after the cessation of the cause of the continuing delay, the Contractor shall notify the Owner and Architect in writing that the cause of the delay has ceased. The failure to give timely notice of the cessation of the cause of the continuing delay will constitute an irrevocable waiver of any Claim based on the continuing delay.

**§ 15.1.6.2** In addition to the requirements of Section 15.1.6.1, if adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on a critical element of the scheduled construction. The support for and evaluation of all adverse-weather Claims with respect to the scheduled

construction shall be based upon average weather conditions during the 10 years immediately preceding the dates at issue in the Claim as such weather conditions were recorded at the government-controlled weather-recording facility nearest to the site. The construction schedule will include 30 weather days meeting the above criteria; additional weather days will be evaluated for extension of time justified by the preceding criteria.

shall be the Contractor's exclusive remedy in the event of any delay, whether or not such delay is foreseeable, not the proximate result of the act or failure to act of the Owner or anyone for whom the Owner is directly responsible or directly attributed to pandemic-related circumstances. The Contractor specifically waives any right it may otherwise have to an increase in the Contract Sum or to any type of damages including but not limited to consequential damages, lost opportunity costs, impact damages or other similar remuneration because of such delay or disruption to all or any part of the Work, whether such delay was foreseen or unforeseen and whether caused by the active interference of any party for whom the Owner is not directly responsible

**§ 15.1.6.4** Notwithstanding any other provision of the Contract Documents to the contrary, in no event shall the Contractor be entitled to an increase in the Contract Time on account of any delaying impact on a non-critical element of the Work.

### **§ 15.1.7 Waiver of Claims for Consequential Damages**

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

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents. As identified in the HUD Contract Article 2.C – to be calculated per HUD Guidelines.

### **§ 15.2 Initial Decision**

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

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

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

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data

will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

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

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

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

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

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

**§ 15.2.9** Notwithstanding any other provision of the Contract Documents to the contrary, either party, without first submitting a Claim to the Initial Decision Maker, may seek judicial relief in the state or federal court where the Project is located, but only if the sole relief sought is a temporary restraining order or a preliminary or permanent injunction.

**§ 15.2.10** Upon receipt of a written request, the Contractor shall make available to the Owner and its representatives all books, records, and other documents in the Contractor's possession or under its control that relate to any Claim or dispute, and the Contractor shall require its Subcontractors and Sub-subcontractors to do likewise.

**§ 15.2.11** Upon receipt of a written request, the Owner shall make available to the Contractor and its representatives all books, records, and other documents in the Owner's possession or under its control that relate to any Claim or dispute, and the Owner shall require its Architects/Engineers, Consultants and Separate Contractors to do likewise.

## **§ 15.3 Mediation**

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

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

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

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

(Paragraphs deleted)



# **Additions and Deletions Report for**

## **AIA® Document A201® – 2017**

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 11:53:00 ET on 04/21/2026.

### **PAGE 1**

#### **Gracious Manor Senior Housing**

1038 Salem Ave.  
Dayton, Ohio 45406

...

#### **Grace Dayton Senior Housing Limited Partnership, an Ohio limited partnership**

2245 North Bank Drive  
Columbus, OH 43220

...

**pH7 Architects, Inc.**  
448 W. Nationwide Blvd.  
Columbus, Ohio 43215

### **PAGE 10**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the ~~Agreement~~) "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, the Contractor's Assumptions & Qualifications included as Attachment E to the A201, 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~~ Architect or Owner. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

...

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a ~~Sub-subcontractor~~ Sub-subcontractor (except as set forth in Section 5.3 and Section 5.4), (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.

...

§ 1.2.1 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. If inconsistencies exist within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, or ordinances that are not the responsibility of the Architect or Engineers as the designers, the Contractor shall, in accordance with the Architect's interpretation, either (i) provide the better quality or greater quantity of Work, or (ii) comply with the more stringent requirement.

PAGE 11

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

...

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

...

§ 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 properly 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.

...

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

PAGE 12

Any use of, or reliance on, all or a portion of a building information model without agreement to ~~written~~ protocols governing the use of, and reliance on, the information contained in the model 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, or other agreed documents, 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.

...

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

...

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for ~~construction, use or occupancy of permanent structures or for permanent changes in existing facilities.~~ the development of the site of the Project.

PAGE 13

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

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

...

**§ 2.3.6** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one (1) copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

...

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. The right of the Owner to stop the Work as provided in this Section 2.4 shall be in addition to, and not in limitation of, the Owner's rights under Sections 12.2 and 14.2. If the Owner's exercise of its rights pursuant to this Section 2.4 are determined by a final judgment of a court of competent jurisdiction or if elected, by binding dispute resolution, to have been unjustified, such exercise shall be deemed to have been a suspension of the Work pursuant to Section 14.3.

...

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period (or a one day period in the case of a threat to the safety of persons or property, as determined by the Owner) after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and in that event, the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services, as well as charges of engineers, attorneys, and other professionals made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15. The Contractor shall allow the Owner and its agents such access to the site as may be necessary to enable the Owner to exercise its rights and remedies under this Section 2.5.

**PAGE 14**

**§ 3.2.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. Prior to the execution of the Agreement, the Contractor and each Subcontractor and Sub-subcontractor have evaluated and satisfied themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation, (i) the location, condition, layout, and nature of the Project site and surrounding areas, (ii) generally prevailing climatic conditions, (iii) anticipated labor supply and costs, (iv) availability and cost of materials, tools, and equipment, and (v) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site, except as set forth in Section 10.3. Except as set forth in Section 10.3, the Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to



make any adjustment in either the Contract Sum or the Contract Time in connection with any failure by the Contractor or any Subcontractor or Sub-subcontractor to have complied with the requirements of this Section 3.2.1.

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

**§ 3.2.2.1** In all cases of interconnection of its Work with existing or other work, it shall verify at the Project site all dimensions relating to such existing or other work..

...

**§ 3.3.1** The Contractor shall supervise and direct the ~~Work,~~ Work consistent with the standard of care exercised by other professional contractors in the Contractor's trade in the region where the Project is located, and 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 Subcontractors,~~ Sub-subcontractors, 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.~~ Sub-subcontractors.

**PAGE 15**

**§ 3.3.4** The Contractor shall use reasonable care in locating, before performing any Work, all above and below-ground utilities on or about the Project, and shall use reasonable care to avoid damaging any such utilities, including, but not limited to, service and transmission facilities for electricity, communication, water, sewer, and gas.

**§ 3.3.5** No signs or advertising of any kind will be permitted on or about the Site, except those appearing on trucks and trailers, without prior approval from the Owner.

**§ 3.3.6 Smoking and Tobacco Products.** All of the Owner's buildings are smoke free. Smoking and other tobacco products are not be permitted in any indoor, outdoor, or parking areas at the Project site throughout the Project duration. The Contractor shall enforce these restrictions on any individual employed by the Contractor or a Subcontractor or a Sub-Subcontractor.

**§ 3.3.7 Firearms and Weapons Prohibited**

**§ 3.3.7.1** No person, including any person licensed to carry a concealed weapon, shall bring or possess a firearm or any other weapon on the Project site or at any Project-related function or activity.

- .1 This prohibition does not apply to firearms or weapons during a hunting season if (1) the firearm or weapon may legally be used for hunting during a then-current hunting season in the state in which the Project is located; (2) the firearm or weapon remains locked in a vehicle at all times, (3) the

ammunition or projectile (e.g., bullet or arrow), if any, for the firearm or weapon remains locked in a separate compartment of the vehicle at all times, (4) the vehicle is not used in the performance of the Work; and (5) the person responsible for the firearm or weapon gives the Owner advance notice of the presence of the firearm or weapon.

- .2 To monitor compliance with this Section 3.3.7, the Owner may conduct reasonable, unannounced searches of the site and all people and personal property entering, on, or leaving the site or a Project-related function or activity. Refusal to allow an inspection is a violation of this Section 3.3.7. A person who refuses to allow an inspection will not be detained or forced to submit to an inspection.
- .3 Any employee of the Contractor, any Subcontractor, or Sub-subcontractor, who violates this Section 3.3.7 shall be subject to immediate and permanent removal from the premises and may be subject to prosecution for criminal trespass.
- .4 The Contractor is primarily responsible for the enforcement of this Section 3.3.7. The Owner may terminate the Contract under Section 14.2 if the Contractor, any Subcontractor, or Sub-subcontractor, or any of their respective employees, (1) repeatedly violates this Section 3.3.7, or (2) fails to cure any violation of this Section 3.3.7 within three hours after being notified of the violation.
- .5 The term "firearm" means a weapon, a pistol, or a rifle, whether loaded or unloaded, capable of firing a projectile and using an explosive as a propellant; but does not include powder-actuated tools manufactured to fasten building materials. The term "weapon" means an instrument of attack or defense.
- .6 The Contractor shall include this Section 3.3.7 in every contract it enters into in furtherance of the Work, and shall communicate its provisions to every person employed in furtherance of the Work.

PAGE 16

§ 3.4.1.1 Unless otherwise provided in the Contract Documents, the Contractor shall comply with all MBE/WBE/DBE, Section 3 and BABA requirements set forth in the Contract Documents. See **Attachment C** to the A201 for requirements.

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

...

§ 3.4.3.1 If the Owner or the Architect deems any employee of the Contractor, Subcontractor, or Sub-subcontractor unsatisfactory, the Contractor shall transfer or require its Subcontractor or Sub-subcontractor to transfer such employee from the Project immediately.

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

...

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted and applicable to the Work when bids are received or negotiations concluded, whether or not yet

effective or merely scheduled to go into effect. The Contractor shall withhold and pay, and require its Subcontractors and Sub-subcontractors to withhold and pay, all federal, state, and local taxes due or payable with respect to wages, salaries, commissions, and any other income subject to provisions of federal, state, and local law.

...

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, ~~and lawful orders~~ lawful orders, and all other requirements of public authorities applicable to performance of the Work. All notices, consents and approvals given by the Contractor under the Contract Documents shall be in writing unless otherwise expressly permitted.

**PAGE 17**

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. The failure to give the notices as required in this Section 3.7.4 shall constitute an irrevocable waiver of any related claim.

**§ 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 ~~15.15~~ and must be made by the Contractor within ten days after such suspension ends.

...

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site on a full-time basis 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. During the period between the date of commencement of the Work and the date of Substantial Completion, the Contractor's superintendent shall not be involved with any work other than the Project.

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

**PAGE 18**

**§ 3.10.1** The Contractor, promptly after being awarded the ~~Contract~~, shall submit ~~Contract~~ and throughout the Work, shall prepare, keep current, and submit each time it is updated for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall

not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Owner and 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. Attached hereto as Attachment F to the A201.

§ 3.10.4 On a monthly basis, the Contractor shall provide a Monthly Project Report to the Owner and Architect. The Monthly Project Report shall include recommendations for adjusting the construction schedule to meet milestone dates and the Substantial Completion date, if needed, and other content at the discretion of the Owner.

§ 3.10.5 In no event shall the Owner or Architect's review or approval of any schedule (1) impose on the Owner or Architect any responsibility for the progress, scheduling, sequencing, or timing of the Work, or (2) relieve the Contractor from full responsibility therefor as the Contractor is solely responsible for the preparation, accuracy, revision, and maintenance of the Construction Schedule.

...

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~~, Owner at all reasonable times, and delivered to the Architect for submittal to the Owner upon the earlier of the termination of the Contract or completion of the Work as a record of the Work as constructed.

PAGE 19

§ 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 appropriate~~ performance and design criteria that such services must satisfy. The Contractor shall be entitled absent its own negligence, 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~~ professional, and who shall satisfy the Owner's requirements regarding qualifications and insurance. 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 appropriate~~ 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.

PAGE 20

~~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.~~ § 3.13.1 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 Protection of construction materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the Work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions.

§ 3.13.3 The Contractor and any entity for whom the Contractor is responsible shall not erect any sign on the Project site or in the building in which the Work is being performed (the "Building") without the prior written consent of the Owner, which may be withheld in the sole discretion of the Owner.

§ 3.13.4 Without limitation of any other provision of the Contract Documents, the Contractor shall use best efforts to minimize any interference with the occupancy or beneficial use of (i) any areas and buildings adjacent to the site of the Work and (ii) the Building in the event of partial occupancy, as more specifically described in Section 9.9. Without prior approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project site, including, without limitation, lavatories, toilets, entrances, and parking areas other than those designated by the Owner.

.1 Without limitation of any other provision of the Contract Documents, the Contractor shall use its best efforts to comply with all rules and regulations, as amended from time to time, promulgated by the Owner in connection with the use and occupancy of the Project site and the Building. The Contractor shall immediately notify the Owner in writing if during the performance of the Work, the Contractor finds compliance of any portion of such rules and regulations to be impracticable, setting forth the problems of such compliance and suggesting alternatives through which the same results intended by such portions of the rules and regulations can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives, or require compliance with the existing requirements of the rules and regulations.

.2 The Contractor also shall comply with all insurance requirements and collective bargaining agreements applicable to the use and occupancy of the Project site and the Building.

## **PAGE 21**

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

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, a Sub-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 Contractor, Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts, other employee benefit acts, or any insurance policy provided or required in connection with the Project. The Contractor hereby specifically and expressly waives any immunity afforded it by virtue of any applicable state constitutional or statutory protections, but only to the extent required to honor the indemnity obligations set forth in this Section 3.18.

§ 3.18.3 The Contractor's indemnity obligations under this Section 3.18 shall also specifically include, without limitation, all fines, penalties, damages, liability, costs, expenses (including, without limitation, reasonable attorneys' fees), and punitive damages (if any) arising out of, or in connection with, any (i) violation of or failure to comply with any law, statute, ordinance, rule, regulation, code, or requirement of a public authority that bears upon the performance of the Work by the Contractor, a Subcontractor, a Sub-subcontractor, or any person or entity for whom either is

responsible, (ii) means, methods, procedures, techniques, or sequences of execution or performance of the Work, or (iii) failure to secure and pay for permits, fees, approvals, licenses, and inspections as required under the Contract Documents, or any violation of any permit or other approval of a public authority applicable to the Work, by the Contractor, a Subcontractor, a Sub-subcontractor, or any person or entity for whom either is responsible.

**§ 3.18.4** The Contractor shall indemnify and hold harmless all of the parties indemnified under this Section 3.18 from and against any costs and expenses (including reasonable attorneys' fees) they incur in enforcing any of the Contractor's defense, indemnity, and hold-harmless obligations under this Contract.

PAGE 22

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

...

**§ 4.2.1** The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for ~~Payment~~. Payment (or for a longer period of time if so provided in the Owner's agreement with the Architect). The Architect will have authority to act on behalf of the Owner only to the extent provided in 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, Sub-subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

...

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

...

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

PAGE 23

§ 4.3.2.15 The Architect's review is not a prerequisite for Owner's review and acceptance of Work. The reviews do not indicate the Owner's view, but provide the Architect with information for coordination of its responsibilities as outlined in its contract with the Owner.

...

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site-site or to supply materials, equipment, or services in furtherance 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-entity, regardless of tier, who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site-site or to supply materials, equipment, or services in furtherance 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.

...

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify-notify, in writing, 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 Owner or 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 Owner or Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

PAGE 25

§ 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 Owner and 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 promptly 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.

PAGE 26

§ 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. Except as provided in Sections 15.1.5 and

15.1.6, the Contractor shall not be entitled to an increase in the Contract Sum or to an extension of the Contract Time, or both, on account of any change in the Work that is not the subject of a Change Order or Construction Change Directive prior to the commencement of such Work.

§ 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.~~ Owner or Architect.

§ 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. Except as permitted in Section 7.3, a change in the Contract Sum or the Contract Time shall be accomplished only by Change Order.

...

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

...

.3 The extent of the adjustment, if any, in the Contract Time.

7.2.2 Upon Contractor's request, the Owner shall provide proof of change order approval by HUD or other Project lender.

PAGE 27

The Owner or 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.

...

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined. Any period of time referred to in the Contract Documents by a number of days is to be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday, or a day made a legal holiday by the law of the applicable jurisdiction, such day is omitted from the computation.

§ 8.1.5 Except as excluded in Section 8.1.4, the Contract Time includes Saturdays, Sundays, and all days made a legal holiday by the law of the applicable jurisdiction.

PAGE 28

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

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

15

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



...

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

...

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be ~~notarized, if required, on AIA Document G701/703 (latest edition), notarized,~~ and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

**PAGE 29**

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance in writing 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.

- .1 The Contractor shall support each request for payment for materials stored off site with no less than a letter from the Contractor's surety (if any) indicating the surety's agreement to the procedures referenced in Section 9.3.2 and that payment to the Contractor shall not relieve either the Contractor or the surety of their responsibilities to complete the Work.
- .2 Title to materials stored off site shall be vested in the Owner, as evidenced by documentation satisfactory in form and substance to the Owner and the Owner's construction lender (if any), including, without limitation, recorded financial statements and UCC filings.
- .3 With each Application for Payment, the Contractor shall submit to the Owner a list identifying where materials are stored off site and the value of materials at each location. The Contractor shall procure insurance satisfactory to the Owner for material stored off site in an amount not less than the total value of that material.
- .4 Materials stored off-site shall be (i) protected from diversion, destruction, theft, and damage to the satisfaction of the Owner and the lender, (ii) specifically marked for use on the Project, and (iii) segregated from other materials at the storage facility

...

§ 9.3.4 As a condition precedent to the Contractor's entitlement to payment on account of an Application for Payment, the Contractor shall submit with each Application for Payment:

- .1 a partial conditional lien waiver from the Contractor for the total payment requested in the Application for Payment;

- .2 a partial conditional lien waiver from all Subcontractors and Sub-subcontractors on whose account the Contractor is seeking payment in the Application for Payment for the total amount of such payment requested;
- .3 a partial unconditional lien waiver from the Contractor for the sum of all previously paid progress payments (not applicable to the Contractor's first Application for Payment) and not applicable to ;
- .4 unless previously provided, a partial or final unconditional lien waiver from each Subcontractor and Sub-subcontractor on whose account the Contractor previously sought and received payment for the sum of all such previously paid payments;
- .5 a notarized statement from the Contractor certifying that: (1) the Application for Payment is correct; (2) the Contractor is entitled to payment of the amounts requested; and (3) all due and payable bills with respect to the Work have been paid in full or will be paid in full from the proceeds of the Application for Payment;
- .6 an application for payment on AIA Document G702/G703 to the Contractor from every Subcontractor on whose account the Contractor is seeking payment in the Application for Payment;
- .7 any other information required by the Contract Documents to be submitted with an Application for Payment; and
- .8 such other information substantiating the Contractor's right to payment as the Owner, Architect, or Owner's lender may reasonably require.

§ 9.3.5 If a Subcontractor or Sub-subcontractor refuses to furnish a required lien waiver, the Contractor shall furnish a bond satisfactory to the Owner which indemnifies the Owner from the lien or potential lien from the Subcontractor or Sub-subcontractor. Such bond shall be in addition to the payment and performance bonds, if any, required under the Agreement. All lien waivers and bonds in lieu of lien waivers shall be on forms approved in advance by the Owner.

§ 9.3.6 All lien waivers shall be on the forms attached hereto as **Attachment B** to the A201 unless a Project lender requires otherwise.

§ 9.3.7 Notwithstanding any other provision of the Contract to the contrary, if this Contract involves the construction or rehabilitation of a Project financed by the United States Department of Housing and Urban Development ("HUD") or other Project lender, the Owner's receipt of authorization from HUD to disburse funds or the Owner's receipt of funds from the lender (as appropriate) is a condition precedent to the Owner's obligation to make the associated progress payment to the Contractor.

#### § 9.3.8 Retainage

§ 9.3.8.1 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:  
10%

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

Subject to the retainage laws of the state in which the Project is located and the requirements of Owner's Lenders, which shall be disclosed to Contractor within 30 days of commencement of the Work, the Owner, shall release and reduce retainage to 5% on each Application for Payment submitted after the Work is 50% complete, provided that the Work is being completed in accordance with the Project Schedule and within the Project budget.

PAGE 30

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the

Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum. Notwithstanding the foregoing, the Owner may issue payment without a Certificate of Payment from the Architect.

§ 9.4.3 If, subsequent to issuing any Certificate for Payment, the Architect determines that any previous Certificate for Payment was in error (whether by review of additional conditions or documents, discovery of mathematical error, or any other reason), then the Architect shall issue a revised Certificate for Payment, setting forth the changes in the amounts due the Contractor as well as a reason for such revision.

PAGE 31

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

...

- .2 liens or third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the 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.~~ Documents; or
- .8 representations made by the Contractor that are not true.

...

§ 9.5.3 When the reasons for withholding certification are removed, removed by the Contractor to the satisfaction of the Architect, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under ~~Section 9.5.1.3,~~ Section 9.5.1, or at the Owner's own initiative, the Owner may, at its sole option, issue joint checks to the Contractor and to any ~~Subcontractor~~ Subcontractor, Sub-subcontractor, or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

...

§ 9.6.1 After the Architect has issued a Certificate for Payment, but subject to the Owner's right to approve payment in whole or in part, or if the Owner approves payment in the absence of a Certificate for Payment issued by the Architect, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so

notify the Architect. The Owner may decline to approve payment in whole or in part to such extent as may be necessary in the Owner's opinion to protect the Owner from loss for which the Contractor is or may be responsible.

.1 Notwithstanding any other provision of the Contract Documents to the contrary, if the Contractor disputes any determination by the Owner or the Architect with regard to any Application or Certificate for Payment, the Contractor shall nevertheless proceed diligently with performance of the Contract as long as all undisputed amounts are paid in a timely manner

.2 Neither the Owner nor the Architect is required to exercise its discretion pursuant to Section 9.5 or 9.6 for the benefit of any entity other than the Owner.

Notwithstanding any provisions of the Contract Documents to the contrary, the Owner's decision to approve an Application for Payment in whole or in part shall be consistent with the bases provided for the Architect's decision pursuant to Section 9.5.1.

**PAGE 32**

§ 9.6.9 Notwithstanding any other provision of the Contract Documents to the contrary, if any claim or lien for which the Contractor is responsible is filed or asserted or there is any reason to believe that such a claim or lien may be filed or asserted at any time during the performance of the Work or the duration of the Contract, the Owner may withhold from any payment otherwise due to the Contractor a sum sufficient, in the Owner's reasonable opinion or as required by law, to pay all obligations and expenses necessary to satisfy such claim or lien until the Contractor furnishes such evidence satisfactory to the Owner that the indebtedness and the claim or lien in respect thereof, if any, has been satisfied, discharged, and released of record if and as provided by law pending the resolution of any such dispute between the Contractor and the entity asserting the claim or lien. The Owner may withhold final payment from the Contractor until the Work and the site are free and clear of any and all claims, liens, or rights thereto arising out of Work performed or materials furnished in furtherance of the Work. If the unpaid balance of the Contract Sum (or, if applicable, GMP) is insufficient to cover such losses, costs, damages, and fees, or if the lien claim arises from Contractor's failure to properly pass through any payment received from the Owner, the Contractor shall immediately pay the difference to the Owner. The Contractor shall have no responsibility under this Section for any lien or claim caused by Owner's failure to make payment to Contractor when due.

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

**PAGE 33**

§ 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 when all government inspections have been successfully completed and all required permits and authorizations have been issued (unless inability to obtain any such permits is due to causes beyond the Contractor's control) 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 ~~Architect-Owner~~ (and the Architect, if the Owner requests) will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the ~~Architect's~~ inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Owner or Architect. In such case, the Contractor shall then submit a request for another inspection ~~by the Architect~~ to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Owner or 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. The Contractor shall complete all items on the list which accompanies the Certificate of Substantial Completion within thirty (30) days of the date on which it receives the list or within such other time period set forth in the Certificate of Substantial Completion. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

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

§ 9.8.6 A Certificate of Substantial Completion may be withdrawn by the Architect or Owner based on subsequently discovered information that would have otherwise permitted the Architect or Owner to determine that the Work was not Substantially Complete if known at the time of the issuance of the Certificate of Substantial Completion.

PAGE 34

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect (if the Owner requests) 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.

...

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

- .1 If this Contract involves the construction or rehabilitation of a Project financed by the United States Department of Housing and Urban Development ("HUD") or other Project lender, the Owner's receipt of authorization from HUD to disburse funds or the Owner's receipt of funds from the Project lender (as appropriate) is a condition precedent to the Owner's obligation to make the final payment to the Contractor.
- .2 The date of final completion of the Work is the date determined by the Owner when all Work is complete, accessible, operable and usable by the Owner and all parts and systems are one hundred percent (100%) complete and cleaned for the Owner's full use and all drawings, certificates, bonds, guarantees, and documents required by the Contract Documents have been provided to the Owner by the Contractor.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect and Owner (1) an affidavit in form and substance reasonably acceptable to the Owner 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~~, satisfied and that all Work is complete in accordance with the requirements of the Contract Documents, (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.~~ a final lien waiver from the Contractor and each Subcontractor; (7) all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, record documents, and other documents required by Contract Documents; (8) all warranties, guarantees and other documents required by the Contract Documents, (9) "as built" drawings for utilities and the Project in such format as the Owner specifies, (10) all sustainability compliance reports and other documentation required under any sustainability, green or LEED certification for with the Project is eligible; (11) all of the documents and information required under Section 9.3 in such format as the Owner specifies, and (12) all of the documents and information required under Section 9.3 to be included with Applications for Payment. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor ~~may~~ shall 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 immediately 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.

PAGE 35

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, Sub-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.

...

§ 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. The Contractor also shall be responsible, at the Contractor's sole cost and expense, for all measures necessary to protect property adjacent to the Project and improvements within that adjacent property. The Contractor shall promptly repair any damage to such property or improvements.

PAGE 36

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~~ matter and to provide notice to insurers.

§ 10.2.9 The Contractor shall promptly report in writing to the Owner and Architect all accidents arising out of or in connection with the Work that cause death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if an accident results in death, serious personal injury, or serious damage, the accident shall be reported immediately by telephone or messenger to the Owner and Architect.

...

§ 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 Subject to the Contractor's compliance with Article 15, 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.start-up , which adjustments shall be accomplished as provided in Article 7.

.1 The definition of "rendered harmless" as it relates to hazardous materials shall mean that in any affected area where these materials are present, the exposure concentration of them shall not exceed the Permissible Exposure Level as established by the Occupational Safety and Health Administration and/or any other agency having regulations governing the exposure to and handling of such materials.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, ~~Architect, Architect's consultants, Sub-subcontractors,~~ 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.

PAGE 37

#### **§ 11.1 Contractor's and Subcontractor's Insurance and Bonds**

**§ 11.1.1** The Contractor and all Subcontractors shall purchase and maintain insurance and bonds 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.~~set forth in the Insurance Requirements attached hereto as Attachment A to the A201.

**§ 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.

...

#### **§ 11.2.1.1 Property Insurance**

If the Project involves construction of a new building or an increase in the footprint of an existing building, the Owner shall provide and maintain a builder's risk insurance policy written on a special causes of loss form and an open-perils basis providing coverage for direct physical loss of or damage to covered property arising from insured perils that shall not exclude: theft; fire; vandalism; malicious mischief; earthquake; earth movement; tornado; lightning; explosion; breakage of glass; flood; windstorm; collapse; water damage; hot and cold testing; debris removal and/or demolition occasioned by enforcement of applicable law; sudden and accidental equipment breakdown; and resulting from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials.

- .1 The property insurance shall cover the Project in the course of construction including false-work, temporary buildings and structures, and materials used in the construction process, stored on or off-site, or while in transit.
- .2 The coverage shall be written on a replacement-cost basis in an amount equal to not less than the initial Contract Sum, plus the value or: (1) all subsequent Modifications; (2) materials supplied and installed by others; and (3) any furnishings, fixtures, materials, or equipment located at the Site. All sub-limits of coverage are subject to the prior written approval of the Owner.
- .3 The property insurance shall not include any deductible of more than \$25,000 per occurrence for the "all-risk perils." Deductibles for other perils may be higher.
- .4 The insureds under the policy shall include the Owner, Contractor, Subcontractors at all tiers, and Separate Contractors.
- .5 Coverage shall include the reasonable extra costs of acceleration and expediting temporary and permanent repairs to, or permanent replacement of, damaged property. Those covered costs shall include overtime wages and the extra costs of "express" or other means for rapidly transporting materials and supplies necessary to the repair or replacement.
- .6 Coverage shall include provisions for mechanical or electrical breakdown, or boiler system testing if a boiler system is part of the Work.
- .7 Coverage shall include temporary structures and scaffolding, along with collapse coverage.
- .8 Coverage shall be primary to all other applicable insurance.
- .9 The policy shall specifically permit and allow for partial occupancy as defined under the Contract Documents and for partial occupancy or a similar term as used under the policy.
- .10 The policy shall be maintained in effect until Substantial Completion of all Work.
- .11 The tools and equipment of the Contractor and all Subcontractor's at every tier shall not be covered under the property insurance. It is the sole responsibility of the Contractor and all Subcontractor's at every tier to maintain such coverage.

**§ 11.2.1.2** If the Project is solely the installation of material and equipment and not new building construction, the Owner may in its discretion purchase and maintain a builder's risk, builder's risk-renovations, or installation floater insurance policy meeting the requirements below. Owner's standard property insurance shall be maintained:

- .1 The Contractor shall be named as an additional insured on the insurance policy.
- .2 The property insurance shall not include any deductible of more than \$25,000 per occurrence for the "all-risk perils." Deductibles for other perils may be higher.
- .3 Coverage for property while at a temporary location.
- .4 Coverage for property while in transit.
- .5 Coverage shall include testing.
- .6 Coverage shall include business income and extra expense.
- .7 Coverage shall include earth movement.
- .8 Coverage shall include flood insurance (this does not apply to covered property at any Project Site or temporary location in any area designated by the Federal Emergency Management Agency as Flood Zones A, B, Shaded X, D, or V as designated as a "Special Flood Hazard Area (SFHA), "Flood Prone Area," "Not Mapped," or "Undesignated Flood Hazard."
- .9 Coverage shall include a limited mold policy.
- .10 Coverage shall include water intrusion.

**§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. ~~Unless the lapse in coverage~~ If an actual lapse in coverage occurs, then, unless that lapse arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice of the actual lapse from the



Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

**PAGE 39**

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

...

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

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

**PAGE 40**

The Contractor shall promptly correct Work rejected by the Owner or 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.

...

§ 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, or elsewhere in the Contract Documents, 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 or credit enhancement~~. The Contractor shall execute all consents reasonably required to facilitate the assignment.

**PAGE 41**

§ 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 Owner and Architect timely notice of when and where tests and inspections are to be made so that ~~the Architect they~~ 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.

...

#### **§ 13.6 Captions**

The captions or headings in the Contract Documents are for convenience and reference only and in no way define, describe, extend, or limit the scope, meaning, or intent of the Contract Documents.

#### **§ 13.7 Severability**

If any part of this Contract is held as a matter of law to be unenforceable or unconscionable, the remainder of this Contract will be enforceable without that part.

#### **§ 13.8 Survivability**

All representations, indemnity obligations, and necessarily continuing obligations under this Contract, will survive final payment, completion and acceptance of the Contractor's services, and termination or completion of this Contract.

#### **§ 13.9 Publicity, Photography, and Awards**

§ 13.9.1 Before completion of the Project, the Owner alone shall control all public relations or publicity about the Project, and the Contractor shall not make any public statement about the Project without the Owner's prior written consent.

§ 13.9.2 After completion of the Project, the Contractor may exercise reasonable public relations and marketing efforts related to the Project, provided that the Contractor (1) properly identifies the Owner and the Architect and their participation in the Project and (2) complies with the Owner's related requests and requirements.

§ 13.9.3 The Contractor shall obtain the Owner's prior written consent and will be subject to the Owner's related requirements before the Contractor commissions, takes, publishes, or otherwise uses any photographs of the Project. The foregoing requirement does not apply to the photographs taken in the normal course of construction or the use of those photographs to facilitate the completion of the Work.

#### **§ 13.10 OHFA Funding Requirements (See Attachment D to the A201)**

The Project is subject to Ohio Housing Finance Agency (OHFA) low income housing tax credit funding requirements including final Contractor's Cost Certification as further described in Attachment D included herewith.

#### **§ 13.11 Section 3 Requirements (See Attachment C to the A201 – Section 3 Clause Part 135.38)**

The Contractor shall be responsible for complying with Section 3 requirements and any reporting as required per the HUD 92554M and Section 3 clause attachments.

#### **§ 13.12 Build America / Buy America - BABA Requirements (See Attachment C to the A201 – BABA**

The Contractor shall be responsible for complying with BABA requirements and any reporting as required per the BABA clause attachment.

#### **PAGE 43**

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

...

.4 otherwise is guilty of substantial breach of a provision of fails to perform any of its material duties or obligations under the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the

Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate ~~employment of the Contractor~~ all or a portion of the Contract and may, subject to any prior rights of the surety:

...

- .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~~ the Work; and
- .4 Require the Contractor to remove any part or all of the Contractor's or a Subcontractor's or a Sub-Subcontractor's equipment, machinery, and supplies from the site, and in the event that the Contractor fails to do so within three (3) days from the date of such request, the Owner may remove and/or store such equipment, machinery, and supplies at the Contractor's expense.

...

§ 14.2.5 After termination pursuant to this Section 14.2, the Contractor shall, unless the notice of termination directs otherwise, (1) immediately discontinue the Work on that date, place no further orders or Subcontracts for materials, equipment, services, facilities, or otherwise, except as may be necessary for completion of such portion of the Work as is not discontinued; (2) promptly make every effort to procure cancellation upon terms satisfactory to the Owner of all orders and Subcontracts to the extent they relate to the performance of a discontinued portion of the Work; and (3) thereafter do only such Work as may be necessary to protect the Work already in progress and to protect materials and equipment on the Project site or in transit thereto.

§ 14.2.6 When the Contractor's services have been terminated by the Owner pursuant to this Section 14.2, the termination shall not affect any rights or remedies of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of funds due the Contractor by the Owner shall not release the Contractor from liability for performance of the Work in accordance with the requirements of the Contract Documents.

§ 14.2.7 In the event that the Owner's termination for cause pursuant to this Section 14.2 is determined by binding dispute resolution to have been unjustified, such termination shall be deemed to have been a termination pursuant to Section 14.4.

#### PAGE 44

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the ~~termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.~~ termination but in no event will the Contractor be entitled to any recovery on account of any Work the Contractor did not perform as a result of the termination.

§ 14.4.4 When the Owner terminates the Contractor's services pursuant to this Section, the termination shall not affect the rights or remedies of the Owner against the Contractor then existing or which may thereafter accrue.

§ 14.4.5 Notwithstanding the provisions of Section 14.4.3 to the contrary, if the Owner terminates the Contract pursuant to this Section 14.4, but there exists an event of the Contractor's default, the Contractor will be entitled to receive only such sums as it would be entitled to receive following the occurrence of an event of default as provided in Section 14.2.

#### PAGE 45

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

§ 15.1.3.3 Unless otherwise agreed in writing by the Owner, within forty-five (45) days after the initiation of a Claim, the Contractor shall submit in writing to the Owner and Architect all information and statements which substantiate the Claim and which satisfy the requirements of Sections 15.1.5 and 15.1.6.

...

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.5, Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

...

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4. **§ 15.1.5.1** Except for a Claim relating to an emergency endangering life or property arising under Section 10, but notwithstanding any other provision of the Contract Documents to the contrary, the Contractor shall obtain the Owner's specific written authorization prior to proceeding with any change in the Work that may entitle the Contractor to an increase in the Contract Sum. The Contractor's failure to obtain such prior written authorization shall constitute an irrevocable waiver of any related Claim. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

**§ 15.1.5.2** The Contractor shall substantiate each Claim for an increase in the Contract Sum with (1) written documentation of the actual additional direct costs to the Contractor due to the event giving rise to the Claim; and (2) a written statement from the Contractor that the increase requested is the entire increase in the Contract Sum associated with the Claim.

...

**§ 15.1.6.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. The Contractor shall substantiate each Claim for an extension of the Contract Time with (1) a written description of the effect of the delay on the progress of the Work; (2) a detailed schedule which identifies the critical portions of the Work impacted by the delaying event and the dates of such impact; (3) a detailed written proposal for an increase in the Contract Sum which would fully compensate the Contractor for all costs of acceleration of the Work needed to completely overcome the associated delay together with a statement consistent with Section 15.1.5.2; and (4) a written statement from the Contractor that the extension requested is the entire extension of the Contract Time associated with the Claim.

- .1 In the case of a continuing delay, only one Claim is necessary; delay occurring on consecutive days, only one Claim is necessary; provided, however, that within ten days after the cessation of the cause of the continuing delay, the Contractor shall notify the Owner and Architect in writing that the cause of the delay has ceased. The failure to give timely notice of the cessation of the cause of the continuing delay will constitute an irrevocable waiver of any Claim based on the continuing delay.

**§ 15.1.6.2** ~~If~~In addition to the requirements of Section 15.1.6.1, if adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on a critical element of the scheduled construction. The support for and evaluation of all adverse-weather Claims with respect to the scheduled construction shall be based upon average weather conditions during the 10 years immediately preceding the dates at issue in the Claim as such weather conditions were recorded at the government-controlled weather-recording facility nearest to the site. The construction schedule will include 30 weather days meeting the above criteria; additional weather days will be evaluated for extension of time justified by the preceding criteria. shall be the Contractor's exclusive remedy in the event of any delay, whether or not such delay is foreseeable, not the proximate result of the act or failure to act of the Owner or anyone for whom the Owner is directly responsible or directly attributed to pandemic-related circumstances. The Contractor specifically waives any right it may otherwise have to an increase in the Contract Sum or to any type of damages including but not limited to consequential damages, lost opportunity costs, impact damages or other similar remuneration because of such delay or disruption to all or any

part of the Work, whether such delay was foreseen or unforeseen and whether caused by the active interference of any party for whom the Owner is not directly responsible

§ 15.1.6.4 Notwithstanding any other provision of the Contract Documents to the contrary, in no event shall the Contractor be entitled to an increase in the Contract Time on account of any delaying impact on a non-critical element of the Work.

PAGE 46

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents. As identified in the HUD Contract Article 2.C – to be calculated per HUD Guidelines.

...

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

PAGE 47

§ 15.2.9 Notwithstanding any other provision of the Contract Documents to the contrary, either party, without first submitting a Claim to the Initial Decision Maker, may seek judicial relief in the state or federal court where the Project is located, but only if the sole relief sought is a temporary restraining order or a preliminary or permanent injunction.

§ 15.2.10 Upon receipt of a written request, the Contractor shall make available to the Owner and its representatives all books, records, and other documents in the Contractor's possession or under its control that relate to any Claim or dispute, and the Contractor shall require its Subcontractors and Sub-subcontractors to do likewise.

§ 15.2.11 Upon receipt of a written request, the Owner shall make available to the Contractor and its representatives all books, records, and other documents in the Owner's possession or under its control that relate to any Claim or dispute, and the Owner shall require its Architects/Engineers, Consultants and Separate Contractors to do likewise.

...

§ 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.

PAGE 48

#### **§ 15.4 Arbitration**

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

filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

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

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

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

**§ 15.4.4 Consolidation or Joinder**

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

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

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

## **Certification of Document's Authenticity**

**AIA® Document D401™ – 2003**

I, Jon Holway, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 11:53:00 ET on 04/21/2026 under Order No. 2114462182 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2017, General Conditions of the Contract for Construction, other than those additions and deletions shown in the associated Additions and Deletions Report.

  
(Signed)

Jon Holway - Senior Director of Pre-Construction

April 21, 2026  
(Dated)

# APPENDIX C - HUD 92554M Supplementary Conditions of the Construction Contract



Salem Avenue Senior Community  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

PROJECT # 2025-21  
1/15/2025

PAGE INTENTIONALLY LEFT BLANK

# SUPPLEMENTARY CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

U.S. Department of Housing  
and Urban Development  
Office of Housing

OMB Approval No. 2502-0598  
(Exp. 12/31/2017)

Public Reporting Burden for this collection of information is estimated to average 0.2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Response to this request for information is required in order to receive the benefits to be derived. This agency may not collect this information, and you are not required to complete this form unless it displays a currently valid OMB control number. While no assurance of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information Act request.

## Article 1: Labor Standards

**A. Applicability.** The Project or program to which the construction work covered by this Contract pertains is being assisted or insured by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract or related instrument pursuant to the provisions applicable to such Federal assistance or insurance. Any statute or regulation contained herein shall also include any subsequent amendment or successor statute or regulation.

**B. Minimum Wages.** Pursuant to Section 212 of the National Housing Act, as amended, 12 U.S.C. 1715c, the minimum wage provisions contained in this paragraph B do not apply to those projects with Security Instruments insured under Section 221(h)(1) designed for less than 9 families and they do not apply to those projects with Security Instruments insured under either Section 220 or 233 designed for less than 12 families.

1. (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project) shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1 (b)(2) of the Davis-Bacon Act (40 U.S.C. 3141(2)(B)(ii)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii)) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics that is not listed in the wage determination and that is to be employed under this Contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, D.C. 20210 ("**Administrator**"). The Administrator, or an authorized representative, shall approve, modify, or disapprove every additional classification action within thirty (30) days of receipt and so advise HUD or its designee or shall notify HUD or its designee within the thirty (30) day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, shall issue a determination within thirty (30) days of receipt and so advise HUD or its designee or shall notify HUD or its designee within the thirty (30) day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs B.1.(ii)(b) or (c) of this Article, shall be paid to all workers

performing work in the classification under this Contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit that is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

**2. Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project), all or part of the wages required by the Contract, HUD or its designee may, after written notice to the Contractor, sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.

### **3. Payrolls, records, and certifications.**

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the Project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1 (b)(2)(B) of the Davis-Bacon Act (40 U.S.C. 3141(2)(B)(ii))), daily and weekly number of hours worked, deductions made and actual wages paid.

Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1 (b)(2)(B) of the Davis-Bacon Act (40 U.S.C. 3141(2)(B)(ii)), the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii)(a) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the Contract, but if the agency is not such a party, the Contractor shall submit the payrolls to the applicant, sponsor, or Owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/wh347.pdf> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the Contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant sponsor, or Owner, as the case may be, for transmission to HUD or its designee, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete.

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph B.3.(ii)(b) of this Article.

(d) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Sections 3801 et seq of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under subparagraph B.3.(i) of this Article available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### **4. Apprentices and Trainees.**

(i) **Apprentices.** Apprentices shall be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by such Office, or if a person is employed in his or her first ninety (90) days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship, or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in

any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where the Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship, or a State Apprenticeship Agency recognized by such Office, withdraws approval of an apprenticeship program, the Contractor shall no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees shall not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman's hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws

approval of a training program, the Contractor shall no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

**5. Compliance with Copeland Act Requirements.** The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.

**6. Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraphs 1 through 10 of this paragraph B and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage determination, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all Contract clauses referenced in this subparagraph.

**7. Contract termination and debarment.** A breach of the Contract clauses in 29 CFR 5.5 may be grounds for termination of the Contract, and for debarment as a contractor or a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of Eligibility.**

(i) By entering into this Contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act (40 U.S.C. 3144(b)(2)) or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act (40



U.S.C. 3144(b)(2)) or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Department . . . makes, passes, utters or publishes any statement, knowing the same to be false . . . shall be fined under this title or imprisoned not more than two years, or both."

### **C. Contract Work Hours and Safety Standards Act.**

**1. Applicability and Definitions.** This paragraph C of Article 1 is applicable only if a direct form of federal assistance is involved, such as Section 8, Section 202/811 Capital Advance, grants etc., and is applicable only where the prime contract is in an amount greater than \$100,000. As used in this paragraph C, the terms "laborers" and "mechanics" include watchmen and guards.

**2. Overtime requirements.** No contractor or subcontractor contracting for any part of the Contract work that may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty (40) hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek.

**3. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the immediately preceding subparagraph C.2, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, the Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of such subparagraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by the clause set forth in such subparagraph.

**4. Withholding for unpaid wages and liquidated damages.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract, or under any other Federal contract with the same prime contractor, or under any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or

subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph 3 of this paragraph C.

**5. Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraphs 1 through 5 of this paragraph C and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in such subparagraphs 1 through 5.

#### **D. Certification.**

For projects with Security Instruments insured under the National Housing Act, as amended, that are subject to paragraph B of this Article 1, the Contractor is required to execute the Contractor's Prevailing Wage Certificate within HUD-92448 as a condition precedent to insurance by HUD of the Loan, or an advance thereof, made or to be made by the Lender in connection with the construction of the Project.

### **Article 2: Equal Employment Opportunity**

**A. Applicability.** This Article 2 applies to any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee.

**B.** The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability, or national origin. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, disability or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided setting forth the provisions of this nondiscrimination clause.

**C.** The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor state that all qualified applicants shall receive consideration for employment without regard to race, color, religion, sex, disability, or national origin.

**D.** The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or workers representatives of the Contractor's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

E. The Contractor shall comply with all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

F. The Contractor shall furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and shall permit access to its books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

G. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and Contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulations or order of the Secretary of Labor, or as otherwise provided by law.

H. The Contractor shall include the provisions of paragraphs A through H of this Article 2 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions shall be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as HUD or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance. *Provided, however,* that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by HUD or the Secretary of Labor, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

### **Article 3: Equal Opportunity for Businesses and Lower Income Persons Located Within the Project Area**

A. This Article 3 is applicable to projects covered by Section 3, as defined in 24 CFR Part 135.

B. The work to be performed under this Contract is on a project assisted under a program providing direct Federal financial assistance from HUD and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible opportunities for training and employment be given to lower income residents of the unit of local government or the metropolitan area (or non-metropolitan county) as determined by HUD in which the Project is located and contracts for work in connection with the Project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the same metropolitan area (or non-metropolitan county) as the Project.

#### **Article 4: Health and Safety**

A. This Article 4 is applicable only where the prime contract is in an amount greater than \$100,000.

B. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

C. The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926, and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.

D. The Contractor shall include the provisions of this Article 4 in every subcontract so that such provisions shall be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as HUD or the Secretary of Labor shall direct as a means of enforcing such provisions.

# APPENDIX D - Current Davis Bacon Wage Rate Determination

Salem Avenue Senior Community  
Dayton, Ohio 43215

Comm. #2025-21  
pH7 Architects

PROJECT # 2025-21  
1/15/2025

PAGE INTENTIONALLY LEFT BLANK

"General Decision Number: OH20260018 01/02/2026

Superseded General Decision Number: OH20250018

State: Ohio

Construction Type: Residential

Counties: Greene, Miami, Montgomery and Preble Counties in Ohio.

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories).

|                     |                  |
|---------------------|------------------|
| Modification Number | Publication Date |
| 0                   | 01/02/2026       |

ENGI0018-027 05/01/2019

|                                              | Rates    | Fringes |
|----------------------------------------------|----------|---------|
| POWER EQUIPMENT OPERATOR<br>(Bulldozer)..... | \$ 37.02 | 15.20   |

ENGI0066-026 06/01/2023

|                                        | Rates    | Fringes |
|----------------------------------------|----------|---------|
| POWER EQUIPMENT OPERATOR<br>Crane..... | \$ 36.92 | 24.01   |

LAB00265-004 06/01/2024

|                                   | Rates    | Fringes |
|-----------------------------------|----------|---------|
| LABORER (Mason Tender-Brick)..... | \$ 25.90 | 18.40   |

PAIN0707-001 05/01/2025

|                                 | Rates    | Fringes |
|---------------------------------|----------|---------|
| PAINTER (Brush and Roller)..... | \$ 33.95 | 20.20   |

PLAS0109-006 06/01/2025

|                                   | Rates    | Fringes |
|-----------------------------------|----------|---------|
| CEMENT MASON/CONCRETE FINISHER... | \$ 33.48 | 24.81   |

SHEE0033-016 06/01/2025

|                                                          | Rates    | Fringes |
|----------------------------------------------------------|----------|---------|
| SHEET METAL WORKER (HVAC Duct<br>Installation Only)..... | \$ 20.40 | 16.50   |

SUOH2012-020 07/20/2012

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| BRICKLAYER..... | \$ 28.40 | 11.78   |

|                                                 |          |       |
|-------------------------------------------------|----------|-------|
| CARPENTER.....                                  | \$ 20.19 | 6.51  |
| ELECTRICIAN.....                                | \$ 19.68 | 9.46  |
| LABORER: Common or General.....                 | \$ 21.50 | 5.23  |
| OPERATOR: Backhoe/Excavator.....                | \$ 25.25 | 9.38  |
| OPERATOR: Bobcat/Skid<br>Steer/Skid Loader..... | \$ 29.49 | 11.16 |
| PLUMBER.....                                    | \$ 20.00 | 5.52  |
| ROOFER.....                                     | \$ 16.85 | 3.83  |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

-----

The body of each wage determination lists the classifications



and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

## State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

## ----- WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

=====

END OF GENERAL DECISION

..