

# PROJECT MANUAL

FOR

## ROOF REPLACEMENT

AT

GLENVIEW TRANSFER STATION  
3 PROVIDENCE WAY  
DES PLAINES, ILLINOIS 60016

OWNER:

SOLID WASTE AGENCY  
OF NORTHERN COOK COUNTY (SWANCC)  
77 WEST HINTZ ROAD  
WHEELING, ILLINOIS 60090

DATE: MARCH 15, 2024

PROJECT NO. 23122



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OF NORTHERN COOK COUNTY (SWANCC)  
77 WEST HINTZ ROAD  
WHEELING, ILLINOIS 60090

ARCHITECT:  
ARCON ASSOCIATES, INC.  
2050 SOUTH FINLEY ROAD, SUITE 40  
LOMBARD, ILLINOIS 60148

## TABLE OF CONTENTS

### **DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

Section 00 01 01 – Title Page	00 01 01-1
Section 00 01 10 – Table of Contents	00 01 10-1
Section 00 01 15 – List of Drawings	00 01 15-1
Section 00 11 13 – Advertisement for Bid	00 11 13-1
Section 00 21 13 – Instructions to Bidders	00 21 13-1-11
Section 00 41 00 – Bid Forms	00 41 00-1-2
Section 00 45 00 – Representations and Certifications	00 45 00-1-9
AIA A105 – 2017 Standard Short Form of Agreement Between Owner and Contractor	1-26

### **DIVISION 01 – GENERAL REQUIREMENTS**

Section 01 10 00 – Summary	01 10 00-1-4
Section 01 20 00 – Price and Payment Procedures	01 20 00-1-3
Section 01 21 00 – Allowances	01 21 00-1
Section 01 22 00 – Unit Prices	01 22 00-1-2
Section 01 30 00 – Administrative Requirements	01 30 00-1-8
Section 01 40 00 – Quality Requirements	01 40 00-1-3
Section 01 50 00 – Temporary Facilities and Controls	01 50 00-1-2
Section 01 60 00 – Product Requirements	01 60 00-1-3
Section 01 61 16 – Volatile Organic Compound (VOC) Content Restrictions	01 61 16-1-3
Section 01 78 00 – Closeout Submittals	01 78 00-1-2

### **DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES**

Section 06 10 01 – Roof Carpentry	06 10 01-1-4
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### **DIVISION 07 – THERMAL AND MOISTURE PROTECTION**

Section 07 52 17 – SBS Modified Bitumen (CA) Membrane Roofing	07 52 17-1-12
Section 07 62 00 – Sheet Metal Flashing and Trim	07 62 00-1-5
Section 07 72 00 – Roof Accessories	07 72 00-1-7
Section 07 92 00 – Joint Sealants	07 92 00-1-7

**SECTION 00 01 15**

**LIST OF DRAWINGS**

G0.1	Cover Sheet
A4.1	Composite Roof Plan, Scope of Work Notes, Scope of Work Table, General Work Notes
A4.2	Partial Roof Plans, General Work Notes
A4.3	Roof Details
HV0.1	Partial Roof Plan – HVAC Demolition Work
HV1.0	Partial Roof Plan – HVAC Work

**END OF SECTION 00 01 15**

## ADVERTISEMENT FOR BID

The **Solid Waste Agency of Northern Cook County (SWANCC)**, 77 West Hintz Road, Wheeling, Illinois, 60090, will receive sealed bids for:

**ROOF REPLACEMENT  
AT  
GLENVIEW TRANSFER STATION  
PROJECT NO. 23122**

The **Bid Opening** will be on **Thursday, April 4, 2024, at 2:00 PM** at the **Solid Waste Agency of Northern Cook County (SWANCC) Administrative Offices** 77 West Hintz Road, Wheeling, Illinois, 60090. At this time the Bids will be publicly opened and read. A Performance and Payment Bond in the full amount of the contract will be required. A Bid Security of 10% of the Bid is required with the proposal. The Contractor must pay the Prevailing Wage Rates for all work per Illinois Law.

It is the policy of Solid Waste Agency of Northern Cook County (SWANCC) to provide equal opportunity to all qualified business in the awarding of contracts and accordingly promotes the utilization of diversified businesses to the maximum extent feasible in any contract issued against this solicitation to bid.

There will be a **Mandatory** Pre-Bid Meeting of all interested bidders. Any bidder submitting a bid on this project **must** attend this meeting. Location and time are as follows:

Location: Glenview Transfer Station, 3 Providence Way, Des Plaines, Illinois 60016  
Date: **Thursday, March 21, 2024**  
Time: **9:00 AM**

The Owner reserves the right to reject any or all Bids, to waive irregularities in the bidding procedure, or accept the Bid that in its opinion will serve its best interest. Any such decision shall be considered final. The Owner reserves the right to set aside a Bid from a Contractor who, in the Owner's opinion, does not exhibit past experience equal to the size and scope of this project.

**PREVAILING WAGE LAW:** This Contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the current "prevailing rate of wages" (hourly cash wages plus amount for fringe benefits) in the county where the work is performed. The Department publishes the prevailing wage rates on its website at: <http://www.state.il.us/agency/idol/rates/rates.HTM>. The Department revises the prevailing wage rates, and the contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website. All contractors and sub-contractors rendering services under this contract must comply with all requirements of the Act, *including but not limited to, all wage, notice and record keeping duties.*

The bidder shall have a written sexual harassment policy in place in full compliance with Section 2-105 of the Illinois Human Rights Act.

Obtain Bidding Documents on **Monday, March 18, 2024, at:**

The **Solid Waste Agency of Northern Cook County (SWANCC)** website:  
<https://swancc.org/about-us/bids-rfps>.

## **SECTION 00 21 13**

### **INSTRUCTIONS TO BIDDERS**

#### **1. INSTRUCTIONS TO BIDDERS**

The work is to be performed at:

Glenview Transfer Station  
3 Providence Way  
Des Plaines, Illinois 60016

The Owner is:

Solid Waste Agency  
of Northern Cook County (SWANCC)  
77 West Hintz Road  
Wheeling, Illinois 60090

#### **2. SCOPE**

Scope of Work includes, but is not limited to the following:

- A. The Contractor is notified that Allowances are included in this project. See Specification Division 01 Section "Allowances."
- B. Provide work on the following Roof Areas, as noted on the drawings and in the Project Manual. Work to be provided includes, but is not limited to, removal of the existing roof membrane, removal of the existing roof system, installation of new roof insulation, new SBS modified bituminous roof membrane/roof system and all associated perimeter metal.
  - 1. Glenview Transfer Station: Roof Areas 1.1, 1.2, 2.1, 2.2, 3.0, 4.0, 5.1, 5.2, 5.3 and 6.0
- C. Interactive Project Closeout Documents will be required at the completion of this project. See Division 1 for details.

#### **3. GENERAL**

The Contractor shall supply all labor, transportation, apparatus, scaffolding, and any tools necessary for the completion of the work, maintain and remove temporary equipment, and construct in excellent and workmanlike manner the complete work and everything properly incidental thereto as stated in the contract documents or reasonably implied therefrom. It is not the intent of the contract documents to set forth in detail every item necessary for the construction of this project. Contractor must be qualified for this work and must, without direction, furnish and install everything necessary to provide construction complete and in acceptable order ready for use without additional work. All parts must be coordinated, complete, ready to operate and delivered to the Owner in new condition.

Each Contractor shall coordinate his work with any and all other trades and Contractors on the site. His work shall be performed in a timely fashion to meet the project time schedule for all work.

#### **4. BIDDING DOCUMENTS**

- A. Advertisement for Bids
- B. Bid Form (Proposal)
- C. Bid Security
- D. Instructions to Bidders

- E. General Conditions
- F. Supplementary General Conditions
- G. Specifications
- H. Drawings
- I. Addenda

Contractor shall review all existing drawings for the building, especially electrical, structural, mechanical, architectural and fire alarm system drawings. These are on file at the Owner's office.

## 5. CONTRACTOR REQUIREMENTS

All interested Bidders shall meet the following requirements in order to bid this project:

- A. Be a licensed Prime Roofing Contractor in the State of Illinois and shall have five (5) years' experience minimum.
- B. As the Prime Roofing Contractor, they shall provide evidence that they have a minimum bonding capacity of \$5,000,000. The Bonding Company must be licensed in the State of Illinois.
- C. As the Prime Roofing Contractor, they shall provide a letter from the specified manufacturer(s) with their Bid Form, stating that they can obtain the specified guarantees.
- D. As the Prime Roofing Contractor, they shall have their own place of business, equipment, staff and manpower, etc., required for the type of work that they are licensed to perform. The business address, equipment storage as well as the staff and manpower should be located within a 100 mile radius of the project site location.
- E. As the Prime Roofing Contractor, they shall have successfully completed five (5) projects of the same size (or larger), scope, cost and guarantees in the last five (5) years. These projects shall be listed in the bid form for the system specified on this project. The foreman and manpower for this project should also have worked on five (5) projects of the same size (or larger) and scope in the last five (5) years, as represented on the Bid Form.
- F. As the Prime Roofing Contractor, they shall be able to meet the necessary insurance limits required by the Contract Documents. The insurance company shall be acceptable to Owner.
- G. As the Prime Roofing Contractor, they shall provide financial information at the Owner's request, including, but not limited to, financial statements for the three (3) previous years. The financial statements shall have been prepared and certified by a C.P.A.
- H. As the Prime Roofing Contractor, they shall submit to the Owner for review a list of all subcontractors that are not listed on the Bid Form, within ten (10) days after being notified that their bid has been accepted.
- I. As the Prime Roofing Contractor, they shall be pre-qualified with the Architect prior to the scheduled Pre-Bid Meeting. Pre-Qualifications shall be presented on the Architect's form "Pre-Qualification Form for Prime Roofing Contractors" and / or AIA Document A305-1986 (or current version thereof). Pre-Qualification must be current as of January 1 of the current year.
- J. As the Prime Roofing Contractor, they **MUST** attend the **MANDATORY** Pre-bid Meeting.
- K. As the Prime Roofing Contractor, they shall be reminded of additional requirements in the Construction Documents including, but not limited to Section 07 52 17 "SBS Modified Bituminous (CA) Roofing", 1.05 Quality Assurance.

- L. As the Prime Roofing Contractor, represents and warrants that they are not currently and within the past five (5) years, have not been suspended, debarred, excluded, or otherwise limited as a contractor, construction manager or participant in any state, federal or Illinois Purchasing Act governed construction contract, grant or reimbursement program. In the event Contractor is or has been suspended, debarred, excluded, or otherwise.
- M. All Contracts for the construction of Public Works are subject to the Illinois Prevailing Wage Act (820 ILCS 130/1-12).
- N. As the Prime Roofing Contractor, represents that they are on the manufacturer's list of approved contractors and are qualified at the time of documents issuance to provide the specified manufacturer guarantee and have manufacturer certified experience in installing manufacturer's PMMA flashing systems.
- O. Other subcontractor requirements, as noted in the documents.

## **6. PROPOSAL (BID) INSTRUCTIONS**

### **6.1 GENERAL**

A Bid, (and one additional copy) as listed below, shall be received for this work only in a sealed opaque envelope bearing the following inscription:

**ROOF REPLACEMENT  
AT  
GLENVIEW TRANSFER STATION  
PROJECT NO. 23122**

bearing the name of the bidder also. All bids will be firm for a period of sixty days from the date of the Bid Opening.

Bids shall be opened at the time noted in the Advertisement for Bids. No bids will be accepted after this time.

No oral, telephonic, telegraphic or facsimile proposal will be considered. Proposals shall be signed by the bidder, giving his full name and business address, and stating whether an individual, partnership or corporation.

Erasures or other changes on the Bid Form will be noted by the signature of the bidder.

Each bidder shall fill in all the blanks on the proposal form furnished.

All quotations shall be signed in words and figures; and in case of discrepancy between the amount stated in words and the amount stated in figures, the amount stated in words shall govern.

All overtime or extra costs for working within the specified time limitations must be included in the proposal. The Owner will not pay for any premiums on wages.

Prices quoted shall include all charges for packing, transportation, and delivery to the building.

The signing of these Bid Forms shall be construed as acceptance of all provisions contained herein.

All proposals shall be submitted with each space properly completed. The special attention of bidders is directed to the policy that no claim for relief because of errors or omissions in the bidding will be considered, and bidders will be held strictly to the proposals as submitted. Should a bidder find any discrepancies in, or omissions from, any of the documents, or be in doubt as to their meanings, he shall



advise the Architect, who will issue the necessary clarifications to all prospective bidders by means of Addenda.

## **6.2 INTERPRETATION OF CONTRACT DOCUMENTS PRELIMINARY TO THE SUBMISSION OF BIDS**

If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or other bidding documents, he may submit to the Architect a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery.

Any interpretation of the proposed documents will be made only by an Addendum duly issued, and a copy of such Addendum will be mailed, telephoned or delivered to each person issued a set of such contract documents by the Architect or Owner and to such other prospective bidders as have requested that they be furnished with a copy of each Addendum. The Architect is not responsible if a bidder has not received an Addendum. It is the responsibility of each bidder to keep himself informed of current bidding information.

When the Architect issues addenda it is the Bidder's responsibility to copy and insert them into the Bid Documents he has obtained from the Architect or Owner.

## **6.3 PERMITS AND FEES**

All permits, licenses, tap-on fees, tie-in fees, and any other fees and permits shall be coordinated and obtained by the Contractor and paid by the Owner.

## **6.4 EXCEPTIONS**

Any deviation, clarification or exception to these bid documents could be cause for rejection of your bid. Under the State Bidding Laws, exceptions to the bid could be cause for disqualification of the bidder.

## **6.5 BID SECURITY**

Bids shall be accompanied by a Bid Security as noted in the Advertisement for Bids. Such Bid Security shall be in the form of a certified check or Bid Bond in the amount of 10% of the Proposal. All checks and Bonds shall be made in favor of the Owner. Failure to submit the proper form and amount of Bid Security may result in rejection of the bid. Bid Bonds must be issued by the same company that provides the subsequent Performance and Payment Bonds.

The bidder agrees that the proceeds of the Bid Security will become the property of the Owner if for any reason the bidder withdraws his bid prior to the time period noted in the Bid Form. The defaulting bidder shall pay the Owner all costs which exceed the amount of his bid for procuring the performance for the work required by the bidding documents. Such costs include, but are not limited to, additional advertising and architectural and engineering services.

## **6.6 CONFIRMATION OF ADDENDA**

It is the responsibility of each Contractor to determine if any Addenda have been issued by contacting the office of the Architect 630-495-1900 or by email at [bemcelmeel@arconassoc.com](mailto:bemcelmeel@arconassoc.com).

## **6.7 BIDDER'S RESPONSIBILITY FOR CONDITIONS OF WORK AT SITE**

Each bidder shall inform himself of the conditions under which the work is to be performed, the site of the work, the obstacles which may be encountered and all other relevant matters concerning the work to be performed; also, the bidder, if awarded the contract, shall not be allowed any extra compensation by

reason of any matter or thing concerning which such bidder might have fully informed himself prior to the bidding.

## 7. TIME SCHEDULE

The Contractor is required to perform his work within the following schedule. By submitting a bid, the Contractor guarantees he can meet this schedule:

Project Start Date: **MONDAY, AUGUST 19, 2024, or earlier as approved by the Owner**

Project Substantial Completion: **SATURDAY, NOVEMBER 23, 2024**  
(Including all roof membrane and flashing work. Additionally, all roofing equipment must be removed from the site and the staging area cleaned and restored to its original condition.)

Project Final Completion: **SATURDAY, DECEMBER 7, 2024**  
(Including all sheetmetal work and punch list items complete to the satisfaction of the Owner and the Architect.)

The Contractor agrees to start construction on **Monday, August 19, 2024**, and continue construction **without interruption until Substantial Completion**. The Contractor agrees to provide the necessary labor and work weekends if required to achieve the dates in the Time Schedule.

## 8. PROJECT VISITATION SCHEDULE

Visitation to the site may be made during normal business hours by appointment. The bidder shall contact:

Solid Waste Agency of Northern Cook County (SWANCC)  
Christina Seibert, Executive Director  
847-724-9205 x202

## 9. PRE-BID MEETING

A **MANDATORY** Prebid Meeting will be held for all Roofing Contractors at:

Location: Glenview Transfer Station, 3 Providence Way, Des Plaines, Illinois 60016

Date / Time: Thursday, March 21, 2024, at 9:00 A.M.

## 10. RESERVATION OF RIGHTS BY THE OWNER

Bid, if awarded, will be awarded to the lowest responsive and responsible Bidder. Owner reserves the right to accept or reject any or all bids for any reason, to waive all informalities in connection therewith, to award a contract for any part of the work or the project as a whole, or to make the award in such a manner as the Owner may deem right and proper for the best interest of the Owner. Owner shall also have the right to accept Alternates in any order or combination, including the right to determine the low bid on the basis of the sum of the Base Bid, or Base Bid and any combination of Alternates. Owner also reserves the right to use all publicly available information in making a determination on whether a Bidder is a responsible bidder.

## 11. STATUTORY REQUIREMENTS

All applicable Federal and State laws, and the rules and regulations of all authorities having jurisdiction over construction of the project, shall apply to the contract throughout, and they will be deemed to be

included in the contract the same as though written therein in full. This includes all current regulations with respect to paying the prevailing wage which shall be incorporated into this project.

Purchases of building materials for incorporation into this project are exempt from the Illinois Retailer's Occupation Tax and Use Tax (Sales Tax). The bidder shall exclude such taxes from consideration in preparing his bid.

Contractor shall comply with all applicable laws, regulations, and rules promulgated by any Federal, State, County, Municipal and or other governmental unit or regulatory body now in effect during the performance of the work, and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of this Contract. By way of example, the following are included within the scope of the laws, regulations and rules referred to in this paragraph, but in no way to operate as a limitation on the laws, regulations and rules with which Contractor must comply, are all forms of Workers Compensation Laws, all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission, the Illinois Preference Act, Illinois Substance Abuse Prevention on Works Projects Act, the Social Security Act, Statutes relating to contracts let by units of government, all applicable Civil Rights and Anti-Discrimination Laws and Regulations, and traffic and public utility regulations.

## **12. NOTICE OF AWARD**

The contract shall be deemed as having been awarded when formal notice of award shall have been duly served upon the intended awardee by some officer or agent of the Owner authorized to give such notice. Such notice shall be in writing.

## **13. POST AWARD REQUIREMENTS**

Within ten (10) days after receiving the contract for signature, the Contractor must furnish the Architect:

- Executed Owner-Contractor Agreement (AIA Document A105)

- Performance Bond

- Payment Bond

- Certificate of Insurance

- A statement of costs for each major item of work or supplier. This statement shall note what work shall be performed by the Contractor and what shall be performed by his subcontractors.

*The Prime Roofing Contractor may obtain a maximum of three (3) additional sets of Bid Documents after contract has been awarded. Prime Roofing Contractors who wish to obtain more than the additional three (3) sets of Bid Documents must purchase the Bid Document set(s).*

### **13.1 COMMENCEMENT OF THE WORK**

The Contractor shall purchase and accept delivery thereon of all materials needed to complete his work. The actual work shall be started as noted in the Project Schedule. This work shall be carried on continuously to completion at the earliest possible date thereafter within the limits of the schedule.

If weather does not permit the actual construction to commence, or during construction if weather interferes with the process, the Contractor shall work on every day that conditions are reasonably acceptable to do so.

### **13.2 COORDINATION, PROJECT SUPERVISION AND SAFETY**

The prime or general contractor is solely responsible for supervising, monitoring and maintaining a safe working environment for all workers and visitors.

Each Contractor and Subcontractor must coordinate his work with all trades. He must cooperate to permit interfacing of systems.

The project must be managed and supervised by a competent individual at all times from the contracting company. He must develop a schedule conforming to time limitations noted in these specifications.

It is understood that this is a complex construction project and the General Contractor is responsible for providing a superintendent who will verify, both existing and new, conditions to make sure that the work described in the drawings will fit. This superintendent shall review all the drawings and become familiar with them, so that work described on one drawing will be compatible with work shown on another. He shall review shop drawings and verify dimensions so that all new work will be compatible with the conditions, dimensions, and elevations.

The contractor shall provide all required investigators, survey, or inspections before demolition of any systems or sections of the building required by any regulatory agency.

### **13.3 PROGRESS PAYMENTS**

Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided in the contract documents as follows:

Provided an Application for Payment is received by the Architect not later than the last day of a month, the Owner shall make payment to the Contractor not later than sixty days after receiving the Application for Payment. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than ninety days after the Architect receives the Application for Payment.

Ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the work and seventy-five (75%) of the portion of the Contract Sum properly allocable to materials and equipment properly stored at the site or at some other location agreed upon in writing for the period covered by the Application for Payment, less the aggregate of previous payments made by the Owner; and upon substantial completion of the entire work, a sum sufficient to increase the total payment to ninety-five percent (95%) of the Contract Sum, if acceptable to the Owner, less such amounts as the Architect shall determine for all incomplete work and unsettled claims as provided in the contract documents. All waivers from subcontractors shall accompany the payment request. Final waivers from the Contractor, his subcontractors, and his suppliers must be submitted with the Final Payment Request. Final waivers must include and acknowledge on the form the total contracted amount (including change orders). The Owner, at his option, may exclude the payment of materials not stored on the construction site.

Payment request shall be submitted on AIA Document G702 with AIA G703 Schedule of Values Sheet. All subcontractors and suppliers shall be listed with their respective amounts.

Payments to the Contractor shall be made for materials properly delivered and stored at the site or in the Contractor's warehouse and all materials properly insured by the Contractor who is responsible. A copy of the paid receipt and confirmation of materials stored in the Contractor's warehouse will be required.

### **13.4 PERFORMANCE AND PAYMENT BONDS**

Within ten (10) days of the date of the Notice of Award, the successful Contractor shall enter into a formal contract with the Owner and shall provide a Performance Bond and a Payment Bond, each in the full amount of the contract. The bonds shall be in accordance with AIA Documents A312. The Contractor shall pay the cost of premiums for said bonds.

The bonds shall be signed and sealed by an authorized representative of the bonding company and an authorized officer or representative of the Contractor, and a certificate of the authority of those signing the bonds, if not officers, shall be attached thereto.

The Performance Bond and the Payment Bond shall guarantee the performance of the duties placed on the Contractor by the prevailing Wage Act, as well as all other duties undertaken by him pursuant to the contract with the Owner, and shall indemnify the Owner from any liability or loss resulting to the Owner from any failure of the Contractor fully to perform each or all of said duties. The Performance Bond and the Payment Bond shall be deemed to cover all such duties.

The Performance Bond and the Payment Bond herein provided shall be placed with a surety company or companies having a policyholders' rating not lower than "A" and a financial rating not lower than "X" in Best's Insurance Guide (current edition). Company must be licensed in the State of Illinois and shall show evidence of same.

Contractor shall furnish Owner with payment and performance bonds covering Contractor's faithful performance of all obligations under the Contract Documents and the payment of all of Contractor's obligations arising out of the Contract Documents. The Contractor shall fully comply with the Illinois Public Construction Bond Act (30 ILCS 550/0.01 *et seq.*) and include the provisions as found in section 30 ILCS 550/1., entitled, Bond Required - Provisions required in bond as amended by P.A. 89-518, section 3, effective January 1, 1997. Such bond(s) shall be with a surety acceptable to Owner and shall name Owner and Owner's Lender, if any, as obligees thereunder. The amount of the bond shall equal 100% of the Contract Sum. Such bond shall include a provision stating that no modification of any provision of any Contract Document, including, without limitation, a change in the contract time, Contract Sum or other condition of payment, will release the surety either in part or in whole. In any event, such bond(s) shall be in form and substance satisfactory to Owner and Owner's Lender. If from time to time the Contract Sum is increased by \$10,000.00 or more, then the bond thereto shall be increased by the amount which the contract sum was increased.

### **13.5 PROTECTIVE PRECAUTIONS**

The Contractor, upon receiving contract acceptance or letter of intent, shall be able to proceed with work immediately after the published start date, subject to the following conditions.

- a) Submit, discuss and obtain approval of the proposed schedule of work from the Owner and the Architect.
- b) Every precaution must be taken to prevent any damage, loss or injury to any person, or to any property of the Owner.
- c) All utilities on the properties shall be kept in proper operating conditions at all times. Should there be a need to temporarily disconnect any system, the Contractor shall notify (in writing) the following agencies, when the existing system is going to be inoperative, and that the building will be without a particular service for a period not to exceed one (1) day. Give a minimum of two days notice to Owner.
  - 1. The Fire Department (where applicable)
  - 3. Owner.
  - 4. Architect.
  - 5. Any other agency or department appropriate or responsible for a specific service.
- d) The same notification shall be provided by the Contractor, if any of the other utilities will be temporarily inoperative.
- e) It is mandatory that the fire lanes be kept free of any obstructions at all times, unless otherwise authorized by the Owner and the Fire Department.

- f) Parking for construction workers will be in areas as discussed with and designated by Owner, and must be strictly adhered to.
- g) All fire alarm, security alarm, and any other type of protection system MUST BE operable at all times when the buildings are occupied or could be occupied. If one of the systems is down, the fire department, Owner, etc., must be notified. The Contractor is responsible for monitoring and maintaining these systems in an operable and safe condition at all times.

### **13.6 PERFORMANCE**

The Contractor may be required to attend meetings with the Owner to report on construction progress. The Owner or Architect shall request attendance, and failure to attend will be reason to delay payment request.

### **14. OWNER/CONTRACTOR INCLUSION**

The following shall be included and a part of the Owner/Contractor Agreement for this project.

The Contractor is solely responsible for the safety of all workers on this project.

A provision shall be included in the contract with the Contractor and Owner which provides: (1) that the Contractor shall defend and indemnify the Architect and his consultants against any action or claims for construction worker injuries to the full extent permitted by law, but not for an amount of damages for which the Architect and/or his consultants have been found guilty of negligence; and (2) that the Contractor shall purchase and maintain insurance covering liability for claims for construction worker injuries for the benefit of themselves and the Architect and his consultants in settlement of, or as damages for, any such claims. Such insurance shall be for not less than the greatest amount of liability insurance specified in the Contract Documents. This shall not limit any other contractual obligations of the Contractor, Subcontractors or the parties hereto to indemnify or provide insurance for the benefit of any other party. If any part of this paragraph be deemed invalid by any court, then that part shall be deleted and the remainder of this paragraph shall continue in full force.

### **15. FAILURE OF CONTRACTOR TO ADEQUATELY MANAGE HIS PROJECT TO A TIMELY COMPLETION**

The Contractor agrees, by submitting a bid, that he accepts responsibility to pay the Architect for his services at \$225.00 per hour for the Architect's time spent before or after the required completion date. This is for time required by the Architect to expedite the Contractor's efforts because he is not completing in an orderly and timely manner.

Payment for architectural services of preparing a single punch list and final walk-through are not the responsibility of the Contractor.

The Contractor agrees, by submitting a bid, that the Owner has the right to deduct from the Contractor's payment for the additional time of the Architect.

### **16. LIQUIDATED DAMAGES PROVISIONS - PROJECT COMPLETION**

Not applicable.

### **17. NO ASBESTOS PRODUCTS IN THIS-PROJECT**

No forms or types of asbestos or asbestos-containing products are permitted in this building project. By submitting a proposal and constructing this project, the prime contractors and subcontractors, suppliers, etc. guarantee that no asbestos-containing products are being included.

## **18. CERTIFICATION OF COMPLIANCE WITH ARTICLE 33E OF THE CRIMINAL CODE OF 1961**

By signing and submitting the Bid Form to the Owner, the contractor/vendor certifies that the contractor is not barred from bidding on the contract as a result of a conviction for either bid-rigging or bid rotating under Article 33E of the Criminal Code of 1961.

## **19. PUBLIC CONTRACTORS - WRITTEN SEXUAL HARASSMENT POLICY**

Public Act 87-1257, effective July 1, 1993, amends the Illinois Human Rights Act (Section 2-105) by requiring that every party to a public contract and every eligible bidder shall have a written sexual harassment policy that shall include, at a minimum, the following information.

- (i) the illegality of sexual harassment;
- (ii) the definition of sexual harassment under state law;
- (iii) a description of sexual harassment, utilizing examples;
- (iv) the contractors internal complaint process including penalties;
- (v) the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission;
- (vi) directions on how to contact the Department and Commission; and
- (vii) protection against retaliation as provided by Section 6-101 of the Human Rights Act.

Finally, the contractor must provide a copy of such written policy to the Department of Human Rights upon request.

## **20. STATEMENT OF NONDISCRIMINATION**

- A. That in the hiring of employees for the performance of work under this contract or any subcontract, no contractor, subcontractor, or any persons acting on his behalf, shall, by reason of race, creed, or color, discriminate against any citizen of the State in the employment of labor or workers who are qualified and available to perform the work to which the employment relates.
- B. That no contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed, or color.
- C. For the performance of the contract, the contractor shall agree as follows: That all contractors or subcontractors will comply with all state laws regarding nondiscrimination. The contractor will take affirmative action to ensure that applicants are employed, and the employees are treated during employment, without regard to their race, color, religion, national origin, ancestry or sex.

## **21. PREVAILING WAGES STATEMENT**

Contractor shall comply with the Illinois Prevailing Wage Act and shall pay, and require every Subcontractor to pay, the prevailing rates of wages as established by the Illinois Department of Labor for each craft or type of work needed to execute the contract in accordance with 820 ILCS 130/.01 et seq. Contractor shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to Contractor due to changes in the prevailing rate of wage during the terms of any contract shall be at the

expense of Contractor and not at the expense of the Owner. Change orders shall, however, be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. Contractor shall be solely responsible to maintain accurate records as required by the Prevailing Wage Act and to obtain and furnish all such certified records to Department of Labor as required by Statute or Regulation, including certified payroll. Contractor shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work and in every way defend and indemnify Owner against any claims arising under or related to the payment of wages in accordance with the Prevailing Wage Act. The Owner agrees to notify the Contractor or Subcontractor of the pendency of any such claim, demand, lien or suit.

The Contractor is advised that the Department revises the prevailing wage rates and the Contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website:

<http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>.

The Contractor shall also:

- (1) Insert into each subcontract and the project specifications for each subcontract, a written stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.
- (2) Require each subcontractor to insert into each lower-tiered contract and the project specifications for each lower tiered subcontract, a stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.

## **22. OWNER'S TAX-EXEMPT STATUS**

Contractor recognized that Owner is exempt for paying sales and use taxes and agrees to purchase and cause its Subcontractors to purchase all materials used in the Project at prices which take full advantage of Owner's tax-exempt status. Owner agrees to provide to Contractor sufficient copies of evidence of Owner's tax-exempt status to enable Contractor to perform its obligations set forth in the preceding sentence. Contractor will not and will take all necessary steps to prevent its Subcontractors from using Owner's tax exempt status to reduce costs on any work other than the Project.

**END SECTION 00 21 13**



**BID FORM**

Bid to: Solid Waste Agency  
of Northern Cook County (SWANCC)  
77 West Hintz Road  
Wheeling, Illinois 60090

Date: **April 4, 2024, at 2:00 P.M.**

Bidder Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Project: **ROOF REPLACEMENT AT  
GLENVIEW TRANSFER STATION  
PROJECT NO. 23122**

I acknowledge receipt of the following Addenda:

No. \_\_\_\_\_ Date \_\_\_\_\_

No. \_\_\_\_\_ Date \_\_\_\_\_

No. \_\_\_\_\_ Date \_\_\_\_\_

I agree to the following:

- A. To hold this Bid open until sixty (60) calendar days after the date of Bid Opening.
- B. To accept the provisions of the Instruction to Bidders regarding disposition of Bid Security.
- C. I have examined the site conditions and all bidding documents.
- D. To enter into and execute a contract with the Owner if awarded on the basis of this Bid.
- E. To furnish Insurance required by the Bidding Documents.
- F. To accomplish the work in accordance with the contract and construction documents.
- G. Totally complete the work as outlined in the Time Schedule.
- H. To provide the required Performance Bond and Payment Bond in an amount equal to 100% of the Contract base bid total.
- I. To provide full coordination and supervision of all subcontractors, suppliers, expedite work, management of payment requests, and general administration of project. To provide supervision and responsibility for all safety on, in and around the construction site at all times.

- J. By signing and submitting the Bid Form to the Owner, the contractor/vendor certifies that the contractor is not barred from bidding on the contract as a result of a conviction for either bid-rigging or bid rotating under Article 33E of the Criminal Code of 1961.

Bid Security for \$\_\_\_\_\_ in the form of \_\_\_\_\_ is enclosed.

The bidder agrees to perform all the specified work as set forth in the Bidding Documents for the sum of:

**BASE BID:**

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)

☐ *CONTRACTOR ACKNOWLEDGES THAT BY CHECKING THIS BOX, THEY HAVE REVIEWED SECTION 01 21 00 ALLOWANCES AND HAVE INCLUDED THE SPECIFIED ALLOWANCES IN BASE BID ABOVE.*

**UNIT PRICE NO. 1:** STEEL DECK REPLACEMENT, 20 GAUGE, TYPE "F" STEEL DECK

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_ SQ.FT.)

**UNIT PRICE NO. 2:** STEEL DECK REPAIR

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_ SQ.FT.)

**UNIT PRICE NO. 3:** STEEL DECK RUST PAINTING

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_ SQ.FT.)

**UNIT PRICE NO. 4:** WOOD BLOCKING REPLACEMENT

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_ BD.FT.)

**UNIT PRICE NO. 5:** EXISTING 2" POLYISOCYANURATE ROOF INSULATION REMOVAL AND REPLACEMENT

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_ SQ.FT.)

**UNIT PRICE NO. 6:** EXISTING 1/2" WOOD FIBERBOARD ROOF INSULATION REMOVAL AND REPLACEMENT

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_ SQ.FT.)

Bidder understands that the Owner may award one General Lump Sum Contract for all the work on the above project. Bidder must quote on all items called for in the Bid Proposal. Write "No Bid" where a price is not quoted.

## LIST OF REFERENCES - CONSTRUCTION PROJECTS

This list is required to consist of Construction Projects of similar size and cost. The list of projects should be located as near to project site as possible.

Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

---

Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

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Name of Project (Owner) \_\_\_\_\_  
Location \_\_\_\_\_  
Cost \_\_\_\_\_  
Date Completed \_\_\_\_\_  
Contact Person (Owner) \_\_\_\_\_  
Telephone (Owner) \_\_\_\_\_  
Architect/Engineer \_\_\_\_\_  
Telephone (Architect) \_\_\_\_\_

## SIGNATURE SHEET

If an Individual:

Signature of Bidder \_\_\_\_\_

Name of Individual \_\_\_\_\_ (Seal)

If a Co-partnership:

Signature of Bidder \_\_\_\_\_

Name of Individual \_\_\_\_\_ (Seal)

If a Corporation:

Name of Corporation \_\_\_\_\_

State of Corporation \_\_\_\_\_

Signature of Officer \_\_\_\_\_

Name of Individual \_\_\_\_\_

President: \_\_\_\_\_

Treasurer: \_\_\_\_\_

Attest \_\_\_\_\_ (Seal)

Signature of Secretary

**CONTRACTOR'S CERTIFICATION**

**BID PROPOSAL**

\_\_\_\_\_, as part of its bid on a contract for  
(Name of Contractor)

\_\_\_\_\_ to \_\_\_\_\_,  
(Name of Project) (Owner)

hereby certifies that said contractor is not barred from bidding on the aforementioned contract as a result of a violation of either Section 33E-3 or 33E-4 of Illinois Criminal Code (720 ILCS 5/33E-3 or 33E-4).

By: \_\_\_\_\_  
Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**CERTIFICATION REGARDING CRIMINAL  
BACKGROUND INVESTIGATION**

\_\_\_\_\_  
(Name of Contractor)

represents, warrants and certifies that none of its owners, officers, or directors have been convicted of a criminal offense which may, in the opinion of the Architect or its client / project owner, be considered as cause to disqualify Contractor as a responsible bidder, or be in violation of the Illinois School Code. Contractor further represents, warrants, and certifies that all of its employees and any Contractor who may work on this project will satisfy the same standard. In order to demonstrate full compliance with that standard, Contractor hereby consents to a full background check being performed on all such individuals at Contractor's expense. At the discretion of the Architect, such background check may include, but not be limited to the investigation of: law enforcement, criminal justice or correction agencies; credit reporting agencies; the accuracy and completeness of financial responsibility information and all references; civil litigation, judgment, lien, employment, education, military and motor vehicle records. Contractor agrees to indemnify and hold harmless any and all persons, firms and entities who may provide or obtain any such background information.

Upon request of the Architect or its client / project Owner, Contractor shall provide the following information about each person requested for a background investigation:

1. Date of Birth
2. Drivers License Number and State of Issue
3. Federal Social Security Number.

Architect or its client / project Owner may request additional information.

Contractor shall return this information to the Architect or its client / project Owner within three business days of the date of receipt.

By: \_\_\_\_\_

Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

**PUBLIC CONTRACTORS - WRITTEN SEXUAL HARASSMENT POLICY**

\_\_\_\_\_, ("Contractor"), having submitted a bid/proposal for  
(Name of Contractor)

\_\_\_\_\_ to \_\_\_\_\_,  
(Name of Project) (Owner)

hereby certifies that said Contractor has a written Sexual Harassment Policy in place in full compliance  
with 775 ILCS 5/2-105(A)(4).

By: \_\_\_\_\_  
Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC



(Contractors with 25 or more employees)

**CERTIFICATE OF COMPLIANCE WITH  
ILLINOIS DRUG-FREE WORKPLACE ACT**

\_\_\_\_\_, having 25 or more employees, does hereby  
(Name of Contractor)

certify pursuant to Section 3 of the *Illinois Drug-Free Workplace Act* (30ILCD 580/3) that (he, she, it) shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the *Illinois Drug-Free Workplace Act* and, further certifies, that (he, she, it) is not ineligible for award of this contract by reason of debarment for a violation of the *Illinois Drug-Free Workplace Act*.

By: \_\_\_\_\_  
Authorized Agent of Contractor

\_\_\_\_\_  
Date

SUBSCRIBED and SWORN TO before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

## NON COLLUSION AFFIDAVIT

**AFFIDAVIT:** "I (we) hereby certify and affirm that my (our) proposal was prepared independently for this project and that it contains no fees or amounts other than for the legitimate execution of this work as specified and that it includes no understanding or agreements in restraint of trade."

(If an individual)

Signature of  
Bidder \_\_\_\_\_ (Seal)

Business  
Address \_\_\_\_\_

\_\_\_\_\_

(If a Partnership)  
Firm Name \_\_\_\_\_ (Seal)

By \_\_\_\_\_

Business Address \_\_\_\_\_

of all Partners \_\_\_\_\_

of the Firm \_\_\_\_\_

\_\_\_\_\_

(If a Corporation)  
Corporate Name \_\_\_\_\_

By \_\_\_\_\_

Business Address \_\_\_\_\_

(CORPORATE SEAL)

Name of Officers: President \_\_\_\_\_

Secretary \_\_\_\_\_

Treasurer \_\_\_\_\_

Attest: \_\_\_\_\_  
Secretary

\_\_\_\_\_

Name of Bidder \_\_\_\_\_

Date \_\_\_\_\_

## CERTIFICATION OF MONTHLY PAYROLL

I, \_\_\_\_\_, do hereby certify that attached hereto  
(name of contractor or subcontractor's representative)

are true and correct payroll records for all laborers, mechanics, and other workers

employed by \_\_\_\_\_ on the project known as  
(name of contractor or subcontractor)

\_\_\_\_\_  
(general description of project)

Such records contain a true and accurate statement of each worker's name, address, telephone number (if available), social security number, classification(s), hourly wages paid in each pay period, number of hours worked each day, and starting and ending times of work each day. The hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the *Illinois Prevailing Wage Act*. I am aware that filing a certified payroll that I know to be false is a Class B misdemeanor.

Certified by:

Dated: \_\_\_\_\_

(Name of Contractor or Subcontractor's Representative)

(Title of Representative)

\_\_\_\_\_  
(Name of Contractor or Subcontractor)

\_\_\_\_\_  
(Address of Contractor or Subcontractor)

SUBSCRIBED and SWORN TO before me  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

Received by \_\_\_\_\_ \_on: \_\_\_\_\_  
(name of public body)

(Name of Public Official Receiving Certification)



# AIA® Document A105® – 2017

## Standard Short Form of Agreement Between Owner and Contractor

**AGREEMENT** made as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year Two thousand twenty-four (\_\_\_\_\_, 2024)  
(In words, indicate day, month and year.)

**BETWEEN** the Owner:

(Name, legal status, address and other information)

Solid Waste Agency of Northern Cook County  
77 W. Hintz Road  
Suite 200  
Wheeling, Illinois 60090

and the Contractor:

(Name, legal status, address and other information)

for the following Project:

(Name, location and detailed description)

Glenview Transfer Station Roof Replacement Project

The Architect:

(Name, legal status, address and other information)

ARCON Associates

The Owner and Contractor agree as follows.

**ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. 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.

## TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
3	CONTRACT SUM
4	PAYMENTS
5	INSURANCE
6	GENERAL PROVISIONS
7	OWNER
8	CONTRACTOR
9	ARCHITECT
10	CHANGES IN THE WORK
11	TIME
12	PAYMENTS AND COMPLETION
13	PROTECTION OF PERSONS AND PROPERTY
14	CORRECTION OF WORK
15	MISCELLANEOUS PROVISIONS
16	TERMINATION OF THE CONTRACT
17	OTHER TERMS AND CONDITIONS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contractor shall complete the Work described in the Contract Documents for the Project. The Contract Documents consist of

- .1 this Agreement signed by the Owner and Contractor;
- .2 the drawings and specifications prepared by the Architect, dated , and enumerated as follows:

Drawings:

Number	Title	Date
--------	-------	------

Specifications:

Section	Title	Pages
---------	-------	-------

- .3 addenda prepared by the Architect as follows:

Number	Date	Pages
--------	------	-------

- .4 written orders for changes in the Work, pursuant to Article 10, issued after execution of this Agreement; and
- .5 other documents, if any, identified as follows:

## ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The Contract Time is the number of calendar days available to the Contractor to substantially complete the Work.

### § 2.2 Date of Commencement:

Unless otherwise set forth below, the date of commencement shall be the date of this Agreement.  
(Insert the date of commencement if other than the date of this Agreement.)

### § 2.3 Substantial Completion:

Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion, as defined in Section 12.5, of the entire Work:  
(Check the appropriate box and complete the necessary information.)

☐ Not later than      calendar days from the date of commencement.

☐ By the following date:)

## ARTICLE 3 CONTRACT SUM

§ 3.1 The Contract Sum shall include all items and services necessary for the proper execution and completion of the Work. Subject to additions and deductions in accordance with Article 10, the Contract Sum is:

§ 3.2 For purposes of payment, the Contract Sum includes the following values related to portions of the Work:  
(Itemize the Contract Sum among the major portions of the Work.)

Portion of the Work	Value
---------------------	-------

§ 3.3 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and hereby accepted by the Owner:  
(Identify the accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.4 Allowances, if any, included in the Contract Sum are as follows:  
(Identify each allowance.)

Item	Price
------	-------

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

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

## ARTICLE 4 PAYMENTS

§ 4.1 Based on Contractor's Applications for Payment certified by the Architect, the Owner shall pay the Contractor, in accordance with Article 12, as follows:

*(Insert below timing for payments and provisions for withholding retainage, if any.)*

Retainage of 10% will be held until the project is 50% complete; at which time retainage will be reduced to 5%.

### § 4.2

*(Paragraphs deleted)*

No interest (0% interest) shall be payable by the Owner under the Agreement. All payments are to be handled in accordance with the Illinois Local Government Prompt Payment Act and subject to the receipt by Owner of all required documentation, including but not limited to lien waivers, certified payroll or an explanation of exemption, record drawings, etc

## ARTICLE 5 INSURANCE

§ 5.1 The Contractor shall maintain the following types and limits of insurance until the expiration of the period for correction of Work as set forth in Section 14.2, subject to the terms and conditions set forth in this Section 5.1:

§ 5.1.1 Commercial General Liability insurance for the Project, written on an occurrence form, with policy limits of not less than Five Million (\$ 5,000,000.00 ) each occurrence, Ten Million (\$ 10,000,000.00 ) general aggregate, and Five Million (\$ 5,000,000.00 ) aggregate for products-completed operations hazard. Completed operations coverage shall be maintained for 2 years after completion of the Project. The general liability policy shall cover liability assumed by contract and the indemnification obligation in Section 8.12 herein.

§ 5.1.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than One Million (\$ 1,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 5.1.3 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided that such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 5.1.1 and 5.1.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 5.1.4 Workers' Compensation at statutory limits.

§ 5.1.5 Employers' Liability with policy limits not less than One Million (\$ 1,000,000.00 ) each accident, One Million (\$ 1,000,000.00 ) each employee, and One Million (\$ 1,000,000.00 ) policy limit.

§ 5.1.6 The Contractor shall provide builder's risk insurance to cover the total value of the entire Project on a replacement cost basis.

§ 5.1.7 Other Insurance Provisions  
5.1.7.1 Failure of Owner to demand a certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

5.1.7.2 Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by Owner.

5.1.7.3 Failure to maintain the required insurance may result in termination of this contract at Owner's option.

5.1.7.4 Contractor shall provide certified copies of all insurance policies required above within 10 days of Owner's

written request for said copies.

**5.1.7.5** If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

**5.1.7.6** Under no circumstances shall the Owner be deemed to have waived any of the insurance requirements of this Contract by any action or omission, including but not limited to:

- (a) allowing any work to commence by the Contractor before receipt of certificates of insurance;
- (b) failing to review any certificates of insurance received from the Contractor;
- (c) failing to advise the Contractor that any certificate of insurance fails to contain all the required insurance provisions, or is otherwise deficient in any manner.

**5.1.7.7** Contractor agrees that the obligation to provide the insurance required by these documents is solely its responsibility and that this is a requirement which cannot be waived by any conduct, action, inaction or omission by the Owner.

**5.1.7.8** Nothing contained in this Contract is to be construed as limiting the liability of the Contractor. The Owner does not, in any way, represent that the coverages or limits of insurance specified is sufficient or adequate to protect the Owner, or the Contractor, but are merely minimums. The obligations of the Contractor to purchase insurance shall not, in any way, limit its obligations to the Owner in the event that the Owner should suffer an injury or loss in excess of the amount recoverable through insurance, or any loss or portion of a loss which is not covered by the Contractor's insurance.

**5.1.7.9** In the event the Contractor fails to furnish and maintain the insurance required by this Contract, the Owner may purchase such insurance on behalf of the Contractor and the Contractor shall pay the cost thereof to the Owner upon demand or shall have such cost deducted from any payments due the Contractor. The Contractor agrees to furnish to the Owner the information needed to obtain such insurance.

**5.1.7.10** The Contractor shall name the Owner and Architect and their officials, officers, directors, and employees as additional insureds on the Contractor's General Liability policy and Automobile Liability policy for claims arising out of the Contractor's performance of the Work and out of the Contractor's operations. The foregoing policies shall be endorsed to provide that such coverage is primary and non-contributory over other insurance maintained by the additional insureds. Such policies shall contain a waiver of subrogation in favor of the additional insureds. All insurance provided by the Contractor shall provide that the insurance shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of the insurer's liability.

*(Table deleted)*

**§ 5.2** Owner shall maintain its usual insurance – or membership in a self-insured risk pool--for liability for claims which may arise from operations under the Contract and that will protect the Owner from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury or to destruction of tangible property (other than the work itself) including the loss of use resulting therefrom

**§ 5.3** The Contractor shall obtain an endorsement to its Commercial General Liability insurance policy to provide coverage for the Contractor's obligations under Section 8.12.

**§ 5.4** Prior to commencement of the Work, each party shall provide certificates of insurance showing their respective coverages.

## **5.5 Performance And Payment Bond**

*(Paragraph deleted)*

**§ 5.5.1** The Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Bond. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond



shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bonds shall be on forms provided by the Owner, shall be issued by a surety satisfactory to the Owner, and shall name the Owner as a primary co-obligee. The cost of the bonds is to be included in the Bid Proposal. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. Each Bidder shall list the name of the surety company that will be furnishing the Bonds on its Bid Proposal. The failure of a Bidder to list the name of its surety company on its Bid Proposal shall be a non-responsive bid. The failure of the successful Bidder to enter into a Contract and supply the required Bonds within five (5) days after the Notice of Award or within such extended period as the Owner may grant if the forms do not meet its approval shall constitute a default, and the Owner may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids. A charge against the defaulting Bidder may be made for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guarantee.

**§ 5.5.1.1** The Contractor shall deliver the required bonds to the Owner not later than five days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

**§ 5.5.1.2** The Contractor shall require the attorney-in-fact who executed the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

**§ 5.5.2** Whenever the Contractor shall be and is declared by Owner to be in default under the Contract, the Surety and the Contractor are each responsible to make full payment to the Owner or any and all extra Work incurred as a result of the Contractor's default, and to pay to Owner all attorney's fees and court costs incurred by Owner as a result of the Contractor's default, and in protecting Owner's rights under the Agreement to remedy Contractor's default.

**§ 5.5.3** The Contractor shall (i) furnish all Surety Company's bonds through Surety Company's local agents approved by and/or as directed by Owner; (ii) fully covered and guarantee with said bond the faithful performance and completion of the entire Contract, including without limitation, the faithful performance of prevailing wage requirements; and (iii) guarantee with said bond payment in all cases by the Contractor or by the Surety Company for all labor performed, material and supplies furnished with the entire Work in the Contract. Said Bond shall remain in full force and effect during the entire period of all general guarantees given by the Contractor with the Contract as called for in the Specifications and Contract, except in cases where other bonds are specifically called for in the specifications and Contract in connection with special guarantees.

## **ARTICLE 6 GENERAL PROVISIONS**

### **§ 6.1 The Contract**

The Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a written modification in accordance with Article 10.

### **§ 6.2 The Work**

The term "Work" means the construction and services required by the Contract Documents, and includes all other labor, materials, equipment, and services provided, or to be provided, by the Contractor to fulfill the Contractor's obligations.

### **§ 6.3 Intent**

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.

### **§ 6.4 Ownership and Use of Architect's Drawings, Specifications and Other Documents**

Documents prepared by the Architect are instruments of the Architect's service for use solely with respect to this Project. The Architect shall retain all common law, statutory, and other reserved rights, including the copyright. The Contractor, subcontractors, sub-subcontractors, and suppliers are authorized to use and reproduce the instruments of service solely and exclusively for execution of the Work. The instruments of service may not be used for other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Architect.

## **§ 6.5 Electronic Notice**

Written notice under this Agreement may be given by one party to the other by email as set forth below.

*(Insert requirements for delivering written notice by email such as name, title, and email address of the recipient, and whether and how the system will be required to generate a read receipt for the transmission.)*

## **ARTICLE 7 OWNER**

### **§ 7.1 Information and Services Required of the Owner**

**§ 7.1.1** If requested by the Contractor, the Owner shall furnish all necessary surveys and a legal description of the site. As further consideration for the right to inspect the Project, Contractor waives its rights under the Public Construction Contract Act of 1999.

**§ 7.1.2** Except for permits and fees under Section 8.7.1 that are the responsibility of the Contractor, the Owner shall obtain and pay for other necessary approvals, easements, assessments, and charges.

**§ 7.1.3** Prior to commencement of the Work, at the written request of 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.

### **§ 7.2 Owner's Right to Stop the Work**

If the Contractor fails to correct Work which is not in accordance with the Contract Documents, the Owner may direct the Contractor in writing to stop the Work until the correction is made.

### **§ 7.3 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 seven day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies, correct such deficiencies. In such case, the Architect or Owner may withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the cost of correction, provided the actions of the Owner and amounts charged to the Contractor were approved by the Architect and Owner.

### **§ 7.4 Owner's Right to Perform Construction and to Award Separate Contracts**

**§ 7.4.1** The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project.

**§ 7.4.2** The Contractor shall coordinate and cooperate with the Owner's own forces and separate contractors employed by the Owner.

**§ 7.5 OWNER'S REMEDIES NOT EXCLUSIVE.** The rights and remedies of Owner stated in this Article shall be in addition to and not in limitation of any other rights of the Owner granted in the Contract Documents or at law or in equity.

## **ARTICLE 8 CONTRACTOR**

### **§ 8.1 Review of Contract Documents and Field Conditions by Contractor**

**§ 8.1.1** Execution of the Contract by the Contractor is a representation by the Contractor, that the Contract Documents are full and complete, are sufficient to enable the Contractor to determine the cost of the Work and that the Contract Documents are sufficient to enable it to construct the Work outlined therein, in accordance with applicable laws and regulations, and otherwise to fulfill all its obligations hereunder, including, but not limited to, Contractor's obligations to construct the Work for an amount not in excess of the Contract Sum on or before the date(s) of Completion established in the Agreement. The Contractor further acknowledges and declares that it has visited and examined the Project site, examined all physical and other conditions affecting the Work and is fully familiar with all of the

conditions thereon and thereunder affecting the same. In connection therewith, Contractor specifically represents and warrants to Owner that prior to the submission of its bid it has: (1) thoroughly examined the location of the work to be performed, is familiar with local conditions, and has read and thoroughly understands the Contract Documents as they relate to the physical conditions prevalent or likely to be encountered in the performance of the work at such location; (2) examined the nature, location and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (3) examined the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents.

**§ 8.1.2** The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner. Before commencing activities, the Contractor shall (1) take field measurements and verify field conditions; (2) carefully compare this and other information known to the Contractor with the Contract Documents; and (3) promptly report errors, inconsistencies, or omissions discovered to the Architect.

**§ 8.1.2.1** The exactness of grades, elevations, dimensions, or locations given in any drawings or the work installed by other contractors is not guaranteed by the Owner.

**§ 8.1.2.2** The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions and locations. In all cases of interconnection of its work with existing or other work, it shall verify at the site all dimensions relating to such existing or other work. Any errors due to the Contractor's failure to so verify all such grades, elevations, locations or dimensions shall be promptly rectified by it without additional cost to the Owner.

**§ 8.1.2.3** Prior to any excavation, the Contractor shall determine the locations of all existing water, gas, sewer, electric, telephone, telegraph, television, irrigation, petroleum pipelines, and other underground utilities and structures. Where the locations of existing underground and surface utilities and structures are indicated, these locations are generally approximate, and all items that may be encountered during the work are not necessarily indicated. The Contractor shall determine the exact locations of all items indicated, and the existence and locations of all items not indicated.

## **§ 8.2 Contractor's Construction Schedule**

The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Engineer's information a Contractor's construction schedule for the Work.

## **§ 8.3 Supervision and Construction Procedures**

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

**§ 8.3.2** The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner, through the Architect, the names of subcontractors or suppliers for each portion of the Work. The Contractor shall not contract with any subcontractor or supplier to whom the Owner or Architect have made a timely and reasonable objection.

**§ 8.3.3** The Contractor has the responsibility to ensure that all material suppliers and Subcontractors, their agents, and employees adhere to the Contract Documents, and that they order materials on time, taking into account the current market and delivery conditions and that they provide materials on time. The Contractor shall coordinate its Work, including without limitation, deliveries, storage, installations, and construction utilities with that of all others on the Project. The Contractor shall be responsible for the space requirements, locations, and routing of its equipment. In areas and locations where the proper and most effective space requirements, locations and routing cannot be made as indicated, the Contractor shall meet with all others involved, before installation, to plan the most effective method of overall installation.

**§ 8.3.4** After commencing the work, the Contractor shall use every precaution to avoid interferences with existing underground and surface utilities and structures, and protect them from damage. The Contractor shall repair or pay for all damage caused by his operations to all existing utility lines, public property, and private property, whether it is below ground or above ground, and he shall settle in total cost of all damage suits which may arise as a result of his operations at no additional costs to the Owner. To avoid unnecessary interferences or delays, the Contractor shall

coordinate all utility removals, replacements and construction with the appropriate utility company. The cost of temporarily relocating utilities for convenience of the Contractor, shall be paid by Contractor.

#### **§ 8.4 Labor and Materials**

**§ 8.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work.

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

**§ 8.4.3** All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, unless herein specified to the contrary.

**§ 8.4.4** After the Contract has been executed, the Owner will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements.

**§ 8.4.5** The Owner has determined that the Illinois Prevailing Wage Act applies to this Contract. Contractor shall therefore comply with the Illinois Prevailing Wage Act and shall pay, and require every Subcontractor to pay, the prevailing rates of wages as established by the Illinois Department of Labor for each craft or type of work needed to execute the contract in accordance with 820 ILCS 130/01 et seq. Contractor shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to Contractor due to changes in the prevailing rate of wage during the terms of any contract shall be at the expense of Contractor and not at the expense of the Owner. Change orders shall, however, be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. Contractor shall be solely responsible to maintain accurate records as required by the Prevailing Wage Act and to obtain and furnish all such certified records to Department of Labor as required by Statute or Regulation, in the manner specified by the Department of Labor (e.g., through the Department's portal) including certified payroll. Contractor shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work and in every way defend and indemnify Owner against any claims arising under or related to the payment of wages in accordance with the Prevailing Wage Act. The Owner agrees to notify the Contractor or Subcontractor of the pendency of any such claim, demand, lien or suit.

The Contractor is advised that the Illinois Department of Labor revises the prevailing wage rates and the Contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website: <http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>.

The Contractor shall also:

- (1) Insert into each subcontract and the project specifications for each subcontract, a written stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.
- (2) Require each subcontractor to insert into each lower-tiered contract and the project specifications for each lower tiered subcontract, a stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.

#### **§ 8.5 Warranty**

The Contractor warrants to the Owner and Architect that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents. Any material or equipment 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 12.5. Installation services carry a one year warranty. All equipment carry the manufacturer's warranty

## **§ 8.6 Taxes**

The Contractor shall pay sales, consumer, use, and similar taxes that are legally required when the Contract is executed. The Owner is exempt from the Illinois Use Tax Act and the Retailer's Occupation Tax.

## **§ 8.7 Permits, Fees and Notices**

**§ 8.7.1** The Owner, with the assistance of the Contractor as necessary, shall obtain and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work.

**§ 8.7.2** The Contractor shall comply with and give notices required by agencies having jurisdiction over the Work. 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 full responsibility for such Work and shall bear the attributable costs. The Contractor shall promptly notify the Architect in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules, and regulations.

## **§ 8.8 Submittals**

The Contractor shall promptly review, approve in writing, and submit to the Architect shop drawings, product data, samples, and similar submittals required by the Contract Documents. Shop drawings, product data, samples, and similar submittals are not Contract Documents. Contractor agrees to reimburse Owner for any additional costs incurred by Owner arising out of any delay or acts of the Contractor in completing the work (including additional observations and testing expenses).

## **§ 8.9 Use of Site**

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, the Contract Documents, and the Owner.

## **§ 8.10 Cutting and Patching**

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

## **§ 8.11 Cleaning Up**

The Contractor shall keep the premises and surrounding area free from accumulation of debris and trash related to the Work. At the completion of the Work, the Contractor shall remove its tools, construction equipment, machinery, and surplus material; and shall properly dispose of waste materials.

## **§ 8.12 Indemnification**

To the fullest extent permitted by law, the Contractor shall waive any right of contribution against the Owner and shall defend, indemnify and hold harmless the Owner and its officers, officials, employees, volunteers and agents and the Architect from and against all claims, damages losses and expenses, including, but not limited to, legal fees (attorney's and paralegal's fees, expert fees and court costs), arising out of or resulting from the performance of the Contractor's work provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or injury to or destruction of property, other than the work itself, including the loss of use resulting therefrom, or is attributable to misuse or improper use of trademark or copyright protected material or otherwise protected intellectual property, to the extent it is caused by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right to indemnity which the Owner would otherwise have. The Contractor shall similarly, protect, indemnify and hold and save harmless, the Owner, its officers, officials, employees, volunteers and agents against and from any and all claims, costs, causes, actions and expenses, including, but not limited to, legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of any provisions of the Contract. The indemnification obligations under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable



by or for the Contractor or any subcontractor under Workers' Compensation or Disability Benefit Acts or Employee Benefits Acts.

## **ARTICLE 9 ARCHITECT**

**§ 9.1** The Architect will provide administration of the Contract as described in the Contract Documents. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

**§ 9.2** The Architect will visit the site as set forth in the Proposal attached to its Agreement with the Owner on an average of once per week to become generally familiar with the progress and quality of the Work.

**§ 9.3** The Architect will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

**§ 9.4** Based on the Architect's periodic observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor. Such certification shall be subject to review of Work for conformance with the Contract Documents at Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations prior to completion and to specific qualifications expressed by the Architect.

**§ 9.5** The Architect has authority to recommend to the Owner to reject Work that does not conform to the Contract Documents.

**§ 9.6** The Architect will promptly review and approve or take appropriate action upon Contractor's submittals, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities and installation or performance of equipment or systems which are the Contractor's responsibility.

**§ 9.7** On written request from either the Owner or Contractor, the Architect will promptly interpret and decide matters concerning performance under, and requirements of, the Contract Documents.

**§ 9.8** 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.

**§ 9.9** The Architect's duties, responsibilities, and limits of authority as described in the Contract Documents shall not be changed without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

## **ARTICLE 10 CHANGES IN THE WORK**

**§ 10.1** The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, and the Contract Sum and Contract Time shall be adjusted accordingly, in writing. If the Owner and Contractor cannot agree to a change in the Contract Sum, the Owner shall pay the Contractor its actual cost plus reasonable overhead and profit.

**§ 10.2** The Owner may authorize or 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. Such authorization or order shall be in writing and shall be binding on the Owner and Contractor. The Contractor shall proceed with such minor changes promptly.

**§ 10.3** If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be subject to equitable adjustment.

## **ARTICLE 11 TIME**

**§ 11.1** Time limits stated in the Contract Documents are of the essence of the Contract.

**§ 11.2** If the Contractor is delayed at any time in progress of the Work by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, or other causes beyond the Contractor's control, the Contract Time shall be subject to equitable adjustment.

**§ 11.3** Costs caused by delays or by improperly timed activities or defective construction shall be borne by the responsible party.

## **ARTICLE 12 PAYMENTS AND COMPLETION**

### **§ 12.1 Contract Sum**

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

### **§ 12.2 Applications for Payment**

**§ 12.2.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for Work completed in accordance with the values stated in this Agreement. The Application shall be supported by data substantiating the Contractor's right to payment as the Owner or Architect may reasonably require, such as evidence of payments made to, and waivers of liens from, subcontractors and suppliers. For every party listed the Contractor shall provide a full or partial waiver of lien, as appropriate, before a payment will be made to the Contractor. The Contractor's partial or final waiver of lien must be included. Payment shall not be made by the Agency without such mechanics' lien waivers and contractors' sworn statements unless they are conditioned upon receipt of such waivers and statements. In addition, the Agency shall not make payment until the monthly certified payroll has been submitted in accordance with Section 1.26. Payment terms shall be in accordance with the provisions of the Local Government Prompt Payment act, 50 ILCS 505/1 et seq., after receipt by the Agency of the Contractor's invoice. Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

Retainage: For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold 10%, as retainage, from the payment otherwise due: 10% When the work is 50% complete, retainage shall be reduced to 5%.

**§ 12.2.2** 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 other encumbrances adverse to the Owner's interests.

### **§ 12.3 Certificates for Payment**

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; (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 in writing of the Architect's reasons for withholding certification in part; 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. If certification or notification is not made within such seven day period, 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 and the Contract Sum shall be equitably adjusted due to the delay.

### **§ 12.4 Progress Payments**

**§ 12.4.1** After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Contract Documents.

§ 12.4.2 The Contractor shall promptly pay each subcontractor and supplier, upon receipt of payment from the Owner, an amount determined in accordance with the terms of the applicable subcontracts and purchase orders.

§ 12.4.3 Neither the Owner nor the Architect shall have responsibility for payments to a subcontractor or supplier.

§ 12.4.4 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 requirements of the Contract Documents.

## § 12.5 Substantial Completion

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

§ 12.5.2 When the Contractor believes that the Work or designated portion thereof is substantially complete, it will notify the Owner and the Architect and the Owner and the Architect will make an inspection to determine whether the Work is substantially complete. When the Architect determines that the Work is substantially complete, the Architect shall document that conclusion in a field report. When the Owner concurs in the conclusion of the Architect, the Owner shall do so in writing to the Contractor and the date of the Owner's determination shall establish the date of Substantial Completion, establish the responsibilities of the Owner and Contractor, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

## § 12.6 Final Completion and Final Payment

§ 12.6.1 Upon receipt of a final Application for Payment, the Owner and the Architect will inspect the Work. When the Owner, upon the recommendation of the Architect, finds the Work acceptable and the Contract fully performed, the Owner shall cause the Engineer to promptly issue a final Certificate for Payment.

§ 12.6.2 Final payment shall not become due until the Contractor submits to the Owner releases and waivers of liens, and data establishing payment or satisfaction of obligations, such as receipts, claims, security interests, or encumbrances arising out of the Contract. Upon satisfaction of the terms and conditions of the Contract, the Contractor agrees to provide the Owner with a final release and waiver of all liens covering all of the Work performed under the Contract relative to the project prior to issuance of final payment. Said final waiver of lien shall identify and state that all Subcontractors have been paid in full and there are no contract balances outstanding and owed to any Subcontractor.

§ 12.6.3 Acceptance of final payment by the Contractor, a subcontractor or 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 13 PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to employees on the Work and other persons who may be affected thereby, the Work and materials and equipment to be incorporated therein, and other property at the site or adjacent thereto. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, or by anyone for whose acts the Contractor may be liable.

## ARTICLE 14 CORRECTION OF WORK

§ 14.1 The Contractor shall promptly correct Work rejected by the Architect or Owner as failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement, and additional testing.

§ 14.2 In addition to the Contractor's other obligations including warranties under the Contract, the Contractor shall, for a period of one year after Substantial Completion, correct work not conforming to the requirements of the Contract Documents.



§ 14.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 7.3.

## **ARTICLE 15 MISCELLANEOUS PROVISIONS**

### **§ 15.1 Assignment of Contract**

Neither party to the Contract shall assign the Contract as a whole without written consent of the other.

### **§ 15.2 Tests and Inspections**

§ 15.2.1 At the appropriate times, the Contractor shall arrange and bear cost of tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities.

§ 15.2.2 If the Owner requires additional testing, the Contractor shall perform those tests.

§ 15.2.3 The Owner shall bear cost of tests, inspections, or approvals that do not become requirements until after the Contract is executed. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

### **§ 15.3 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.

## **ARTICLE 16 TERMINATION OF THE CONTRACT**

### **§ 16.1 Termination by the Contractor**

If the Work is stopped under Section 12.3 for a period of 14 days through no fault of the Contractor, the Contractor may, upon seven additional days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed including reasonable overhead and profit, and costs incurred by reason of such termination.

### **§ 16.2 Termination by the Owner for Cause**

§ 16.2.1 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 for materials or labor in accordance with the respective agreements between the Contractor and the subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 is otherwise guilty of substantial breach of a provision of the Contract Documents.

§ 16.2.2 When any of the above reasons 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' written notice, terminate employment of the Contractor and may

- .1 take possession of the site and of all materials thereon owned by the Contractor, and
- .2 finish the Work by whatever reasonable method the Owner may deem expedient.

§ 16.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 16.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 16.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract.

### **§ 16.3 Termination by the Owner for Convenience**

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

## ARTICLE 17 OTHER TERMS AND CONDITIONS

*(Insert any other terms or conditions below.)*

§ 17.1 The Contractor warrants it is familiar with and shall comply with Federal, State and local laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Contract including without limitation Workers' Compensation Laws, minimum salary and wage statutes and regulations, laws with respect to permits and licenses and fees in connection therewith, laws regarding maximum working hours. No plea of misunderstanding or ignorance thereof will be considered.

§ 17.2 Whenever required, the Contractor or Subcontractor shall furnish the Owner with satisfactory proof of compliance with said Federal, State and local laws, statutes, ordinances, rules, regulations, orders, and decrees.

§ 17.3 Dispute resolution – Litigation in a court of competent jurisdiction. There are no preconditions to filing suit.

§ 17.4 Contractor shall carefully examine the Occupational Safety and health Act as issued by the Federal Register (OSHA), and the specific regulations governing procedures, techniques, safety precautions, equipment design, and the configuration of the same as required under this Act and shall comply with all terms of the Act and to perform and complete in a workmanlike manner all work required in full compliance with said Act.

§ 17.5 Contractor shall comply with all terms of the Illinois Preference Act and all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission.

§ 17.6 At all times Contractor shall remain in compliance with the Illinois Public Works Employment Discrimination Act (775 ILCS 10/1, et seq.) and the Illinois Human Rights Act (775 ILCS 5/2-101, et seq.) and in addition shall at all times comply with Section 2-105 of the Illinois Human Rights Act requiring a written sexual harassment policy as defined therein.

§ 17.7 Contractor agrees to maintain all records and documents for projects of the Owner in compliance with the Freedom of Information Act, 5 ILCS 140/1 et seq. In addition, Contractor shall produce, without cost to the Owner, records which are responsive to a request received by the Owner under the Freedom of Information Act so that the Owner may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then Contractor shall so notify the Owner and if possible, the Owner shall request an extension so as to comply with the Act. In the event that the Owner is found to have not complied with the Freedom of Information Act based upon Contractor's failure to produce documents or otherwise appropriately respond to a request under the Act, then Contractor shall indemnify and hold the Owner harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorneys' fees and penalties.

§ 17.8 The Contractor shall comply with and cause all subcontractors to comply with the requirements and provisions of the Illinois Substance Abuse Prevention on Public Works Projects Act (820 ILCS 265/1 et. seq.) (the "Act").

§ 17.9 By execution of this Contract, the Contractor understands, represents and warrants to the Owner that the Contractor and its Subcontractors (for which the Subcontractor takes responsibility to insure that they comply with the above-mentioned Acts) are in compliance with all requirements provided by the Acts set forth in Article 17 and that they will remain in compliance for the entirety of the Work. A violation of any of the Acts set forth in this Article is cause for the immediate cancellation of the Contract. However, any forbearance or delay by the Owner in canceling this Contract shall not be considered as, and does not constitute, Owner's consent to such violation and a waiver of any rights the Owner may have, including without limitation, cancellation of this Contract.

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

*(If required by law, insert cancellation period, disclosures or other warning statements above the signatures.)*

---

**OWNER** *(Signature)*

---

*(Printed name and title )*

---

**CONTRACTOR** *(Signature)*

---

*(Printed name and title )*

**LICENSE NO.:**

**JURISDICTION:**

# Additions and Deletions Report for AIA® Document A105® – 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 10:07:44 ET on 03/13/2024.

## PAGE 1

**AGREEMENT** made as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year Two thousand twenty-four  
(\_\_\_\_\_, 2024)

...

Solid Waste Agency of Northern Cook County  
77 W. Hintz Road  
Suite 200  
Wheeling, Illinois 60090

...

Glenview Transfer Station Roof Replacement Project

...

ARCON Associates

## PAGE 3

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

[ ] By the following date: date:

...

~~(\$—)~~

## PAGE 4

Retainage of 10% will be held until the project is 50% complete; at which time retainage will be reduced to 5%.

**§ 4.2** ~~Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate below, or in the absence thereof, at the legal rate prevailing at the place of the Project.~~

~~(Insert rate of interest agreed upon, if any.)~~

—%—No interest (0% interest) shall be payable by the Owner under the Agreement. All payments are to be handled in accordance with the Illinois Local Government Prompt Payment Act and subject to the receipt by Owner of all required documentation, including but not limited to lien waivers, certified payroll or an explanation of exemption, record drawings, etc

...



§ 5.1.1 Commercial General Liability insurance for the Project, written on an occurrence form, with policy limits of not less than Five Million (\$ 5,000,000.00 ) each occurrence, Ten Million (\$ 10,000,000.00 ) general aggregate, and Five Million (\$ 5,000,000.00 ) aggregate for products-completed operations hazard. Completed operations coverage shall be maintained for 2 years after completion of the Project. The general liability policy shall cover liability assumed by contract and the indemnification obligation in Section 8.12 herein.

§ 5.1.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than ~~(\$ —)~~ One Million (\$ 1,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

...

§ 5.1.5 Employers' Liability with policy limits not less than One Million (\$ 1,000,000.00 ) each accident, One Million (\$ 1,000,000.00 ) each employee, and One Million (\$ 1,000,000.00 ) policy limit.

...

§ 5.1.7 ~~Other Insurance Provided by the Contractor~~ Other Insurance Provisions 5.1.7.1 Failure of Owner to demand a certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

5.1.7.2 Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by Owner.

5.1.7.3 Failure to maintain the required insurance may result in termination of this contract at Owner's option.

5.1.7.4 Contractor shall provide certified copies of all insurance policies required above within 10 days of Owner's written request for said copies.

5.1.7.5 If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

5.1.7.6 Under no circumstances shall the Owner be deemed to have waived any of the insurance requirements of this Contract by any action or omission, including but not limited to:

- (a) allowing any work to commence by the Contractor before receipt of certificates of insurance;
- (b) failing to review any certificates of insurance received from the Contractor;

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)  
(c) failing to advise the Contractor that any certificate of insurance fails to contain all the required insurance provisions, or is otherwise deficient in any manner.

5.1.7.7 Contractor agrees that the obligation to provide the insurance required by these documents is solely its responsibility and that this is a requirement which cannot be waived by any conduct, action, inaction or omission by the Owner.

5.1.7.8 Nothing contained in this Contract is to be construed as limiting the liability of the Contractor. The Owner does not, in any way, represent that the coverages or limits of insurance specified is sufficient or adequate to protect the Owner, or the Contractor, but are merely minimums. The obligations of the Contractor to purchase insurance shall not, in any way, limit its obligations to the Owner in the event that the Owner should suffer an injury or loss in excess of the amount recoverable through insurance, or any loss or portion of a loss which is not covered by the Contractor's insurance.

5.1.7.9 In the event the Contractor fails to furnish and maintain the insurance required by this Contract, the Owner may purchase such insurance on behalf of the Contractor and the Contractor shall pay the cost



thereof to the Owner upon demand or shall have such cost deducted from any payments due the Contractor. The Contractor agrees to furnish to the Owner the information needed to obtain such insurance.

5.1.7.10 The Contractor shall name the Owner and Architect and their officials, officers, directors, and employees as additional insureds on the Contractor's General Liability policy and Automobile Liability policy for claims arising out of the Contractor's performance of the Work and out of the Contractor's operations. The foregoing policies shall be endorsed to provide that such coverage is primary and non-contributory over other insurance maintained by the additional insureds. Such policies shall contain a waiver of subrogation in favor of the additional insureds. All insurance provided by the Contractor shall provide that the insurance shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of the insurer's liability.

## Coverage

## Limits

§ 5.2 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance and shall provide property insurance to cover the value of the Owner's property. The Contractor is entitled to receive an increase in the Contract Sum equal to the insurance proceeds related to a loss for damage to the Work covered by the Owner's property insurance. Owner shall maintain its usual insurance – or membership in a self-insured risk pool--for liability for claims which may arise from operations under the Contract and that will protect the Owner from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury or to destruction of tangible property (other than the work itself) including the loss of use resulting therefrom

PAGE 5

## 5.5 Performance And Payment Bond

§ 5.5 Unless specifically precluded by the Owner's property insurance policy, the Owner and Contractor waive all rights against (1) each other and any of their subcontractors, suppliers, agents, and employees, each of the other; and (2) the Architect, Architect's consultants, and any of their agents and employees, for damages caused by fire or other causes of loss to the extent those losses are covered by property insurance or other insurance applicable to the Project, except such rights as they have to the proceeds of such insurance.

§ 5.5.1 The Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Bond. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bonds shall be on forms provided by the Owner, shall be issued by a surety satisfactory to the Owner, and shall name the Owner as a primary co-obligee. The cost of the bonds is to be included in the Bid Proposal. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. Each Bidder shall list the name of the surety company that will be furnishing the Bonds on its Bid Proposal. The failure of a Bidder to list the name of its surety company on its Bid Proposal shall be a non-responsive bid. The failure of the successful Bidder to enter into a Contract and supply the required Bonds within five (5) days after the Notice of Award or within such extended period as the Owner may grant if the forms do not meet its approval shall constitute a default, and the Owner may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids. A charge against the defaulting Bidder may be made for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guarantee.

§ 5.5.1.1 The Contractor shall deliver the required bonds to the Owner not later than five days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

§ 5.5.1.2 The Contractor shall require the attorney-in-fact who executed the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

§ 5.5.2 Whenever the Contractor shall be and is declared by Owner to be in default under the Contract, the Surety and the Contractor are each responsible to make full payment to the Owner or any and all extra Work incurred as a result of the Contractor's default, and to pay to Owner all attorney's fees and court costs incurred by Owner as a result of the Contractor's default, and in protecting Owner's rights under the Agreement to remedy Contractor's default.

§ 5.5.3 The Contractor shall (i) furnish all Surety Company's bonds through Surety Company's local agents approved by and/or as directed by Owner; (ii) fully covered and guarantee with said bond the faithful performance and completion of the entire Contract, including without limitation, the faithful performance of prevailing wage requirements; and (iii) guarantee with said bond payment in all cases by the Contractor or by the Surety Company for all labor performed, material and supplies furnished with the entire Work in the Contract. Said Bond shall remain in full force and effect during the entire period of all general guarantees given by the Contractor with the Contract as called for in the Specifications and Contract, except in cases where other bonds are specifically called for in the specifications and Contract in connection with special guarantees.

## PAGE 7

§ 7.1.1 If requested by the Contractor, the Owner shall furnish all necessary surveys and a legal description of the site. As further consideration for the right to inspect the Project, Contractor waives its rights under the Public Construction Contract Act of 1999.

...

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies, correct such deficiencies. In such case, the Architect or Owner may withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the cost of correction, provided the actions of the Owner and amounts charged to the Contractor were approved by the ~~Architect~~ Architect and Owner.

...

§ 7.5 OWNER'S REMEDIES NOT EXCLUSIVE. The rights and remedies of Owner stated in this Article shall be in addition to and not in limitation of any other rights of the Owner granted in the Contract Documents or at law or in equity.

...

§ 8.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of by the Contractor, that the Contract Documents are full and complete, are sufficient to enable the Contractor to determine the cost of the Work and that the Contract Documents are sufficient to enable it to construct the Work outlined therein, in accordance with applicable laws and regulations, and otherwise to fulfill all its obligations hereunder, including, but not limited to, Contractor's obligations to construct the Work for an amount not in excess of the Contract Sum on or before the date(s) of Completion established in the Agreement. The Contractor further acknowledges and declares that it has visited and examined the Project site, examined all physical and other conditions affecting the Work and is fully familiar with all of the conditions thereon and thereunder affecting the same. In connection therewith, Contractor specifically represents and warrants to Owner that prior to the submission of its bid it has: (1) thoroughly examined the location of the work to be performed, is familiar with local conditions, and has read and thoroughly understands the Contract Documents as they relate to the physical conditions prevalent or likely to be encountered in the performance of the work at such location; (2) examined the nature, location and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor



supply and labor costs, and available equipment supply and equipment costs; and (3) examined the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents.

**PAGE 8**

§ 8.1.2.1 The exactness of grades, elevations, dimensions, or locations given in any drawings or the work installed by other contractors is not guaranteed by the Owner.

§ 8.1.2.2 The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions and locations. In all cases of interconnection of its work with existing or other work, it shall verify at the site all dimensions relating to such existing or other work. Any errors due to the Contractor's failure to so verify all such grades, elevations, locations or dimensions shall be promptly rectified by it without additional cost to the Owner.

§ 8.1.2.3 Prior to any excavation, the Contractor shall determine the locations of all existing water, gas, sewer, electric, telephone, telegraph, television, irrigation, petroleum pipelines, and other underground utilities and structures. Where the locations of existing underground and surface utilities and structures are indicated, these locations are generally approximate, and all items that may be encountered during the work are not necessarily indicated. The Contractor shall determine the exact locations of all items indicated, and the existence and locations of all items not indicated.

The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's Engineer's information a Contractor's construction schedule for the Work.

...

§ 8.3.3 The Contractor has the responsibility to ensure that all material suppliers and Subcontractors, their agents, and employees adhere to the Contract Documents, and that they order materials on time, taking into account the current market and delivery conditions and that they provide materials on time. The Contractor shall coordinate its Work, including without limitation, deliveries, storage, installations, and construction utilities with that of all others on the Project. The Contractor shall be responsible for the space requirements, locations, and routing of its equipment. In areas and locations where the proper and most effective space requirements, locations and routing cannot be made as indicated, the Contractor shall meet with all others involved, before installation, to plan the most effective method of overall installation.

§ 8.3.4 After commencing the work, the Contractor shall use every precaution to avoid interferences with existing underground and surface utilities and structures, and protect them from damage. The Contractor shall repair or pay for all damage caused by his operations to all existing utility lines, public property, and private property, whether it is below ground or above ground, and he shall settle in total cost of all damage suits which may arise as a result of his operations at no additional costs to the Owner. To avoid unnecessary interferences or delays, the Contractor shall coordinate all utility removals, replacements and construction with the appropriate utility company. The cost of temporarily relocating utilities for convenience of the Contractor, shall be paid by Contractor.

**PAGE 9**

§ 8.4.3 All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, unless herein specified to the contrary.

§ 8.4.4 After the Contract has been executed, the Owner and will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements.

§ 8.4.5 The Owner has determined that the Illinois Prevailing Wage Act applies to this Contract. Contractor shall therefore comply with the Illinois Prevailing Wage Act and shall pay, and require every Subcontractor to pay, the prevailing rates of wages as established by the Illinois Department of Labor for each craft or type of work needed to execute the contract in accordance with 820 ILCS 130/01 et seq. Contractor shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to Contractor due to changes in the prevailing rate of wage during the terms of



any contract shall be at the expense of Contractor and not at the expense of the Owner. Change orders shall, however, be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. Contractor shall be solely responsible to maintain accurate records as required by the Prevailing Wage Act and to obtain and furnish all such certified records to Department of Labor as required by Statute or Regulation, in the manner specified by the Department of Labor (e.g., through the Department's portal) including certified payroll. Contractor shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work and in every way defend and indemnify Owner against any claims arising under or related to the payment of wages in accordance with the Prevailing Wage Act. The Owner agrees to notify the Contractor or Subcontractor of the pendency of any such claim, demand, lien or suit.

The Contractor is advised that the Illinois Department of Labor revises the prevailing wage rates and the Contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website: <http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>.

The Contractor shall also:

(1) Insert into each subcontract and the project specifications for each subcontract, a written stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.

(2) Require each subcontractor to insert into each lower-tiered contract and the project specifications for each lower tiered subcontract, a stipulation that the subcontractor shall not pay less than the prevailing rate of wages to all laborers, workers, and mechanics performing work under the contract.

The Contractor warrants to the Owner and Architect that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents. Any material or equipment 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 12.5. Installation services carry a one year warranty. All equipment carry the manufacturer's warranty

## **PAGE 10**

**The Contractor shall pay sales, consumer, use, and similar taxes that are legally required when the Contract is executed. The Owner is exempt from the Illinois Use Tax Act and the Retailer's Occupation Tax.**

...

**§ 8.7.1** The Owner, with the assistance of the Contractor as necessary, shall obtain and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work.

**§ 8.7.2** The Contractor shall comply with and give notices required by agencies having jurisdiction over the Work. 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 full responsibility for such Work and shall bear the attributable costs. The Contractor shall promptly notify the Architect in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules, and regulations.

...

The Contractor shall promptly review, approve in writing, and submit to the Architect shop drawings, product data, samples, and similar submittals required by the Contract Documents. Shop drawings, product data, samples, and similar submittals are not Contract Documents. Contractor agrees to reimburse Owner for any additional costs incurred by Owner arising out of any delay or acts of the Contractor in completing the work (including additional observations and testing expenses).

...

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them, from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, waive any right of contribution against the Owner and shall defend, indemnify and hold harmless the Owner and its officers, officials, employees, volunteers and agents and the Architect from and against all claims, damages losses and expenses, including, but not limited to, legal fees (attorney's and paralegal's fees, expert fees and court costs), arising out of or resulting from the performance of the Work, Contractor's work provided that any such claim, damage, loss, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a subcontractor, injury to or destruction of property, other than the work itself, including the loss of use resulting therefrom, or is attributable to misuse or improper use of trademark or copyright protected material or otherwise protected intellectual property, to the extent it is caused by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of 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. any of them may be liable. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right to indemnity which the Owner would otherwise have. The Contractor shall similarly, protect, indemnify and hold and save harmless, the Owner, its officers, officials, employees, volunteers and agents against and from any and all claims, costs, causes, actions and expenses, including, but not limited to, legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of any provisions of the Contract. The indemnification obligations under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Workers' Compensation or Disability Benefit Acts or Employee Benefits Acts.

PAGE 11

§ 9.2 The Architect will visit the site at intervals appropriate to the stage of construction as set forth in the Proposal attached to its Agreement with the Owner on an average of once per week to become generally familiar with the progress and quality of the Work.

...

§ 9.4 Based on the Architect's periodic observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor. the Contractor Such certification shall be subject to review of Work for conformance with the Contract Documents at Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations prior to completion and to specific qualifications expressed by the Architect.

§ 9.5 The Architect has authority to recommend to the Owner to reject Work that does not conform to the Contract Documents.

§ 9.6 The Architect will promptly review and approve or take appropriate action upon Contractor's submittals, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities and installation or performance of equipment or systems which are the Contractor's responsibility.

...

§ 10.2 ~~The Architect~~ Owner may authorize or 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. Such authorization or order shall be in writing and shall be binding on the Owner and Contractor. The Contractor shall proceed with such minor changes promptly.

PAGE 12

§ 12.2.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for Work completed in accordance with the values stated in this Agreement. The Application shall be supported by data substantiating the Contractor's right to payment as the Owner or Architect may reasonably require, such as evidence of payments made to, and waivers of liens from, subcontractors and

suppliers. For every party listed the Contractor shall provide a full or partial waiver of lien, as appropriate, before a payment will be made to the Contractor. The Contractor's partial or final waiver of lien must be included. Payment shall not be made by the Agency without such mechanics' lien waivers and contractors' sworn statements unless they are conditioned upon receipt of such waivers and statements. In addition, the Agency shall not make payment until the monthly certified payroll has been submitted in accordance with Section 1.26. Payment terms shall be in accordance with the provisions of the Local Government Prompt Payment act, 50 ILCS 505/1 et seq., after receipt by the Agency of the Contractor's invoice. Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

Retainage: For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold 10%, as retainage, from the payment otherwise due: 10% When the work is 50% complete, retainage shall be reduced to 5%.

...

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; (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 in writing of the Architect's reasons for withholding certification in part; 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. If certification or notification is not made within such seven day period, the Contractor may, upon seven additional days' written notice to the Owner and ~~Architect~~, Architect r, stop the Work until payment of the amount owing has been received. The Contract Time and the Contract Sum shall be equitably adjusted due to the delay.

#### PAGE 13

§ 12.5.2 When the Contractor believes that the Work or designated portion thereof is substantially complete, it will notify the ~~Owner and the Architect and the Owner~~ and the Architect will make an inspection to determine whether the Work is substantially complete. When the Architect determines that the Work is substantially complete, the Architect shall ~~prepare a Certificate of Substantial Completion that document that conclusion in a field report. When the Owner concurs in the conclusion of the Architect, the Owner shall do so in writing to the Contractor and the date of the Owner's determination shall establish the date of Substantial Completion, establish the responsibilities of the Owner and Contractor, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.~~

...

§ 12.6.1 Upon receipt of a final Application for Payment, the ~~Owner and the Architect~~ will inspect the Work. When ~~the Architect the Owner, upon the recommendation of the Architect, finds the Work acceptable and the Contract fully performed, the Architect will the Owner shall cause the Engineer to promptly issue a final Certificate for Payment.~~

§ 12.6.2 Final payment shall not become due until the Contractor submits to the ~~Architect~~ Owner releases and waivers of liens, and data establishing payment or satisfaction of obligations, such as receipts, claims, security interests, or encumbrances arising out of the Contract. Upon satisfaction of the terms and conditions of the Contract, the Contractor agrees to provide the Owner with a final release and waiver of all liens covering all of the Work performed under the Contract relative to the project prior to issuance of final payment. Said final waiver of lien shall identify and state that all Subcontractors have been paid in full and there are no contract balances outstanding and owed to any Subcontractor.

...

§ 14.1 The Contractor shall promptly correct Work rejected by the Architect or Owner as failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement, and additional testing.

§ 15.2.2 If the ~~Architect-Owner~~ requires additional testing, the Contractor shall perform those tests.

...

§ 16.2.2 When any of the above reasons exist, the ~~Owner, after consultation with the Architect, Owner~~ may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may

PAGE 15

§ 17.1 The Contractor warrants it is familiar with and shall comply with Federal, State and local laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Contract including without limitation Workers' Compensation Laws, minimum salary and wage statutes and regulations, laws with respect to permits and licenses and fees in connection therewith, laws regarding maximum working hours No plea of misunderstanding or ignorance thereof will be considered.

§ 17.2 Whenever required, the Contractor or Subcontractor shall furnish the Owner with satisfactory proof of compliance with said Federal, State and local laws, statutes, ordinances, rules, regulations, orders, and decrees.

§ 17.3 Dispute resolution – Litigation in a court of competent jurisdiction. There are no preconditions to filing suit.

§ 17.4 Contractor shall carefully examine the Occupational Safety and health Act as issued by the Federal Register (OSHA), and the specific regulations governing procedures, techniques, safety precautions, equipment design, and the configuration of the same as required under this Act and shall comply with all terms of the Act and to perform and complete in a workmanlike manner all work required in full compliance with said Act.

§ 17.5 Contractor shall comply with all terms of the Illinois Preference Act and all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission.

§ 17.6 At all times Contractor shall remain in compliance with the Illinois Public Works Employment Discrimination Act (775 ILCS 10/1, et seq.) and the Illinois Human Rights Act (775 ILCS 5/2-101, et seq.) and in addition shall at all times comply with Section 2-105 of the Illinois Human Rights Act requiring a written sexual harassment policy as defined therein.

§ 17.7 Contractor agrees to maintain all records and documents for projects of the Owner in compliance with the Freedom of Information Act, 5 ILCS 140/1 et seq. In addition, Contractor shall produce, without cost to the Owner, records which are responsive to a request received by the Owner under the Freedom of Information Act so that the Owner may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then Contractor shall so notify the Owner and if possible, the Owner shall request an extension so as to comply with the Act. In the event that the Owner is found to have not complied with the Freedom of Information Act based upon Contractor's failure to produce documents or otherwise appropriately respond to a request under the Act, then Contractor shall indemnify and hold the Owner harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorneys' fees and penalties.

§ 17.8 The Contractor shall comply with and cause all subcontractors to comply with the requirements and provisions of the Illinois Substance Abuse Prevention on Public Works Projects Act (820 ILCS 265/1 et. seq.) (the "Act").

§ 17.9 By execution of this Contract, the Contractor understands, represents and warrants to the Owner that the Contractor and its Subcontractors (for which the Subcontractor takes responsibility to insure that they comply with the above-mentioned Acts) are in compliance with all requirements provided by the Acts set forth in Article 17 and that they will remain in compliance for the entirety of the Work. A violation of any of the Acts set forth in this Article is cause for the immediate cancellation of the Contract. However, any forbearance or delay by the Owner in canceling this Contract shall not be considered as, and does not constitute, Owner's consent to such violation and a waiver of any rights the Owner may have, including without limitation, cancellation of this Contract.

## ***Certification of Document's Authenticity***

**AIA® Document D401™ – 2003**

I, \_\_\_\_\_, 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 10:07:44 ET on 03/13/2024 under Order No. 2114508906 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A105™ – 2017, Standard Short Form of Agreement Between Owner and Contractor, other than those additions and deletions shown in the associated Additions and Deletions Report.

\_\_\_\_\_  
*(Signed)*

\_\_\_\_\_  
*(Title)*

\_\_\_\_\_  
*(Dated)*

## **SECTION 01 10 00**

### **SUMMARY**

#### **PART 1 GENERAL**

##### **1.01 PROJECT INFORMATION**

- A. Project Name: 23122 SWANCC Roof Replacement at Glenview Transfer Station
- B. Owner's Name: Solid Waste Agency of Northern Cook County.
- C. Architect's Name: ARCON Associates, Inc..
- D. The Project consists of roofing the Glenview Transfer Station.

##### **1.02 CONTRACT DESCRIPTION**

- A. Contract Type: A single prime contract based on a lump sum as described in the Documents.

##### **1.03 OWNER OCCUPANCY**

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

##### **1.04 PROTECTIVE PRECAUTIONS**

- A. The Contractor, upon receiving contract acceptance or letter of intent, shall be able to proceed with work immediately after the published start date, subject to the following conditions.
- B. Submit, discuss and obtain approval of the proposed schedule of work from the Owner and the Architect.
- C. Every precaution must be taken to prevent any damage, loss or injury to any person, or to any property of the Owner.
- D. All utilities on the properties shall be kept in proper operating conditions at all times. Should there be a need to temporarily disconnect any system, the Contractor shall notify (in writing) the following agencies, when the existing system is going to be inoperative, and that the building will be without a particular service for a period not to exceed one (1) day. Give a minimum of two days notice to Owner.
  - 1. The Fire Department (where applicable)
  - 2. Owner.
  - 3. Architect.
  - 4. Any other agency or department appropriate or responsible for a specific service.
- E. The same notification shall be provided by the Contractor, if any of the other utilities will be temporarily inoperative.
- F. It is mandatory that the fire lanes be kept free of any obstructions at all times, unless otherwise authorized by the Owner and the Fire Department.
- G. Parking for construction workers will be in areas as discussed with and designated by Owner, and shall be strictly adhered to.
- H. All fire alarm, security alarm, and any other type of protection system SHALL BE operable at all times when the buildings are occupied or could be occupied. If one of the systems is down, the fire department, Owner, etc., must be notified. The Contractor is responsible for monitoring and maintaining these systems in an operable and safe condition at all times.

##### **1.05 CONTRACTOR USE OF SITE AND PREMISES**

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
  - 1. Owner occupancy.
  - 2. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.

2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Utility Outages and Shutdown:
  1. Limit disruption of utility services to hours the building is unoccupied.
  2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
  3. Prevent accidental disruption of utility services to other facilities.

#### **1.06 LOCAL CODES**

- A. Each Contractor complies with specified and applicable codes and standards. If conflict between codes or standards and drawings, specifications or addenda requirements, more stringent requirements shall govern.

#### **1.07 ENVIRONMENTAL REQUIREMENTS**

- A. The Contractor shall comply with all applicable federal, state, and local laws, regulations, ordinances, codes for standards concerning environmental control. Particular attention shall be given, without limitation, to:
  1. Reduction of air pollution by control of refuse burning (if permitted), minimization of dust, containment of chemical vapors, control of engine exhaust gases, and control of smoke from temporary heaters.
  2. Reduction of water pollution by control of sanitary facilities, proper storage of fuels and other potential contaminants, and prevention of siltation from land erosion.
  3. Minimization of noise levels.
  4. Proper and legal disposal, off site unless otherwise provided, of waste and soil resulting from construction activities.

#### **1.08 DOCUMENTS AND SAMPLES AT PROJECT SITE**

- A. The Contractor shall maintain, at the site, for the Owner, one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good order and marked to record all changes made during construction. These shall be available to the Architect. The Drawings, marked to record all changes made during construction shall be delivered to the Architect for the Owner upon completion of the work.
- B. Permit drawings shall be maintained at the site in accordance with local requirements.

#### **1.09 CONTRACTOR INSPECTION**

- A. The Contractor shall inspect and supervise the work to be assured that the work is performed in accordance with contract requirements.
  1. The Contractor shall reject or stop portions of the work which are not in accordance with contract requirements.
- B. By requesting the Final Payment, Contractor certifies that he has provided his work in compliance with the specifications and drawings.

#### **1.10 ACCIDENTS AND SAFETY RESPONSIBILITY**

- A. The general or prime contractor is solely responsible for supervision, monitoring, and maintaining safe working conditions on, in and around the construction site. The Architect, his consultants and owner are not responsible for the safety conditions on the construction site.
  1. The Contractor shall report any and all accidents on the site or related to the project in writing to his insurance company and to the Owner and Architect within 24 hours of occurrence. The report shall contain the following information:
    - a. Name and address of injured person or persons;
    - b. Location of occurrence;
    - c. Date and time of occurrence;
    - d. Narrative description of the accident and how it occurred;
    - e. Extent of injuries, hospital where treated name or names of physicians in attendance;
    - f. Names of witnesses and, whenever possible, statements of witnesses and the name of person taking such statement;
    - g. Signature of Contractor's superintendent.
  2. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported to the Architect, and to the Owner immediately by telephone or messenger. If any



claim is made by anyone against the Contractor or any Subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Architect giving full details of the claim.

#### **1.11 SPECIFICATION SECTIONS APPLICABLE TO ALL CONTRACTS**

- A. Unless otherwise noted, all provisions of the Division 01 sections shall apply to all contracts.
- B. Section 01 78 00 - Closeout Submittals. - See section for Interactive Closeout procedures. Interactive Project Closeout shall be included in Contractor's Bid. Interactive Project Closeout shall be handled by BHFX.

#### **1.12 SPECIFICATION FORMATS AND CONVENTIONS**

- A. Specification Format: The Specifications are organized into Divisions and Sections using the CSI "2004 MasterFormat" numbering system.
- B. 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:
  - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    - a. 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.

#### **1.13 MISCELLANEOUS PROVISIONS**

- A. It is understood and agreed by all the Contractors that the materials, tools, equipment, building or work is entirely at their risk until same is completed. The Owner assumes no responsibility for the loss by theft or damage.

#### **1.14 DEFINITIONS**

- A. General: Basic Contract definitions are included in the Conditions of the Contract and as follows:
  - 1. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
  - 2. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
  - 3. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
  - 4. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
  - 5. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
  - 6. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
  - 7. "Provide": Furnish and install, complete and ready for the intended use.
  - 8. "Installer": 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.
  - 9. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as



"carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

10. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
11. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

#### **1.15 INDUSTRY STANDARDS**

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: 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 uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
  1. 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.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

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

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

**END OF SECTION**

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

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

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

**1.02 RELATED REQUIREMENTS**

- A. Section 01 21 00 - Allowances: Payment procedures relating to allowances.

**1.03 SCHEDULE OF VALUES**

- A. Form to be used: AIA G703.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values electronically within 10 days after date Contract Award.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's Construction Schedule (preliminary if not final).
  - 4. Products list.
  - 5. Schedule of unit prices.
  - 6. Submittals Schedule (preliminary if not final).
  - 7. List of Contractor's staff assignments.
  - 8. List of Contractor's principal consultants.
  - 9. Copies of building permits.
  - 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 11. Certificates of insurance and insurance policies.
  - 12. Performance and payment bonds.
- B. Payment Period: Submit at intervals stipulated in the Agreement.
- C. Form to be used: AIA G702 and G703.
- D. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- E. Forms filled out by hand will not be accepted.
- F. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
    - a. Proof of insurance and documentation of stored materials.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.
  - 10. Retainage.

- G. Execute certification by signature of authorized officer with notarization.
- H. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- I. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- J. Submit one electronic copy of each Application for Payment.
- K. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 30 00.
  - 2. Partial release of liens from major subcontractors and vendors.
    - a. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
      - 1) When an application shows completion of an item, submit final or full waivers.
      - 2) Owner reserves the right to designate which entities involved in the Work must submit waivers.
      - 3) Waiver Delays: Submit each Application for Payment with Contractor's waiver of mechanic's lien for construction period covered by the application.
        - (a) Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
    - b. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
  - 3. Certified Payroll. With each Application for payment, submit certified payroll documentation from subcontractors and employees for the construction period covered by the previous application. Form shall contain all information required by Illinois State Law.

#### **1.05 MODIFICATION PROCEDURES**

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time(if applicable) for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- E. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Credit for deletions from Contract, similarly documented.
  - 2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

#### **1.06 APPLICATION FOR FINAL PAYMENT**

- A. Application for Final Payment will not be considered until the following have been accomplished:

- B. Submit Final Statement reflecting all adjustments.
  - 1. Original Contract Sum.
    - a. Additions and deductions resulting from:
      - 1) Previous Change Orders.
      - 2) Cash Allowances.
      - 3) Other adjustments.
      - 4) Deductions for uncorrected work.
      - 5) Deductions for liquidated damages.
      - 6) Deductions for Reinspection Payments.
    - b. Total Contract Sum, as adjusted.
    - c. Previous payments.
    - d. Sum remaining due.
  - 2. Architect will prepare final Change Order, reflecting approved adjustments to Contract Sum not previously made by Change Orders.
  - 3. Final Certified Payroll.
- C. Evidence of completion of Project closeout requirements.
- D. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
- E. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  - 1. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  - 2. AIA Document G707, "Consent of Surety to Final Payment."
  - 3. Evidence that claims have been settled.
  - 4. 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.
  - 5. Final, liquidated damages settlement statement.
- F. By requesting the Final Payment, each prime Contractor certifies that he has provided his work in compliance with the specifications and drawings.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 21 00  
ALLOWANCES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

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

**1.02 RELATED REQUIREMENTS**

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

**1.03 CASH ALLOWANCE**

- A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Cash Allowance.
- B. Funds will be drawn from the Allowance by payment application.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

**1.04 ALLOWANCES SCHEDULE**

- A. GLENVIEW TRANSFER STATION (BASE BID)
  - 1. Allowance No. 1: Provide 200 SQ.FT. of 20 gauge, type "F" steel deck replacement. (Unit Price No. 1)
  - 2. Allowance No. 2: Provide 200 SQ.FT. of steel deck repair with 18 ga. flat stock galvanized steel plate. (Unit Price No. 2)
  - 3. Allowance No. 3: Provide 200 SQ.FT. of steel deck rust painting with one (1) coat of red rust inhibitive paint. (Unit Price No. 3)
  - 4. Allowance No. 4: Provide 500 BD.FT. of additional wood blocking. (Unit Price No. 4)
  - 5. Allowance No. 5: Provide 200 SQ.FT. of 2" polyisocyanurate roof insulation removal and replacement. (Unit Price No. 5)
  - 6. Allowance No. 6: Provide 200 SQ.FT. of 1/2" wood fiberboard roof insulation removal and replacement. (Unit Price No. 6)
  - 7. Allowance No. 7: Provide at \$20,000 cash allowance for electrical, mechanical, or other roof related items as directed by the Owner/Architect.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

## **SECTION 01 22 00**

### **UNIT PRICES**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. List of unit prices, for use in preparing Bids.
- B. Measurement and payment criteria applicable to Work performed under a unit price payment method.

##### **1.02 COSTS INCLUDED**

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

##### **1.03 UNIT QUANTITIES SPECIFIED**

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

##### **1.04 MEASUREMENT OF QUANTITIES**

- A. Take all measurements and compute quantities. Measurements and quantities will be verified by Architect.
- B. Assist by providing necessary equipment, workers, and survey personnel as required.
- C. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
- D. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness in place (per finished, installed product).
- E. Measurement by Area: Measured by square dimension using mean length and width or radius.
- F. Contractor's and testing agency Responsibilities: Sign testing agency or surveyor's field notes or keep duplicate field notes, calculate and certify quantities for payment purposes.

##### **1.05 PAYMENT**

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.
- B. Payment will not be made for any of the following:
  - 1. Products wasted or disposed of in a manner that is not acceptable.
  - 2. Products determined as unacceptable before or after placement.
  - 3. Products not completely unloaded from the transporting vehicle.
  - 4. Products placed beyond the lines and levels of the required Work.
  - 5. Products remaining on hand after completion of the Work.
  - 6. Loading, hauling, and disposing of rejected Products.

##### **1.06 SCHEDULE OF UNIT PRICES**

- A. Unit Price No. 1: Steel Deck Replacement
  - 1. Description: Unit cost to provide steel deck replacement, with 20 gauge, type "F" steel deck.
  - 2. Unit of Measurement: Square Foot (SQ.FT.).
- B. Unit Price No. 2: Steel Deck Repair
  - 1. Description: Unit cost to provide steel deck repair with 18 ga. flat stock galvanized steel plate.
  - 2. Unit of Measurement: Square Foot (SQ.FT.).
- C. Unit Price No. 3: Steel Deck Rust Painting
  - 1. Description: Unit cost to provide steel deck rust painting with one (1) coat of red rust inhibitive paint.
  - 2. Unit of Measurement: Square Foot (SQ.FT.).
- D. Unit Price No. 4: Additional Wood Blocking
  - 1. Description: Unit cost to provide additional wood blocking removal and replacement.

2. Unit of Measurement: Board Foot (BD. FT.).
- E. Unit Price No. 5: Roof Insulation Replacement (2")
  1. Description: Unit cost to provide removal and replacement of the existing 2" polyisocyanurate roof insulation with new 2" polyisocyanurate roof insulation.
  2. Unit of Measurement: Square Foot (SQ.FT.).
- F. Unit Price No. 6: Roof Insulation Replacement (1/2")
  1. Description: Unit cost to provide removal and replacement of the existing 1/2" wood fiberboard roof insulation with new 1/2" wood fiberboard roof insulation.
  2. Unit of Measurement: Square Foot (SQ.FT.).

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 30 00**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Electronic submittals.
- B. Pre-Construction meeting.
- C. Site mobilization meeting.
- D. Progress meetings.
- E. Construction progress schedule.
- F. Coordination drawings.
- G. Number of copies of submittals.
- H. Requests for Interpretation (RFI) procedures.
- I. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 60 00 - Product Requirements: General product requirements.
- B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 78 00 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

**1.03 PROJECT COORDINATOR**

- A. Cooperate with the Owner in allocation of mobilization areas of site, offices, sheds, temporary parking, and site access.
- B. During construction, coordinate use of site and facilities through the Owner.
- C. Comply with procedures of Architect for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- D. Comply with instructions of the Owner for use of temporary utilities and construction facilities.
- E. Coordinate field engineering and layout work under instructions of the Site Superintendent.
- F. Make the following types of submittals to Architect:
  - 1. Requests for Interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 ELECTRONIC DOCUMENT SUBMITTALS**

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format and transmitted via the internet.
  - 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. Parties Required to use service: Contractor and Architect.
  3. It is the responsibility of the Contractor to submit documents in PDF format.
  4. Contractors and Architect's consultants will 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.
  7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
  8. Contractors will have access to the Architect's submittal service for use in delivering submittals, requests for information, progress documentation. Contractors can deliver other documents (payment applications, punch lists, reports, etc.) via internet/e-mail.
  9. Samples and color cards shall be submitted without using electronic processing.
- B. Software: The selected service is:
1. Newforma Project Center: Access to the software will be available through Architect. No special software is required to be provided by Contractor.

### **3.02 PRE-CONSTRUCTION MEETING**

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required:
1. Owner.
  2. Architect.
  3. Contractor.
- C. Agenda:
1. Execution of Owner-Contractor Agreement.
  2. Submission of executed bonds and insurance certificates.
  3. Distribution of Contract Documents.
  4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  5. Designation of personnel representing the parties to Contract and Architect.
  6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  7. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

### **3.03 SITE MOBILIZATION MEETING (PRE-CONSTRUCTION MEETING)**

- A. Architect will schedule meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:
1. Contractor.
  2. Owner.
  3. Architect.
  4. Contractor's superintendent.
  5. Major subcontractors.
- C. Agenda:
1. Use of premises by Owner and Contractor.
  2. Owner's requirements and partial occupancy prior to completion.
  3. Construction facilities and controls provided by Owner.
  4. Temporary utilities provided by Owner.
  5. Survey and building layout.
  6. Security and housekeeping procedures.
  7. Schedules.
  8. Application for payment procedures.

9. Procedures for testing.
  10. Procedures for maintaining record documents.
  11. Requirements for start-up of equipment.
  12. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

### **3.04 PROGRESS MEETINGS**

- A. Attendance Required:
1. Contractor.
  2. Owner.
  3. Architect.
  4. Contractor's superintendent.
  5. Major subcontractors.
- B. Agenda:
1. Review minutes of previous meetings.
  2. Review of work progress.
  3. Field observations, problems, and decisions.
  4. Identification of problems that impede, or will impede, planned progress.
  5. Review of submittals schedule and status of submittals.
  6. Review of RFIs log and status of responses.
  7. Review of off-site fabrication and delivery schedules.
  8. Maintenance of progress schedule.
  9. Corrective measures to regain projected schedules.
  10. Planned progress during succeeding work period.
  11. Maintenance of quality and work standards.
  12. Effect of proposed changes on progress schedule and coordination.
  13. Other business relating to work.
- C. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

### **3.05 CONSTRUCTION PROGRESS SCHEDULE**

- A. Within 10 days after date Contract Award, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.

### **3.06 COORDINATION DRAWINGS**

- A. Provide information required by Contractor for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect.
- C. Architect or Architect's Consultants will furnish at Contractor's request CAD Base Drawings for the sole use in developing Shop Drawings.
1. Contractor shall be required to sign CAD waiver provided by Architect or Architect's Consultants.
  2. Contractor shall be charged a handling fee of \$250 for each CAD file.
  3. CAD Software Program: The background drawings shall be available only in version of AutoCAD currently in use by Architect or Architect's Consultants.
  4. The CAD files will only include walls, doors, windows, room numbers and other generic information to facilitate creation of Shop Drawings. These documents will not be duplications of Contract Documents.

### 3.07 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
  - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in the Contract Documents.
  - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of the Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  - 1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  - 2. Prepare using software provided by the Electronic Document Submittal Service.
  - 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
  - 1. Include in each request Contractor's signature attesting to good faith effort to determine from the Contract Documents information requiring interpretation.
  - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
    - a. Approval of submittals (use procedures specified elsewhere in this section).
    - b. Approval of substitutions (see Section - 01 60 00 - Product Requirements)
    - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
  - 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  - 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, the Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  - 2. Owner's, Architect's, and Contractor's names.
  - 3. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  - 4. Annotations: Field dimensions and/or description of conditions which have engendered the request.
  - 5. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
  - 1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  - 2. Note dates of when each request is made, and when a response is received.

3. Highlight items requiring priority or expedited response.
  4. Highlight items for which a timely response has not been received to date.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with a suffix to the original number.
  2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
  3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
  4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

### **3.08 SUBMITTAL SCHEDULE**

- A. Submit to Architect for review a schedule for submittals in tabular format.
1. Submit at the same time as the preliminary schedule.
  2. Coordinate with Contractor's construction schedule and schedule of values.
  3. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
  4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
    - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

### **3.09 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. Submittals listed in specific a specification section shall be submitted complete in one single package or otherwise will be rejected. Physical samples are permitted to be submitted under separate cover.
- E. After review, provide copies and distribute in accordance with Submittal Procedures article below and for record documents purposes described in Section 01 78 00 - Closeout Submittals.

### **3.10 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 78 00 - Closeout Submittals:
1. Project record documents.
  2. Operation and maintenance data.
  3. Warranties.

4. Bonds.
  5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.11 NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
1. Shop drawing PDF files shall be generated on one of the following sheet sizes:
    - a. 30" x 42"
    - b. 24" x 16"
    - c. 11" x 17"
- B. Samples: Submit the number specified in individual specification sections one of which will be retained by Architect. If the number of samples is not indicated submit two samples.
1. Retained samples will not be returned to Contractor unless specifically so stated.
  2. Samples will be accepted by Architect only if all delivery charges are prepaid.
  3. Samples shall bear the identification markings specified in this section.

### **3.12 SUBMITTAL PROCEDURES**

- A. Definitions:
1. Shop Drawings: Graphic depiction of products/assemblies to be reviewed including but not limited to fabrication, erection, layout, setting drawings, schedules, piping, ductwork, conduit systems details of the construction, wiring diagrams, control diagrams, and methods of construction required to show that the materials, equipment or systems and their position confirm to the Contract Documents.
  2. Product Data: Illustrations, performance charts, instructions, brochures and other information to illustrate a material, product or system for some portion of the work.
  3. Samples: Physical examples which illustrate materials, colors, textures, materials or workmanship and establish standards by which the Work will be judged.
- B. General Requirements:
1. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
  2. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each document.
  3. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
    - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
  4. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
    - a. Upload submittals in electronic form to Electronic Document Submittal Service website.
  5. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
  6. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
  7. Provide space for Contractor and Architect review stamps.
  8. When revised for resubmission, identify all changes made since previous submission.
  9. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  10. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  11. Submittals not requested will be recognized, and will be returned "Not Reviewed",
  12. If the shop drawings or product data show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall make specific mention of such variation in his submittal letter or on the shop drawing or product data documents submitted. Any such variations are subject to review by the Architect.

13. The Architect shall review shop drawings or product data only for conformance with design intent of the project. The Architect's review will not be construed as:
  - a. Permitting any departure from the Contract requirements;
  - b. Relieving the Contractor of the responsibility for any error in details, dimensions or otherwise that may exist.
  - c. Accepted departures from additional details or instructions previously furnished by the Architect, unless the Architect has specifically accepted the variation in accordance with the provisions of this article.
14. By approving and submitting shop drawings and product data, the Contractor thereby represents that he has:
  - a. Obtained, determined, and verified all field measurements and conditions, construction criteria, materials and similar data.
  - b. Checked, Reviewed and approved them each shop drawing.
  - c. Checked and coordinated the information contained within such submittals with the requirements of the work and of the Contract Documents.
- C. Product Data Procedures:
  1. Submit only information required by individual specification sections.
  2. Collect required information into a single submittal for each individual specification section.
  3. Submit concurrently with related shop drawing submittal.
  4. Do not submit (Material) Safety Data Sheets for materials or products unless specifically indicated in specification section.
- D. Shop Drawing Procedures:
  1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related work.
  2. Do not reproduce the Contract Documents to create shop drawings.
  3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
  4. Shop drawings shall be in sufficient detail to indicate all conflicts with other Subcontractors.
- E. Samples Procedures:
  1. Transmit related items together as single package.
  2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
  3. Samples will be accepted by Architect only if all delivery charges are prepaid.
  4. Electronic reproductions (scans) will not be reviewed by Architect. The Architect, to expedite return of samples may stamp the electronic reproduction and return to Contractor with notations and shop drawing stamp. Physical samples may be returned under separate cover.

### **3.13 SUBMITTAL REVIEW**

- A. Submittals with no corrections will be stamped "CONFORMS WITH DESIGN CONCEPT", and those requiring only minor corrections will be stamped "NOTE MARKINGS". Those stamped "CONFORMS WITH DESIGN CONCEPT" can be used for ordering, fabrication and erection. Those stamped "NOTE MARKINGS" can also be used for ordering, fabrication, and erection, but the original drawings must be corrected and new documents submitted for final acceptance. If submittals resubmitted for final acceptance have changes other than those previously noted, such changes shall be identified and explained in the letter of transmittal by which the drawings are submitted.
- B. If major corrections are required, the Architect will return the submittal stamped "RESUBMIT". The Contractor shall correct the original submittal as required and then submit new documents to the Architect for review and comment. The Architect will review the revised submittal and return the submittal to the Contractor until final acceptance has been given.
- C. Shop drawings which do not have the Architect's signature and stamp "CONFORMS WITH DESIGN CONCEPT", or "NOTE MARKINGS" shall not be permitted at the site. At least one complete set of shop drawings bearing the Architect's stamp shall be kept at the site, in the Contractor's field office, for reference at all times.
- D. If product does not comply with the design concept, or is not a specified product, the Architect will return the submittal stamped "REJECTED". After reviewing the appropriate Specification Section for

products and submittal requirements, the Contractor shall resubmit new product that is indicated in the specification section. This shall be submitted as an entirely new submittal. Contractor reserves the right to reject any submittal that is not submitted in accordance with the requirements of the Contract Documents.

- E. If a submittal is provided for informational purposes or for record purposes the Architect and Architect's Consultants actions will indicate "Not Reviewed" or language with same legal meaning.
- F. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
  - 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- G. Architect's Consultants actions on items submitted for review will indicate one of the following (see above for further information):
  - 1. "Conforms with Design Concept" or language with same legal meaning.
  - 2. "Note Marking" or language with similar legal meaning.
  - 3. "Revise and Resubmit" or language with similar legal meaning.
  - 4. "Rejected" or language with similar meaning.
- H. No work in the shop or field shall be started until the Architect has approved the shop drawings and samples for that segment of the work, nor shall work be done from any shop drawings not bearing the Architect's stamp of approval.

**END OF SECTION**

**SECTION 01 40 00**  
**QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Control of installation.
- E. Mock-ups.
- F. Tolerances.
- G. Manufacturers' field services.
- H. Defect Assessment.

**1.02 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit copies of report to Contractor, Architect, and Architect's Consultants.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.
    - j. Compliance with Contract Documents.
    - k. When requested by Architect, provide interpretation of results.
  - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect.
  - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
  - 1. Submit report within 5 days of observation to Architect for information.
  - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents.

**1.03 QUALITY ASSURANCE**

- A. Testing Agency Qualifications:



1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.

#### **1.04 REFERENCES AND STANDARDS**

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

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

### **PART 3 EXECUTION**

#### **3.01 CONTROL OF INSTALLATION**

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

#### **3.02 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. Notify Architect seven (7) working days in advance of dates and times when mock-ups will be constructed.
- 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. Make corrections as necessary until Architect's approval is issued.
- I. Accepted mock-ups shall be 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.

### **3.03 TOLERANCES**

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

### **3.04 MANUFACTURERS' FIELD SERVICES**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

### **3.05 DEFECT ASSESSMENT**

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

**END OF SECTION**

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

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Vehicular access and parking.
- D. Waste removal facilities and services.
- E. Project identification sign.

**1.02 TEMPORARY UTILITIES**

- A. Owner will provide the following:
  - 1. Electrical power and metering, consisting of connection to existing facilities.
  - 2. Water supply, consisting of connection to existing facilities.
- B. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

**1.03 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

**1.04 FENCING**

- A. Contractor is to provide a minimum 6 foot high, removable chain link fence around all equipment and staging areas.

**1.05 VEHICULAR ACCESS AND PARKING**

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

**1.06 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site weekly.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

**1.07 PROJECT IDENTIFICATION**

- A. Provide project identification sign of design and construction indicated on Drawings.
- B. Provide project identification sign of design, construction, and location as indicated on Drawings. If not indicated on drawings place in location approved by Owner.
- C. No other signs are allowed without Owner permission except those required by law.

**1.08 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.

**PART 2 PRODUCTS - NOT USED**  
**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 60 00**  
**PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Transportation, handling, storage and protection.
- B. Product option requirements.
- C. Substitution limitations and procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- B. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

**1.03 SUBMITTALS**

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

**PART 2 PRODUCTS**

**2.01 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
  - 1. Made using or containing CFC's or HCFC's.
  - 2. Containing lead, cadmium, or asbestos.
- C. Where other criteria are met, Contractor shall give preference to products that:
  - 1. If used on interior, have lower emissions, as defined in Section 01 61 16.
  - 2. If wet-applied, have lower VOC content, as defined in Section 01 61 16.

**2.02 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.

**PART 3 EXECUTION**

**3.01 SUBSTITUTION PROCEDURES - PRIOR TO BID OPENING**

- A. The Contractor or any Subcontractor's Proposal shall be based upon the materials, equipment, or processes specifically named in the Contract Documents. The word "processes" as used herein includes methods or systems of construction.

1. Products are generally specified by ASTM or other reference standard, and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed.
2. Before the Pre-bid Meeting, or in the absence thereof 10 days prior to the Bid Opening, the Owner and Architect will consider a formal request for the substitution of products in place of those specified under the following conditions:
  - a. The request is accompanied by complete data on the proposed substitution substantiating compliance with the Contract Documents, including product identification and description, performance and test data, references and samples where applicable, and an itemized comparison of the proposed substitution with the products specified with data relating to Contract Time Schedule, design and artistic effect where applicable, and its relationship to separate contracts.
  - b. The request is accompanied by accurate cost data on the proposed substitution in comparison with the product specified, whether or not modification of the Contract Sum is to be a consideration.
- B. Request for substitution based on paragraph above, when forwarded by the Contractor to the Architect, are understood to mean that the Contractor:
  1. Represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
    - a. Will provide the same guarantee for the substitution that he would for that specified;
    - b. Certifies that the cost data presented is complete and includes all related costs under this contract, but excludes costs under separate contracts and the Architect's re-design cost, and that he waives all claims for additional costs related to the substitution which subsequently become apparent; and
    - c. Will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be completed in all respects.
    - d. The Owner and Architect do not have to consider substitutions after the Pre- bid Meeting. No substitutions shall be made unless acceptable to the Owner and Architect in writing.

### **3.02 SUBSTITUTION PROCEDURES - AFTER BID OPENING**

- A. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- B. The Owner and Architect will consider a formal request for the substitution of products in place of those specified under the following conditions:
  1. Required for compliance with local authority interpretation of code requirement or insurance regulations then existing as approved in writing by Architect.
  2. Unavailability of specified products through no fault of Contractor.
  3. Subsequent information discloses inability of specified products to perform properly or to fit in designated space.
  4. Manufacturer/Fabricator refuses to certify or guarantee performance of specified products as required.
  5. When it is clearly seen in the judgement of the Architect that a substitution would be substantially to the Owner's best interest, in terms of cost, time or other considerations.
- C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request.

### **3.03 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.

- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

#### **3.04 STORAGE AND PROTECTION**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Do not store products directly on the ground.
- J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- K. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- L. Prevent contact with material that may cause corrosion, discoloration, or staining.
- M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- N. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**END OF SECTION**

## **SECTION 01 61 16**

### **VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Requirements for Indoor-Emissions-Restricted products.
- B. Requirements for VOC-Content-Restricted products.

##### **1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.

##### **1.03 DEFINITIONS**

- A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings applied on site.
  - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
  - 3. Flooring.
  - 4. Thermal and acoustical insulation.
- B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings applied on site.
  - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
- C. Interior of Building: Anywhere inside the exterior weather barrier.
- D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.
- F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
  - 1. Concrete.
  - 2. Clay brick.
  - 3. Metals that are plated, anodized, or powder-coated.
  - 4. Glass.
  - 5. Ceramics.
  - 6. Solid wood flooring that is unfinished and untreated.

##### **1.04 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
- B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
- C. GreenSeal GS-36 - Adhesives for Commercial Use.
- D. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168.
- E. State of Illinois Title 35 - Environmental Protection.

##### **1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

##### **1.06 QUALITY ASSURANCE**

- A. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), ASTM D3960, or State of Illinois Title 35, unless otherwise indicated.
  - 1. Evidence of Compliance: Acceptable types of evidence are:
    - a. Report of laboratory testing performed in accordance with requirements.



- b. Published product data showing compliance with requirements.
- c. Certification by manufacturer that product complies with requirements.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. VOC/VOM Content-Restricted Products: VOC/VOM content not greater than required by the following:
  - 1. All applicable products used on Project shall comply with requirements of State of Illinois Title 35 whether or not specifically referenced.
  - 2. All Interior Products: Products shall comply with VOC/VOM content limits when calculated according to State of Illinois Title 35. In case of conflict between reference standards, the more stringent shall be required.
    - a. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule and State of Illinois Title 35.
    - b. Aerosol Adhesives: GreenSeal GS-36 and State of Illinois Title 35.
    - c. Joint Sealants: SCAQMD 1168 Rule and State of Illinois Title 35.
    - d. Paints and Coatings: Each color and type; most stringent of the following:
      - 1) 40 CFR 59, Subpart D.
      - 2) State of Illinois Title 35
  - 3. Wet-Applied Roofing and Waterproofing: Comply with State of Illinois Title 35.
  - 4. Exterior Applied Coatings, sealers and other wet applied coatings: Comply with State of Illinois Title 35.
- C. Products containing ozone depleting compounds: Comply with State of Illinois Title 35.

## **PART 3 EXECUTION**

### **3.01 FIELD QUALITY CONTROL**

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

### **3.02 SCHEDULE OF REQUIREMENTS**

- A. The following list incorporates commonly used construction products with their required VOC/VOM requirements. This list is for reference and does not include all products. For a complete list see State of Illinois Title 35. VOM content limit is given in grams/liter with (pounds/gallon) unless otherwise noted.
  - 1. Coatings
    - a. Flat Coatings: 100 (0.8)
    - b. Non-Flat Coatings: 150 (1.3)
    - c. Non-Flat-High-Gloss Coatings: 250 (2.1)
  - 2. Bituminous Roof Coatings: 300 (2.5)
  - 3. Bituminous Roof Primers: 350 (2.9)
  - 4. Bond Breakers: 350 (2.9)
  - 5. Clear Wood Coatings
    - a. Clear Brushing Lacquers: 680 (5.7)
    - b. Lacquers (including lacquer sanding sealers): 550 (4.6)
    - c. Sanding Sealers (other than lacquer sanding sealers): 350 (2.9)
    - d. Varnishes: 350 (2.9)
  - 6. Concrete Curing Compounds: 350 (2.9)
  - 7. Concrete Surface Retarder: 780 g/l (6.5)
  - 8. Dry Fog Coatings: 400 (3.3)
  - 9. Fire Resistive Coatings: 350 (2.9)
  - 10. Fire Retardant Coatings

- a. Clear: 650 (5.4)
- b. Opaque: 350 (2.9)
- 11. Floor Coatings: 250 (2.1)
- 12. Primers, Sealers, and Undercoaters: 200 (1.7)
- 13. Quick-Dry Enamels: 250 (2.1)
- 14. Quick-Dry Primers, Sealers and Undercoaters: 200 (1.7)
- 15. Roof Coatings: 250 (2.1)
- 16. Roof Coatings: 250 (2.1)
- 17. Rust Preventative Coatings: 400 (3.3)
- 18. Shellacs
  - a. Clear: 730 (6.1)
  - b. Opaque: 550 (4.6)
- 19. Specialty Primers, Sealers, and Undercoaters: 350 (2.9)
- 20. Stains: 250 (2.1)
- 21. Swimming Pool Coatings: 450 (2.8)
- 22. Swimming Pool repair and Maintenance Coatings: 340 (2.8)
- 23. Thermoplastic Rubber Coatings and Mastics: 550 (4.6)
- 24. Traffic Marking Coatings: 150 (1.3)
- 25. Waterproofing Concrete/Masonry Sealers: 400 (3.3)
- 26. Waterproofing Sealers: 250 (2.1)
- 27. Wood Preservatives: 350 (2.9)
- 28. Coatings not listed: See State of Illinois Title 35,

**END OF SECTION**

**SECTION 01 78 00**  
**CLOSEOUT SUBMITTALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Individual Product Sections: Specific requirements for operation and maintenance data.
- C. Individual Product Sections: Warranties required for specific products or Work.

**1.03 SUBMITTALS**

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

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
  - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:

1. Field changes of dimension and detail.
  2. Details not on original Contract drawings.
- G. At project closeout, Contractor shall submit preliminary documents following procedures outlined in Section 01 30 00 - Administrative Requirements to Architect for review. Revise documents in accordance with Architect's comments and resubmit.

### **3.02 OPERATION AND MAINTENANCE DATA**

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

### **3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. For Each Product, Applied Material, and Finish:
  1. Product data, with catalog number, size, composition, and color and texture designations.
  2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

### **3.04 WARRANTIES AND BONDS**

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

**END OF SECTION**

**SECTION 06 10 01**  
**ROOF CARPENTRY**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Non-structural dimension lumber framing.
- B. Roofing blocking and nailers.
- C. Roof sheathing with and plywood backing panels.

**1.02 RELATED REQUIREMENTS**

- A. Section 07 52 17 - SBS Modified Bituminous (CA) Membrane Roofing: Roofing work related to roof carpentry.
- B. Section 07 62 00 - Sheet Metal Flashing and Trim.

**1.03 REFERENCE STANDARDS**

- A. APA E30 - Engineered Wood Construction Guide.
- B. ASME B18.6.1 - Wood Screws (Inch Series).
- C. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- D. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.
- E. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel.
- F. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
- G. ASTM E488/E488M - Standard Test Methods for Strength of Anchors in Concrete Elements.
- H. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.
- I. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings.
- J. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- K. ICC (IBC) - International Building Code.
- L. NELMA (SGR) - Standard Grading Rules for Northeastern Lumber.
- M. NLGA (SGRNL) - Standard Grading Rules for Canadian Lumber.
- N. PS 1 - Structural Plywood.
- O. PS 2 - Performance Standard for Wood-Based Structural-Use Panels.
- P. PS 20 - American Softwood Lumber Standard.
- Q. SPIB (GR) - Grading Rules.
- R. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17.
- S. WWPA G-5 - Western Lumber Grading Rules.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide technical data on insulated sheathing and application instructions.
- C. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee Board of Review.
- D. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
  - 1. Power-driven fasteners.
  - 2. Powder-actuated fasteners.
  - 3. Expansion anchors.

### **1.05 QUALITY ASSURANCE**

- A. Field Constructed Mock-Ups: Prior to installation of roofing related perimeter wood carpentry, both perimeter and field, erect sample construction for wood to be installed at the tops of walls, to further verify profile. Provide mock-ups in 10' lengths or as requested by Architect. Mockup may be incorporated into finished construction.

### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

## **PART 2 PRODUCTS**

### **2.01 WOOD PRODUCTS, GENERAL**

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece, or omit grade stamp and provide certificates of grade compliance issued by grading agency.
  - 3. Where nominal sizes are indicated, provide actual sizes required by PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  - 4. Provide dry lumber with 15 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.
- C. Wood Structural Panels:
  - 1. Plywood: Either PS 1 or PS 2, unless otherwise indicated.
  - 2. Thickness: As needed to comply with requirements specified but not less than thickness indicated.
  - 3. Comply with "Code Plus" provisions in APA E30.
  - 4. Factory mark panels according to indicated standard.
- D. Pressure treated lumber is not acceptable.

### **2.02 DIMENSION LUMBER**

- A. Joists, Rafters, and Other Framing: No. 2 grade and any of the following species:
  - 1. Douglas fir-larch; WCLIB (GR)
  - 2. Douglas fir-south; WWPA G-5
  - 3. Douglas fir-larch (north); NLGA (SGRNL).
  - 4. Hem-fir; WCLIB (GR) or WWPA G-5.
  - 5. Hem-fir (north); NLGA (SGRNL).
  - 6. Southern pine; SPIB (GR).
  - 7. Spruce-pine-fir (south); NELMA (SGR), WCLIB (GR), or WWPA G-5.
  - 8. Spruce-pine-fir; NLGA.
- B. Sizes: Nominal sizes as indicated on drawings, S4S.

### **2.03 MISCELLANEOUS LUMBER**

- A. General: Provide lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Cants.
  - 3. Nailers.
  - 4. Furring.
- B. For items of dimension lumber size, provide No. 2 grade lumber with 15 percent maximum moisture content and any of the following species:
  - 1. Mixed southern pine; SPIB (GR).
  - 2. Hem-fir or Hem-fir (north); NLGA (SGRNL), WCLIB (GR), or WWPA G-5.
  - 3. Spruce-pine-fir (south) or Spruce-pine-fir; NELMA (SGR), NLGA (SGRNL), WCLIB (GR), or WWPA G-5.
- C. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine, No. 2 grade; SPIB (GR).
2. Hem-fir or Hem-fir (north), 2 Common grade; NLGA (SGRNL), WCLIB (GR), or WWPA G-5.
3. Spruce-pine-fir (south) or Spruce-pine-fir, 2 Common grade; NELMA (SGR), NLGA (SGRNL), WCLIB (GR), or WWPA G-5.

## **2.04 SHEATHING**

- A. Plywood Roof Sheathing: Exposure 1, Structural I sheathing.
  1. Span Rating: Not less than 32/16.
  2. Thickness: Not less than 3/4 inch.

## **2.05 ACCESSORIES**

- A. Fasteners and Anchors:
  1. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
    - a. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.
  2. Power-Driven Fasteners: ASTM E488/E488M with design safety factor of 5 per ICC (IBC)
  3. Bolts: Steel bolts complying with ASTM A307, Grade A (ASTM A563, Property Class 4.6); with ASTM A563 hex nuts and, where indicated, flat washers.
  4. Nails, Brads, and Staples: ASTM F1667.
  5. Wood Screws: Comply with ASME B18.6.1.
  6. Screws for Fastening to Cold-Formed Metal Framing: ASTM C954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
  7. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E488/E488M conducted by a qualified independent testing and inspecting agency.
    - a. Material: Carbon-steel components, zinc plated to comply with ASTM B633, Class Fe/Zn 5.
- B. Sheathing Tape: Pressure-sensitive plastic tape for sealing joints and penetrations in sheathing and recommended by sheathing manufacturer for use with type of sheathing required.
- C. Adhesives for Field Gluing Panels to Framing: Formulation complying with ASTM D3498 that is approved for use with type of construction panel indicated by both adhesive and panel manufacturers.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION - GENERAL**

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, sleepers, and similar supports to comply with requirements for attaching other construction.
- B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  1. NES NER-272. for power-driven fasteners.
  2. Chapter 23, table, "Fastening Schedule," in the ICC (IBC).
- D. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

### **3.02 FRAMING INSTALLATION**

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Install structural members full length without splices between supports.

- C. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWI (WFCM) Wood Frame Construction Manual.
- D. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

### **3.03 WOOD SLEEPER, BLOCKING, AND NAILER, INSTALLATION**

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build anchor bolts into masonry during installation of masonry work. Where possible, secure anchor bolts to formwork before concrete placement.
- C. When stacking wood, offset and stagger wood joints a minimum of 12" o.c.

### **3.04 WALL AND PARTITION FRAMING INSTALLATION**

- A. For stud walls, provide 2-by-4-inch nominal size wood studs spaced 16 inches o.c., unless otherwise indicated.
- B. Construct corners and intersections with three or more studs. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
  - 1. Provide continuous horizontal blocking at midheight of partitions more than 96 inches high, using members of 2-inch nominal thickness and of same width as wall or partitions.
- C. Fire block concealed spaces of wood-framed walls and partitions at each floor level and at ceiling line of top story. Where fire blocking is not inherent in framing system used, provide closely fitted wood blocks of 2-inch nominal thick lumber of same width as framing members.
- D. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Set headers on edge and support on jamb studs.
  - 1. For non-load-bearing partitions, provide double-jamb studs with headers not less than 4-inch nominal depth for openings 48 inches and less in width, 6-inch nominal depth for openings 48 to 72 inches in width, 8-inch nominal depth for openings 72 to 120 inches in width, and not less than 10-inch nominal depth for openings 10 to 12 feet in width.

### **3.05 INSTALLATION OF CONSTRUCTION PANELS**

- A. General: Comply with applicable recommendations contained in APA E30, "Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.
  - 1. Comply with "Code Plus" provisions in APA E30.

### **3.06 SHEATHING JOINTS**

- A. Apply bond breaker tape or similar material to joints between sheathing panels and at items penetrating sheathing.

### **3.07 PROTECTION**

- A. Cover and protect all roof related wood blocking and sheathing from moisture and weather after installation. Self adhered roofing underlayment, synthetic roofing underlayment or tarpaulins are acceptable. Protect wood construction until metal coverings (copings, wall panels, etc.) are installed.

### **3.08 EXCESS MATERIAL AND WASTE**

- A. Remove excess material or waste that cannot be used, as described above, and legally dispose of off Owner's property.
- B. Do not burn scrap on project site.
- C. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- D. Prevent sawdust and wood shavings from entering the storm drainage system.

**END OF SECTION**



## **SECTION 07 52 17**

### **SBS MODIFIED BITUMINOUS (CA) MEMBRANE ROOFING**

#### **PART 1 GENERAL**

##### **1.01 SECTION INCLUDES**

- A. SBS Modified Bituminous Roofing System.
- B. Vapor Barrier.
- C. Disposal of demolition debris and construction waste is the responsibility of Contractor. Perform disposal in manner complying with all applicable federal, state, and local regulations.

##### **1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 06 10 01 - Roof Carpentry: Wood nailers and blocking associated with roofing work.
- C. Section 07 62 00 - Sheet Metal Flashing and Trim: Formed metal flashing and trim items associated with roofing.
- D. Section 07 72 00 - Roof Accessories: Roof hatches, vents, and manufactured curbs.

##### **1.03 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
- B. ASTM C208 - Standard Specification for Cellulosic Fiber Insulating Board.
- C. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
- D. ASTM D173/D173M - Standard Specification for Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing.
- E. ASTM D36/D36M - Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus).
- F. ASTM D312/D312M - Standard Specification for Asphalt Used in Roofing.
- G. ASTM D4479/D4479M - Standard Specification for Asphalt Roof Coatings - Asbestos-Free.
- H. ASTM D2178/D2178M - Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.
- I. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- J. ASTM D6163/D6163M - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
- K. ASTM D6164/D6164M - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
- L. ASTM D92 - Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester.
- M. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.
- N. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
- O. NRCA - The NRCA Roofing Manual; Membrane Roof Systems (2023)
- P. State of Illinois Title 35 - Environmental Protection.
- Q. UL 1256 - Standard for Fire Test of Roof Deck Constructions.

##### **1.04 PERFORMANCE REQUIREMENTS**

- A. General: During construction operations, provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Work specified by reference to the published standards or specifications of a manufacturer or organization shall comply with the recommended requirements of the current standard or

specification listed. In case of conflict between the referenced specifications and the project specifications, the project specifications shall govern where more stringent. In case of conflicts between the referenced specification or standards, the one having the more stringent requirements shall govern.

#### **1.05 ADMINISTRATIVE REQUIREMENTS**

- A. Pre-Installation Meeting: Before start of roofing work, Contractor shall hold a meeting to discuss the proper installation of materials and requirements to achieve the warranty.
  - 1. Require attendance with parties directly influencing the quality of roofing work or affected by performance of roofing work.
  - 2. Notify Construction Manager / Architect one week in advance of meeting.
- B. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project Site. Comply with requirements for pre-installation conferences in 01 30 00 - Administrative Requirements".
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing, and inspecting agency representative, roofing, installer, roofing system manufacturer's representative, deck installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review structural loading limitations of roof deck during and after roofing.
  - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect the roofing system.
  - 7. Review governing regulations and requirements for insurance and certificates if applicable.
  - 8. Review temporary protection requirements for roofing system during and after installation.
  - 9. Review roof observation and repair procedures after roofing installation.
  - 10. Coordinate to move equipment and resolve conflicts prior to installation.
  - 11. Review Section below "Installation Quality Control".

#### **1.06 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data
  - 1. Roofing system: Manufacturer's specification and product data sheet current at time of bidding.
  - 2. Insulation: Manufacturer's product data sheet for each type of insulation.
  - 3. Fasteners: Manufacturer's product data sheet for each type.
- C. Installation Instructions: Manufacturer's written installation - instructions for the roofing foreman.
- D. Shop Drawings
  - 1. Tapered insulation: Submit shop drawings showing layout of tapered roof insulation system, dimensions and slopes.
  - 2. Sample Warranty: Indicate (if necessary) where warranty submitted deviates from the specification requirements.
- E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system (as requested by the Owner).
- F. Manufacturer Certificates: Signed by roofing system manufacturer certifying that the components of the roofing system comply with requirements specified in "Performance Requirements" Article (as requested by the Owner).
  - 1. Submit evidence of meeting performance requirements.
- G. Product Certificates signed by manufacturers of bituminous roof coatings and bituminous roof primers certifying:
  - 1. That products furnished comply with requirements and are suitable for the use indicated.

2. That products furnished are in accordance with VOC Content limits and other requirements of State of Illinois Title 35 (Section 223) and 40 CFR 59, Subpart D (EPA Method 24) whichever is more stringent.
- H. Product Test Reports (as requested by the Owner): Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components or roofing system.
  1. Indicate that bitumen delivered to Project complies with requirements. Include quantity and statistical and descriptive data for each product. Submit certificate with each load before it is used.
    - a. Include continuous log showing time and temperature for each load of bulk bitumen, indicating date obtained from manufacturer, where held, and how transported before final heating and application on roof.
- I. Research / Evaluation Reports: For components of roofing system (as requested by the Owner).
- J. Maintenance Data that would be applicable to the performance and warranty of the specified roofing system.
- K. Warranties: Special warranties specified in this Section.
  1. Manufacturer's Warranty.
  2. Contractor's Warranty.

## **1.07 QUALITY ASSURANCE**

- A. Prime Roofing Contractor Qualifications and Written Approvals:
  1. The Prime Roofing Contractor, providing work under this section, shall be the roof installer, manufacturer warrantor and the roofing workers payroll agent. The Contractor shall be the prime contractor holding the agreement for the contract for construction and shall not be a subcontractor or a subsidiary company to the Contractor holding the agreement with the Owner for the contract for construction.
  2. The Prime Roofing Contractor shall be a qualified installer, approved by the manufacturer to install manufacturer's products and provide manufacturer's specified warranty. Installer must have a minimum of five (5) years experience as a licensed installer of the specified manufacturer, as attested to by the manufacturer.
  3. The Prime Roofing Contractor bidding the work shall have their own place of business, equipment, staff, manpower, etc., required for the type of work they are licensed to perform. The business address, equipment storage, as well as the staff / manpower should be located within a 100 mile radius of the project site location.
  4. The Prime Roofing Contractor declares that the reference projects listed on the Bid Form have been successfully completed to the Owners' satisfaction and that they are similar to the design, system type and products used in this project. Unless otherwise approved by the Owner, the Contractor shall employ on this project a field foreman who has completed at least two of the projects listed on the Bid Form.
  5. The Prime Roofing Contractor bidding the project shall have successfully five (5) projects of the same size (or larger), scope, cost and guarantees in the last five (5) years. These projects shall be listed in the bid form for the system specified on this project. The foreman and manpower for this project should also have worked on five (5) projects of same size (or larger) and scope in the last five (5) years, as represented on the Bid Form.
  6. The Prime Roofing Contractor shall be licensed in the State of Illinois as a roofing contractor under the current business ownership and structure for the last five (5) years.
  7. Roofing Written Approvals: Before fabrication, delivery or installation, submit and obtain approval of the following in accordance with the bid documents. Do this at the request of the Owner.
    - a. A letter from the roof membrane manufacturer approving the Contractor to install specified roof membrane.
    - b. A letter from the roof membrane manufacturer stating that he will guarantee the roof membrane as described in the bid documents.
    - c. A letter from the roof insulation manufacturer stating that the insulation system as described in the bid documents complies with his recommended requirements.
  8. The Prime Roofing Contractor bidding the work shall provide the necessary financial information to Owner when requested, including, but not limited to, the financial statements for

- the three previous years of the apparent successful contractor which shall be submitted to Owner. The financial statements shall have been prepared and certified by a C.P.A.
9. The Prime Roofing Contractor bidding the work shall be able to meet the necessary insurance limits required by Contract Documents. The insurance company shall be acceptable to Owner. (See Supplementary General Conditions for insurance.)
- B. Source Limitations: Obtain components for roofing system approved by roofing system manufacturer.
- C. Fire Test Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
1. Exterior Fire-Test Exposure: Class A; ASTM E108, for application and roof slopes indicated.
  2. Fire-Resistive Ratings: ASTM E119, for fire resistance-rated roof assemblies of which roofing system is a part.
  3. Test Assemblies: FM 4450 or Pass UL 1256 Testing for Roof Assemblies.
- D. Bituminous Materials Quality Control:
1. Submit a certificate from the manufacturer, properly attested, stating that bulk or non-labeled material complies with the requirements of the contract documents. Furnish certificate prior to the installation.
  2. Tests: Secure test cut specimens as directed by the Architect in accordance with the recommended procedure of the National Roofing Contractor's Association or ASTM. For each new roof area cut samples of built-up roofing, as directed by the Architect.
  3. Samples shall be 6 inches by 36 inches, taken perpendicular to the long dimension of the felts and immediately and permanently repaired with the specified number of plies.
  4. Provide the following information, printed on all asphalt packages or Bills of Lading covering bulk asphalt:
    - a. Softening Point Range (SP): The temperature ranges of the asphalt determined in accordance with ASTM D312/D312M and ASTM D36/D36M.
    - b. Flash Point (FP): The flash point of the asphalt as determined by ASTM D92.
    - c. Equiviscous Temperature Range (EVT): The temperature range, plus or minus 25 degrees Fahrenheit, at which a viscosity of 125 centistokes is attained.
    - d. Finished Blowing Temperature (FBT): The temperature at which the blowing of the asphalt has been completed.
  5. Asphalt bitumen shall be sufficiently heated in the kettle/tanker to achieve this optimum viscosity/temperature range (EVT) AT THE POINT OF APPLICATION.
  6. Bitumen heating is subject to two (2) restraints:
    - a. It shall NOT be heated to or above the actual COC Flash Point. (ASTM D92, Test for Flash and Fire Points by Cleveland Open Cup).
      - 1) It shall NOT be heated and held above the Finished Blowing Temperature (FBT) for more than 4 hours.
  7. Kettle temperature for bitumen shall not exceed 50 degrees below the flash point asphalt. All kettles on the project shall have correctly operational thermometers.
  8. VOC/VOM Content: Products shall comply with VOC/VOM content limits of State of Illinois Title 35 including but not limited to the following:
    - a. Bituminous Roof Coatings: 300 g/L.
    - b. Bituminous Roof Primers: 350 g/L.
    - c. Roof Coatings: 250 g/L.
    - d. Thermoplastic Rubber Coatings and Mastics: 550 g/L.

#### **1.08 DELIVERY, STORAGE AND HANDLING**

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Provide heated or cooled storage for temperature sensitive material installations. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Bring onto the site only that amount of roofing membrane and insulation materials that can be totally installed during two (2) day's of roofing operation. Those materials that are not used within the day's operations can be stored on site until the following day. Materials must be stored and kept watertight and protected from the elements. Any materials not fully covered for protection from moisture will be rejected at the discretion of the Owner / Architect. If rejected, the materials must be immediately removed from the site and not used on the project. Any materials stored on the roof that have been rained on, covered or not, are subject to rejection by the Owner / Architect. Any materials stored on the roof in quantities exceeding two (2) day's operation are subject to rejection by the Owner / Architect. Rejected materials are subject to physical marking by the Owner / Architect. The manufacturer's applied plastic wrap is not an acceptable covering and is not considered weather protection. Canvas tarpaulins are considered an acceptable covering
- E. Handle and store roofing materials and place equipment in a manner to avoid damage to or deflection of deck.
- F. Materials stored offsite, should be kept in a covered area and protected from the elements or stored in enclosed warehouse space. Off site storage of materials is subject to review by the Owner / Architect without notice. Any materials suspected of being wet or damaged through a discontinuity in the covering, contaminated during delivery to the jobsite, or improper storage on the jobsite is subject to rejection by the Owner / Architect.

#### **1.09 JOB CONDITIONS**

- A. Protection
  - 1. Avoid heavy traffic on completed work.
  - 2. Restore to original condition or replace all work or materials damaged by roofing operations, including, but not limited to, roof drains and downspouts.
  - 3. Protect paving and building surfaces adjacent to roofing operations.
  - 4. Remove any accumulated frost or moisture conditions on the surfaces to receive roofing.
  - 5. Seal the day's work to disallow intrusion of water under or behind the work.
- B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements, without phasing installation of final insulation or membrane.
- C. No phased construction is allowed above the vapor barrier.

#### **1.10 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Roofing Contractor provides the following minimum warranties:
  - 1. Roofing Contractor: Two (2) year warranty in accordance with general requirements.
  - 2. Manufacturer: Twenty (20) years no dollar limit (NDL) System Guarantee in accordance with general requirements.
  - 3. Warranty and Guarantee shall commence after the date of substantial completion.

### **PART 2 PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Acceptable Manufacturer - Roofing System:
  - 1. Siplast: Irving, TX: [www.siplast.com](http://www.siplast.com).
  - 2. Soprema: Wadsworth, OH: [www.soprema.us](http://www.soprema.us).
- B. Substitutions: See Section 01 60 00 - Product Requirements.

#### **2.02 ROOFING SYSTEM DESCRIPTION**

- A. Roofing materials shall be selected from standard specifications of the manufacturers and shall be designed to meet the following conditions, including the listed ASTM, UL, ANSI or FM standards.

## 2.03 SBS MODIFIED BITUMEN MATERIALS

### A. Felts and Flashings

1. Roof Membrane Ply Sheet: Asphalt, Fiberglass Mat Reinforced, coated ply sheet: ASTM D2178/D2178M, Type IV.
  - a. Siplast: Paraglas
  - b. Soprema: Sopra IV
2. Roof Membrane Base Ply: SBS Modified Bitumen, Smooth Surfaced with a Fine Mineral Aggregate, Fiberglass Mat Reinforced, ASTM D6163
  - a. Siplast: Paradiene 20
  - b. Soprema: Elastophene Sanded 2.2
3. Roof Membrane Finish Ply: SBS Modified Bitumen Membrane, Fiberglass Scrim / Polyester Mat Reinforced with White Ceramic Granules, ASTM D6162 or Polyester Reinforced with White Ceramic Coated Granules, ASTM D6164.
  - a. Siplast: Parafor 30
  - b. Soprema: Sopralene 180 FR GR
4. Flashing Reinforcing Ply: SBS Modified Bitumen, Smooth Surfaced with a Fine Mineral Aggregate, Fiberglass Mat Reinforced, ASTM D6163.
  - a. Siplast: Paradiene 20
  - b. Soprema: Elastophene Sanded 2.2
5. Flashing Finish Ply: SBS Modified Bitumen Membrane, Fiberglass Scrim / Polyester Mat Reinforced with White Ceramic Granules, ASTM D6162 or Polyester Reinforced with White Ceramic Coated Granules, ASTM D6164.
  - a. Siplast: Parafor 30
  - b. Soprema: Sopralene 180 FR GR
6. Cold Process Adhesive: Asphalt based, solvent blend, ASTM D4479/D4479M. Adhesive (for interply of roof membrane finish ply and flood coat adhesive).
  - a. Siplast: PA-311M
  - b. Soprema: ColPly Adhesive
7. Flashing Adhesive: Asphalt Based, fiber reinforced, ASTM D4586/D4586M, Type II.
  - a. Siplast: PA-828 Flashing Cement
  - b. Soprema: ColPly Flashing Cement
8. Roof Cement: Trowel Grade, Asphalt Mastic, ASTM D4586/D4586M, Type II.
  - a. Siplast: PA-1021 Plastic Cement
  - b. Soprema: Sopramastic SBS Elastic Cement
9. Reinforcing fabric: Bituminous-saturated woven cotton: ASTM D173/D173M, asphalt impregnated as approved by the manufacturer of the roof system.
10. Resin/Fleece Flashing System:
  - a. Siplast: Parapro 123 Flashing System Products
  - b. Soprema: Alsan RS 230 System Products
11. Solvent Free Adhesive (for use to adhere the roof membrane finish ply under Resin/Fleece flashing system).
  - a. Siplast: SFT Adhesive
  - b. Soprema: ColPly EF Adhesive

### B. Substrate Boards:

1. Gypsum Roof Board: Fiberglass Mat, gypsum roof board, either 4' x 4' or 4' x 8' x 5/8" thick. ASTM C1177
  - a. National Gypsum Company: Dexcell Glass Mat Roof Board.
  - b. Georgia-Pacific Corporation: Dens-Deck Prime Roof Board.
  - c. Substitutions: Not Permitted.

### C. Insulation:

1. All insulation shall be tested as an assembly and meet one of the following requirements and shall be marked with the insulations classification.
  - a. FM 4450: Class 1.
  - b. UL 1256: Pass.
2. Fiberboard Roof Insulation Coverboard, 4' x 4' x .5" or 4' x 8' x .5": High density, primed red coating, wood fiber insulation, ASTM C208, Type II.

- a. Blue Ridge Fiberboard Inc.: Structodeck HD
  - b. Substitutions: Not Permitted.
- 3. Polyisocyanurate Roof Insulation Board (including field panels, tapered panels, saddles and crickets): 4' x 4' x thickness specified on the drawings. Fiber reinforced organic mat facer, compressive strength: 20 psi minimum. Comply with the current ASTM C1289, Type II, Class 1, Grade 2.
  - a. Siplast: Paratherm
  - b. Soprema: Sopra - ISO
  - c. Substitutions: Not Permitted unless approved by Owner / Architect.
- 4. Polyisocyanurate Tapered Insulation Sump Panels: 8' x 8', 1/2" per foot slope, 1/2" - 2-1/2" thickness, compressive strength: 20 psi minimum. Comply with the current ASTM C1289, Type II, Class 1, Grade 2.
  - a. Hunter Panels: Hinged Target Sumps.
- 5. Cants and Edge Strips:
  - a. Preformed Cants: Manufactured from the same material as the top insulation board material.
  - b. Edge Strips and Tapered Transitions: Factory tapered and manufactured from wood fiber insulation board.
- D. Temporary Roof / Air Barrier / Vapor Barrier:
  - 1. Ply Sheet: Asphalt, Fiberglass Mat Reinforced, coated ply sheet: ASTM D2178/D2178M, Type IV.
- E. Bitumens:
  - 1. Asphalt: ASTM D312/D312M, as approved by the Roof System Manufacturer.
    - a. Type IV Asphalt (for interply of roof membrane ply sheet and roof membrane base ply / flashing reinforcing ply) as approved by the manufacturer of the roof system.
    - b. Type III or IV Asphalt (for interply of temporary roof and insulation adhesive) as approved by the manufacturer of the roof system.
- F. Fasteners:
  - 1. Insulation / Substrate Board Fasteners and Insulation Plates (Steel Deck): Confirm fastener length and penetration depth in the field prior to installation.
    - a. Siplast: Parafast Roofing Fastener and 3" Parafast Metal Plates
    - b. Soprema: Soprafix #12 DP Fastener and 3" Soprafix Metal Plates
  - 2. Roofing Nails: Minimum 11 ga. with 1 inch round or square head. Nails to wood shall have annular ringed grooves. Nails to masonry shall be heat treated.
  - 3. Base Sheet Fasteners (Cementitious Wood Fiber Deck): Confirm fastener length and penetration depth in the field prior to installation. Fasteners should not indent or penetrate the underside of the deck.
    - a. Siplast: Paralok Fastener. 1.4" or 1.8" long
    - b. Soprema: Twin Loc Nail. 1.4" or 1.8" long
  - 4. Base Sheet Fasteners (Gypsum and Lightweight Insulating Concrete Decks): Confirm fastener length and penetration depth in the field prior to installation. **Fasteners should not indent or penetrate the underside of the deck.**
    - a. Siplast: Paralok Fastener. 1.4" or 1.8" long
    - b. Soprema: Twin Loc Nail. 1.4" or 1.8" long
    - c. Altenloh, Brinck & Co. US, Inc: Trufast Versa-Fast Fasteners and Trufast Versa-Fast 3" Metal Plates **(for Gypsum Plank or Poured Gypsum Deck, 3" or greater)**
  - 5. Equipment/accessories to curbs:
    - a. Construction Fasteners, Inc., woodgrip drill screw with bonded steel and neoprene washer.
- G. Miscellaneous:
  - 1. Roof Mastic: Asphalt based, reinforced with non-asbestos fibers for general purpose and temporary construction use, ASTM D4586/D4586M Types I or II.
  - 2. Roof-Walkway Pads:
    - a. Siplast: Paratred.
    - b. Soprema: Soprawalk GY
  - 3. Self Adhered Roofing Underlayment:
    - a. Grace: Ice & Water Shield

- b. Soprema: Lastobond Eco
- 4. Asphalt Primer:
  - a. Siplast: PA-1125 Asphalt Primer
  - b. Soprema: Elastocol 350
- 5. Cold Process Adhesive Spreader:
  - a. Siplast: Paraflow PA-311 Adhesive Spreader
  - b. Other cold process adhesive spreading methods as approved by the manufacturer of the roof system.

## **PART 3 INSTALLATION**

### **3.01 EXAMINATION**

- A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment and that deflection will not strain or rupture roof components or deform deck.
- B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
- C. Examine roof substrate to verify that it is properly sloped to drains.
- D. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations and instructions; start of work constitutes acceptance of project conditions and requirements.
- E. Verify that wood nailers have been properly installed.

### **3.02 ROOF DECK REPLACEMENT AND PREPARATION**

- A. The Contractor shall not install any portion of the new roof construction over any unsatisfactory roof deck. Notify the Architect immediately of any unsatisfactory roof deck conditions.
  - 1. Surfaces to which roofing is to be applied shall be even, smooth, clean and dry, and free from defects that might affect the soundness of the installation.

### **3.03 INSTALLATION OF TEMPORARY ROOF / AIR BARRIER / VAPOR BARRIER**

- A. Install temporary roof where indicated. Use felts and bitumen indicated, installed as specified below. Unless otherwise shown on the drawings or more severely prescribed by the manufacturer, secure boards under the temporary roof, with appropriate fasteners at a rate of 1 fastener per 2 sq. ft. (8 fasteners per 4' x 4' board and / or 16 fasteners per 4' x 8' board).

### **3.04 INSULATION AND COVER BOARD INSTALLATION**

- A. Types and sizes are indicated on the drawings and specified herein.
- B. Install tapered insulation as indicated on the drawings. Where saddles are specified with double layer insulation, install the first (bottom) layer of insulation, then the saddle system, then the specified overboard to break all insulation joints. Tapered boards may be interlaced or field mitered at corner intersections at contractor's option.
- C. Install all insulation top layers and tapered insulation systems such that top joints overlap bottom ones by 12 inches minimum and such that there are no continuous vertical joints. On tapered insulation systems stagger insulation boards within each row of the same letter designation; then install specified overboard insulation to completely break all joints under.
- D. Install insulation in accordance with manufacturers' recommendations except where deviated from herein. Lay no more insulation at one time than can be completely protected by the fully installed final roof membrane. Insulation boards installed directly to a steel roof deck shall be mechanically attached at a rate of 1 fastener per 2 sq. ft. (8 fasteners per 4' x 4' board).
- E. Apply insulation so that the longitudinal (continuous) joint is parallel to the short dimension of the roof. Lay insulation with edges in continuous contact, and not forced into place. Stagger end joints. Take particular care to install overboards in full edge contact.
- F. Fully "walk in" insulation within ten seconds of the application of the hot asphalt adhesive. Provide moppings at a minimum of 33 pounds per square.
- G. Remove and replace any damaged boards where the felt facer of the insulation has pulled loose from the board or where the board is damaged because of foot or equipment traffic. Remove and replace any insulation of edge strips that have been wetted during construction.



- H. Nail or fasten all insulation stops, wood nailers and wood members at 12 inches O.C. Nail at the end of each piece.
- I. At the end of the day's work prepare an insulation night termination by holding back the topper board 12" from the edge, installing a dry sheet over and sealing with at least 2 organic field plies. Provide a continuous seal around the work area to not allow water to enter into the deck structure under the newly installed roof construction.

### **3.05 ROOF MEMBRANE INSTALLATION**

- A. Install roofing in accordance with the current manufacturer's specifications, approved by the Architect, currently recommended by the roofing manufacturer for the type of roof deck required, and as modified herein. Cold process adhesive for the roof membrane base ply and finish ply shall be applied as recommended by the manufacturer.
- B. Unless otherwise prescribed by the manufacturer, apply roofing in shingle fashion so that direction of the flow of water is over (and not against) laps.
- C. Moppings of bitumen shall be solid under the felts for the full extent required by the roofing specifications so that no place in the mopped area shall felt touch felt. The quantity of bitumen shall be provided to generate a continuous 1/4 inch projection past the lap edge.
- D. Moppings shall be applied by either hand mops or lightweight (aluminum) felt laying machines only. Field plies shall be laid in a method to limit foot and construction traffic thereon for a period of 30 minutes.
- E. Additional Field Plies and Sumps: Prior to installing the fiberglass field ply construction, hot mop a base layer of one ply of organic field ply into all sump areas, valley lines, and slope transitions.
- F. Lightly press the plies into the hot bitumen with a rough bristle broom. Lay without wrinkles, buckles or kinks. Repair defects immediately. The finished roofing systems shall be free from pockets, blisters or dry felts. Avoid direct traffic on the plies.
- G. Complete in one operation the application of built-up roofing, up to the line of termination at the end of the day's work. Provide manufacturer's recommended water cut-offs, using organic base sheets or field plies.
- H. Repair test cuts immediately. Build up roofing and insulation over the test cut to the number of layers of felts and bitumen required for the roof. The first ply of the felt in repair shall lap past the test spot by three inches all around. Succeeding plies shall lap the receding by 3 inches.

### **3.06 FLASHING INSTALLATION**

- A. Provide specified manufacturers modified bitumen flashing system. Install flashing sheet with application method recommended except where modified herein. Mechanically fasten flashing to walls and curbs 6 inches o.c. Install flashing sheets in 3 foot roll width sections. On sheets without a selvage edge, heat and press in granules along the adhering edge to continuously reveal modified bitumen. Prime the adhering edge as recommended by the manufacturer.
- B. Backer Sheets: Provide flashing backer sheets at all raised flashings. On wood surfaces to receive fully adhered flashing materials, prepare the wood surfaces by priming the surface and then nailing a 4 inch wide strip of 30 pound un-perforated felt over all wood panel joints, nailed on both sides of the strip at 4 inches o.c. Then hot mop install a fiberglass flashing backer base sheet to the substrate and nail off at the top. If the raised flashing heights exceed 15 inches, then this flashing backer base sheet must be nailed dry to the substrate at 6 inches o.c. in any direction, rather than hot mopping.
- C. Provide temporary flashings if permanent flashings are not in place. All openings in the membrane must be sealed to prevent any moisture from entering the roof system prior to completion of membrane application. Roofing felts must be glazed and sealed at the end of each day's work. Mechanically attached felts that cover unfinished work shall be 30 pound unperforated organic.
- D. Plumbing vent flashing. Press lead flange into full coat of roofing cement. Turn lead tube down into vent minimum 2 inches. Strip-in two roofing felts set in hot bitumen over flanges and new roof system. Extend all plumbing vent stacks receiving lead flashing, minimum 8 inches above new roof membrane surface.
- E. Drain Flashing. Flash all roof drains affected by new work as indicated on drawings. Set lead on finished roofing in cement at a rate of one-half pound of roofing cement per square foot. Return to jobsite 60 days after completing drain flashings and retighten bolts or clamps.

- F. Install base flashings in flashing adhesive no later than three (3) days following lay up of the roof membrane. Permanently seal all flashing laps immediately after installation with a three-course application of compatible flashing cement and reinforcing fabric. Apply aluminum surfacing over three-course application, after flashing cement has sufficiently flashed off.
- G. Provide self adhered roofing underlayment at the tops of all walls prior to installation of metal components. This includes, but is not limited to coping caps, raised metal edges, expansion joint covers and divider covers. The underlayment must extend a minimum of 1" down the vertical surface of each side of the wall.
- H. Install metal components, coping caps, etc., no later than one week following the installation of base flashings.

### **3.07 INSTALLATION, MISCELLANEOUS PROVISIONS**

- A. Raise and disconnect all rooftop equipment counterflashings to allow proper installation of base flashings thereunder. This includes lifting and mechanically and electrically disconnecting rooftop mechanical equipment. Provide additional treated wood nailers around equipment curbs to maintain a minimum of 4 inches between the top of a new fiber cant at the base and the top of the curb. Reconnect mechanically and electrically for continuous operation.
- B. Provide continuous factory tapered transitions for all surfaces to receive roofing felts of not less than 45 degrees for vertical/horizontal transitions and 1/4 inch per foot for horizontal/horizontal transitions.
- C. Where pitch pans are not otherwise replaced with these specifications, replace pitch pans, fill with grout filler and top with Carlisle Pourable Rubber Sealer.

### **3.08 FIELD QUALITY CONTROL**

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports. If the final roof construction is suspected by the Architect to be wet, then the Architect and its qualified testing agency will conduct non-destructive moisture surveys and other investigations.
- B. Test Cuts: Before flood coating and surfacing built-up roofing membrane, test specimens will be removed to evaluate problems observed during quality-assurance inspections of roofing membrane as follows:
  - 1. Approximate quantities of components within roofing membrane will be determined according to ASTM D3617.
  - 2. Test specimens will be examined for interply voids according to ASTM D3617 and to comply with criteria established in Appendix 3 of NRCA/ARMA "Quality Control Guidelines for the Application of Built-up Roofing".
- C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect. Notify Architect or Owner 48 hours in advance of date and time of inspection.
- D. Repair and remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements. If the final roof construction is suspected by the Architect to be wetted, then the Owner will undertake additional testing and inspecting at the Contractor's expense.
- F. Manufacturer Site Visits: The Manufacturer will provide quality control site visits through the contractor at the following intervals; site visit reports will be provided to the Architect / Owner upon request:
  - 1. One (1) site visit minimum during the first week of the roof system installation
  - 2. Two (2) site visits minimum during the remaining roof system installation time frame.
  - 3. Warranty site visit and punch list at the completion of the roof system installation.

### **3.09 PROTECTION AND CLEANING**

- A. For new Construction: Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

- B. Carefully inspect all completed work. Correct all defects.
- C. Correct deficiencies and replace roofing system or work that does not comply with requirements. Repair substrates. Repair and reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion, free of defects, according to warranty and design requirements.
- D. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction. Clean up bitumens mastic and adhesive spills, splatterings, and remove surplus materials. Restore damaged surfaces to pre-existing condition.
- E. Provide adequate protection of complete work until substantial completion. Prevent traffic, storage or movement of materials or equipment on completed roofing.
- F. Clean up all rubbish, debris, surplus materials, tools and equipment and remove from site.

### **3.10 INSTALLATION QUALITY CONTROL**

- A. General
  - 1. Authorized starting time will be cleared with the Owner and government authority.
  - 2. Walk the site with Owner and record preconstruction site/pavement problems.
  - 3. Check out all drains and vents before starting tear-off; record slow or blocked units; report same to the Owner and Architect.
  - 4. Storage of materials: daily deliveries with 1½ day's material on site; ½ day OK for startup or overstock.
  - 5. Maintain a neat job site.
  - 6. Cover and protect wood work from moisture after installation.
  - 7. Vacuum remove all existing loose roof gravel; do not use power brooms.
  - 8. Prime wood surfaces to receive fully adhered products.
  - 9. Fastener spacings are minimum criteria: we'll accept tighter spacings, but not larger ones.
  - 10. Hot temp roofs may have looser tolerances than the prime membrane, but no widespread blisters and no fishmouths; prime, finished roof must be very tight! Broom in the temporary plies.
  - 11. Complete the temp roof and then do carpentry, drain work, accessories, etc.; then do lay-up work. Lay up final construction only to completed curbs, and edges.
  - 12. Completely remove all water from the temporary roof in the immediate work area prior to lay-up operations.
  - 13. Where construction operations have occurred (e.g. carpentry, masonry, etc.), remove all deposits from the roof and prime the construction area. Prime all areas of the temporary roof containing a significant accumulation of dirt.
  - 14. PHASED APPLICATION IS UNACCEPTABLE. Insulation and membrane should all be laid in one day. Surfacing can follow within manufacturer allowances to a maximum of two weeks.
  - 15. If using a felt machine for insulation, maintain full coverage across the boards.
  - 16. Do not slide in insulation boards into the adhesive; place them in.
  - 17. Immediately reject and remove any insulation that foams; immediately report conditions to the Architect.
  - 18. Maintain a dry tie-in of 12 inches for each layer of insulation at the end of each day for next day's work.
  - 19. Fully mop in all cants. Immediately step in cants (push into place) along their entire lengths.
  - 20. Insulation joint tolerances of 1/4" are not a problem if covered by additional insulation boards; but no more than 1/4".
  - 21. STEP IN EVERY INSULATION BOARD.
  - 22. Maintain a consistent 12 inch coverage of boards over joints below.
  - 23. Butt boards tightly against blocking AND completely fill any voids.
  - 24. Use an INCREASED AMOUNT of hot adhesive for dusty perlite tapered panels and saddles.
  - 25. Install cover boards with very tight joints, with no tolerance for voids, other than perlite curing shrink.
  - 26. Keep all dispenser orifices clean and free flowing.
  - 27. Remove foreign bitumen from kettles and tankers prior to insertion of specified products.
  - 28. Do no overheat membrane bitumen; adhere to E.V.T. numbers and tolerances.

29. Asphalt BUR membranes: set the plies in place with a light squeegee or flexible metal teathed device.
30. Set rolls and broom from the bare insulation side of the construction; do not walk on freshly laid plies.
31. Immediately cut out and patch blisters and fishmouths with as many plies as removed; overlap each ply by 2".
32. Mop an additional ply over sharp, potentially-bridging fiberglass ply transitions.
33. Do not drag luggers or mop carts over freshly laid plies.
34. Do not put motor oil on the tires of the equipment.
35. Squeegee and glaze temporary bur at the end of each day.
36. Rained on (including light mist or rain) or incomplete, phased daily work will be rejected and removed.
37. Cover unflushed raised constructions with ice and water shield or 30# unperforated felt over the tops of the water edged plies.
38. Where otherwise not covered by the project construction documents, construct according to NRCA latest publications and standards.

**END OF SECTION**

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

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Standing seam metal wall panel system and associated metal trim
- B. Fabricated sheet metal items including, but not limited to;
  - 1. Coping caps
  - 2. Raised metal edge and metal edge gravel stop
  - 3. Expansion joints
  - 4. Area Dividers
  - 5. Gutters, through wall scuppers and downspouts
  - 6. Counterflashings, skirt metal counterflashings and termination bars
- C. Miscellaneous metal related accessories.
- D. Products furnished but not installed under this Section include the following:
  - 1. Metal Thru-Wall Roof Flashing as specified on the drawings.

**1.02 RELATED REQUIREMENTS**

- A. Section 06 10 01 - Roof Carpentry: Wood nailers, blocking and sheathing associated with sheet metal flashing and trim.
- B. Section 07 52 17 - SBS Modified Bituminous (CA) Membrane Roofing: Roofing work related to sheet metal flashing and trim.
- C. Section 07 72 00 - Roof Accessories:
- D. Section 07 92 00 - Joint Sealants:

**1.03 REFERENCE STANDARDS**

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- C. ASTM B32 - Standard Specification for Solder Metal.
- D. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction.
- E. SMACNA (ASMM) - Architectural Sheet Metal Manual.
- F. NRCA - The NRCA Roofing Manual; Architectural Metal Flashing (2022)

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Pre-Installation Meeting: Convene one week before starting work of this section.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Samples for initial selection: Manufacturer's color charts showing the full range of colors and textures available.

**1.06 QUALITY ASSURANCE**

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual, the NRCA Roofing Manual and manufacturer's requirements, whichever is more stringent for fabrication and installation, except as otherwise indicated.
- B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 3 years of documented experience.
- C. Field Constructed Mock-Ups: Prior to installation of roofing related sheet metal terminations, both perimeter and field, erect sample terminations to further verify profile and color. Provide mock-ups including, but not limited to the following:

1. Roofing Exterior Perimeter (e.g. coping caps, raised metal edge, etc.): 10' long, including joint.
2. Roofing Exterior Perimeter (corner): 2' in each direction.
3. Area Dividers / Expansion Joints: 5' long.
4. Roofing Interior Perimeter (e.g. coping caps, raised metal edge, thru-wall counterflashing, surface mounted counterflashing, etc.): 10' long, including joint.

#### **1.07 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**

#### **2.01 MANUFACTURERS**

- A. Petersen Aluminum Corporation: <https://www.pac-clad.com/>
- B. Berridge Manufacturing Company: <https://www.berridge.com/>

#### **2.02 METAL WALL PANEL SYSTEM**

- A. Pre-Finished Galvanized Steel Wall Panels: ASTM A653/A653M, with G90/Z275 zinc coating; 24 gauge, (0.0239) inch thick base metal, shop pre-coated with PVDF coating.
  1. Color: As selected by Owner / Architect from manufacturer's standard published colors.
  2. Product:
    - a. Peterson Aluminum Corp.: Snap-On Panels, 12" wide panels.
    - b. Berridge Manufacturing Co.: Tee-Panel, 12-3/4" wide panels.
- B. Roof Insulation: Insulation as specified in Section 07 52 17 - SBS Modified Bituminous (CA) Membrane Roofing.
- C. Underlayment Felt: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams.
  1. GCP Applied Technologies; Tri-Flex XT or equivalent as approved by roof panel manufacturer for the roof panel and warranty specified.

#### **2.03 SHEET MATERIALS**

- A. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gauge, (0.0239) inch thick base metal, shop pre-coated with PVDF coating.
  1. Color: Unless noted otherwise, as selected by Architect from manufacturer's standard colors.
- B. Stainless Steel: ASTM A666, Type 304, soft temper, 20 gage (0.032) inch thick; smooth No. 4 finish.
- C. Copper: ASTM B370, cold rolled except where soft temper is required for forming. Weight as indicated on the drawings.
- D. Rubberized Asphalt Flashing: Self-adhering polymer-modified asphalt sheet; 0.040 inch total thickness; with cross-linked polyethylene top and bottom surfaces.
  1. Install preformed end dams for inside and outside corners and ends of lintels.
  2. Manufacturers:
    - a. W.R. Grace & Co.: Perma-A-Barrier:
    - b. Illinois Products Corporation (IPCO): IPCO Flashing
    - c. York Manufacturing, Inc; Wicked Good Flashing: [www.yorkmfg.com](http://www.yorkmfg.com).
- E. Stainless Steel Drip Edge: Type 304 hemmed stainless steel drip 0.015 inch shape and size as shown on drawings.
  1. Available Products: Subject to compliance with requirements, products that may be incorporated in the work include but are not limited to the following:
    - a. MFL - Holman and Barnhard
    - b. 1008 with hemmed edge - Heckman Construction Products, Inc.
- F. Termination Bars: Aluminum compatible with membrane and adhesives.
  1. Products:
    - a. Hohmann & Barnard, Inc.; T2: [www.h-b.com](http://www.h-b.com).
    - b. Wire-bond; #4210 Termination Bar: [wirebond.com](http://wirebond.com).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.04 ACCESSORIES

- A. Expansion Anchors: Rawlplug Company, Zamac Hammer-Screw, 1 1/4 inch minimum embedment.
- B. Threaded Masonry Fasteners: ITW Buildex, Tapcon, 3/16 hex washer head, 1 1/4 inch minimum embedment.
- C. For Fastening Metal to Wood Blocking:
  - 1. Construction Fasteners, Inc., woodgrip drill screw with bonded steel and neoprene washer.
- D. Nails: Minimum 11 gage galvanized with annular ringed grooves.
- E. Sealing Washers: One piece stainless steel and neoprene hydraulically bonded.
- F. Solder
  - 1. For steel or copper, provide 50-50 tin/lead ASTM B32 solder with Rosin Flux.
- G. Underlayment: Asphalt saturated organic felt ASTM D226/D226M, Type I (No. 15), unless noted otherwise.
- H. Bituminous coating: Solvent type bituminous mastic.

## 2.05 FABRICATION

- A. General: Shop fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of SMACNA (ASMM) (Architectural Sheet Metal Manual) and recognized industry standards. Fabricate for waterproof and weather resistant performance. Comply with material manufacturer's instructions and recommendations for forming material. Form exposed sheet metal work without excessive oil canning, buckling and tool marks, true to line and levels indicated.
- B. Cleats: Form cleats of same metal and weights as sheet metal being secured. Cleats shall be continuous.
- C. Keeper Straps: Form keeper straps of same metal and one gauge heavier than sheet metal being specified.
- D. Cover plates: For gravel stops, fascia extensions and copings shall be formed of same metal and weight as sheet metal being secured. Cover plates shall be 6 inches wide unless noted otherwise. Feather edges of cover plates by bending 10 degrees toward finished work.
- E. Backer plates: For coping joints, provide galvanized sheet metal backer plate beneath joints. Backer plates shall be 12 inches wide unless noted otherwise.
- F. Drips: Form 3/4 inch drips at lower edge of sheet metal flashings, counterflashings, cap flashings, fascias, gravel stops, copings and other metal items, by folding edge back and bending out 30 degrees from vertical to carry water away from wall. Where cleats are indicated, form drip to provide hook to totally engage the cleat or edge strip fastening.
- G. Terminations: Where sheet metal gravel stops, copings, expansion joints and other sheet metal work terminates at walls or other metal systems, provide fabricated sheet metal transition piece. Transition pieces shall be waterproof, weather resistant and permit expansion and contraction between adjacent metal systems. Terminations to walls shall be adequately anchored and sealed. No butted terminations are allowed.
- H. Soldering: All corners, terminations and non-moving metal joints of copper, unfinished galvanized, stainless steel or tern-coated stainless steel surfaces shall be soldered. Pop rivet and seal these corners for prefinished steel or aluminum metal construction.
- I. MINIMUM SURFACE SLOPE: Coping, raised edges, area dividers, expansion joint covers and other "horizontal" surfaces are to be beveled or shimmed to maintain a minimum slope of 2 inch per foot. Localized conditions shall be shimmed and adjusted to affect positive drainage of metal system and surfaces away from metal joints. THIS CRITERION AMPLIFIES WHAT IS SHOWN ON DETAIL DRAWINGS.
- J. Spread Clips: Provide spreader clips at expansion joints, 4 inches wide, 24 inches o.c., one gauge heavier than the covering metal.
- K. Gravel Guards: Shall be 20 ounce, 42 inch square with 3 inch flanges on roof surface.
- L. Form sections true to shape, accurate in size, square, and free from distortion or defects.

- M. Form pieces in longest possible lengths.
- N. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- O. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- P. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- Q. Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

## **PART 3 EXECUTION**

### **3.01 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.

### **3.02 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.

### **3.03 INSTALLATION**

- A. Apply underlayment felt to wood surfaces to be covered by sheet metal.
- B. Protect metal surfaces in contact with dissimilar metals with a coat of bituminous coating to prevent galvanic action.
- C. General: Comply with SMACNA (ASMM) (Architectural Sheet Metal Manual) and recognized industry standards. Set units of work securely in place by methods indicated. Provide for thermal expansion of metal units, conceal fasteners where possible, and set units true to line and level as indicated.
- D. Installation, Underlayment: Provide felt underlayment and rosin-sized paper under all copings, metal panels, and area dividers. Nail at SMACNA (ASMM) recommended patterns for the condition.
- E. Installation, gravel stops and fascias: Install with 2 inches minimum expansion at each joint. Nail cleats 3 inches o.c. Install cover plates with two screws with sealer washers. Provide two screws with sealer washers at center of gravel stop section.
- F. Installation, Copings and Area Divider Cover: Install with 2 inches minimum expansion at each joint. Install backer plates at joints and corners and embed coping in sealant bead each side of joint. Install 4 inches wide keeper strap at center of coping section with three fasteners to substrate. Bend keeper strap up to totally engage the coping drip and pop rivet through the drip with two (2) stainless steel pop rivets. Set cover plate in sealant bead each side of joint and fasten with two (2) screws with sealer washers.
- G. Installation, Expansion Joints: Install continuous cleats with screws and sealer washers 12 inches o.c. Install expansion joint covers with top surface sloped to shed water. Provide continuous 2 inch/foot minimum slope unless otherwise shown and provide continuous positive support under the sheet metal. Provide 1 inch wide expansion joint not greater than 10 feet on center and within 2 feet each side of inside and outside corners and end termination. Install spreader slips at 24 inches o.c., bent to provide 1 inch movement.
- H. Installation, Counterflashing: Install 2 inches wide keeper straps, where indicated, with two fasteners 24 on center. Install sealant tape where indicated. Install counterflashing true to line and level. Lap counterflashing sections 5 inches minimum. Lap inside and outside corners. Fasten counterflashing with specified fasteners and bend keeper straps up to completely engage the drip.
- I. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.
- J. Apply plastic cement compound between metal flashings and felt flashings.



- K. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.

**END OF SECTION**

**SECTION 07 72 00**  
**ROOF ACCESSORIES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Manufactured curbs and equipment rails.
- B. Non-penetrating rooftop accessories
- C. Roof hatches.
- D. Pipe and duct penetration housings
- E. Portable, non-penetrating, rooftop support system for Mechanical Platform Systems

**1.02 RELATED REQUIREMENTS**

- A. Section 05 31 00 - Steel Decking.
- B. Section 07 62 00 - Sheet Metal Flashing and Trim: Roof accessory items fabricated from sheet metal.

**1.03 REFERENCE STANDARDS**

- A. 29 CFR 1910.23 - Ladders.
- B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- D. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- E. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- F. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).
- G. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
  - 4. Maintenance requirements.
- C. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
  - 1. Non-penetrating Rooftop Supports: Submit design calculations for loadings and spacings.
- D. Warranty Documentation:
  - 1. Submit manufacturer warranty.
  - 2. Ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.05 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.

**1.06 WARRANTY**

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

## **PART 2 PRODUCTS**

### **2.01 ROOF CURBS**

- A. Manufacturers:
  - 1. AES Industries Inc: [www.aescurb.com](http://www.aescurb.com).
  - 2. The Pate Company: [www.patecurbs.com](http://www.patecurbs.com).
  - 3. Roof Products & Systems (RPS): [www.rpscurbs.com](http://www.rpscurbs.com).
  - 4. Thybar Corporation.
  - 5. Uni-curb, Inc.
  - 6. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Roof Curbs Mounting Assemblies: Factory fabricated hollow sheet metal construction, internally reinforced, and capable of supporting superimposed live and dead loads and designated equipment load with fully mitered and sealed corner joints welded or mechanically fastened, and integral counterflashing with top and edges formed to shed water.
  - 1. Roof Curb Mounting Substrate: Curb substrate consists of flat roof deck sheathing with insulation.
  - 2. Sheet Metal Material:
  - 3. Galvalume Steel: Hot-dip aluminum zinc alloy coated steel sheet complying with ASTM A792/A792M; AZ55 coating designation; \_\_\_ gage, \_\_\_\_\_ inch thick.
  - 4. Fabricate curb bottom and mounting flanges for installation directly on metal roof panel system to match slope and configuration of system.
    - a. Extend side flange to next adjacent roof panel seam and comply with seam configurations and seal connection, providing at least 6 inch clearance between curb and metal roof panel flange allowing water to properly flow past curb.
    - b. Where side of curb aligns with metal roof panel flange, attach fasteners on upper slope of flange to curb connection allowing water to flow past below fasteners, and seal connection.
    - c. Maintain at least 12 inch clearance from curb, and lap upper curb flange on underside of down sloping metal roof panel, and seal connection.
    - d. Lap lower curb flange overtop of down sloping metal roof panel and seal connection.
  - 5. Height above finished roof surface: 12 inches, minimum.
  - 6. Provide layouts and configurations indicated on drawings.
- C. Curbs Adjacent to Roof Openings: Provide curb on each side of opening, with top of curb horizontal for equipment mounting.
  - 1. Provide preservative treated wood nailers along top of curb.
  - 2. Insulate inside curbs with 1-1/2 inch thick fiberglass insulation.
  - 3. Height Above Finished Roof Surface: 8 inches, minimum.

### **2.02 ROOF HATCHES**

- A. Manufacturers - Basis of Design: Bilco S-50TB (thermally broken roof hatch).
  - 1. Bilco Co.; S-50TB: [www.bilco.com](http://www.bilco.com).
- B. Roof Hatches, General: Factory-assembled aluminum frame and cover, complete with operating and release hardware.
  - 1. Mounting: Provide frames and curbs suitable for mounting conditions as indicated on drawings.
  - 2. Thermally Broken Hatches: Added insulation to frame and cover; available in each manufacturer's standard, single leaf sizes; special sizes available upon request
  - 3. Size: As indicated on drawings; single-leaf style unless indicated as double-leaf.
  - 4. For Ladder Access: Single leaf; 30 by 36 inches.
- C. Frames and Curbs: One-piece curb and frame with integral cap flashing to receive roof flashings; extended bottom flange to suit mounting.
  - 1. Material: Mill finished aluminum, 11 gage, 0.0907 inch thick.
  - 2. Insulation: 3 inches polyisocyanurate.
  - 3. Curb Height: 12 inches from finished surface of roof, minimum.
- D. Metal Covers: Flush, insulated, hollow metal construction.
  - 1. Capable of supporting 40 psf live load.
  - 2. Material: Mill finished aluminum; outer cover 11 gage, 0.0907 inch thick, liner 0.04 inch thick.
  - 3. Insulation: 3 inches polyisocyanurate

4. Gasket: Neoprene, continuous around cover perimeter.
- E. Safety Railing System: Manufacturer's standard accessory safety rail system mounted directly to curb.
  1. Comply with 29 CFR 1910.23, with a safety factor of two.
  2. Posts and Rails: Aluminum tube.
  3. Gate: Same material as railing; automatic closing with latch.
  4. Finish: Manufacturer's standard, factory applied finish.
  5. Gate Hinges and Post Guides: ASTM B221 (ASTM B221M), 6063 alloy, T5 temper aluminum.
  6. Mounting Brackets: Hot dipped galvanized steel, 1/4 inch thick, minimum.
  7. Manufacturers:
    - a. BILCO Company; Bil-Guard 2.0: [www.bilco.com/#sle](http://www.bilco.com/#sle).
- F. Hardware: Steel, zinc coated and chromate sealed, unless otherwise indicated or required by manufacturer.
  1. Lifting Mechanisms: Compression or torsion spring operator with shock absorbers that automatically opens upon release of latch; capable of lifting covers despite 10 psf load.
  2. Hinges: Heavy duty pintle type.
  3. Hold open arm with vinyl-coated handle for manual release.
  4. Latch: Upon closing, engage latch automatically and reset manual release.
  5. Manual Release: Pull handle on interior.
  6. Locking: Padlock hasp on interior.
- G. Aluminum Extension Railing
  1. Designed with a telescoping tubular section that locks automatically when fully extended. Upward and downward movement shall be controlled by a stainless steel spring balancing mechanism. Unit shall be completely assembled with fasteners for securing to the ladder rungs.
  2. Performance characteristics:
    - a. Tubular post shall lock automatically when fully extended.
    - b. Safety post shall have controlled upward and downward movement.
    - c. Release lever shall disengage the post to allow it to be returned to its lowered position.
    - d. Post shall have adjustable mounting brackets to fit ladder rung spacing up to 14" on center and clamp brackets to accommodate ladder rungs up to 1-3/4" in diameter.
  3. Post: Shall be manufactured of high strength square tubing. A pull up loop shall be provided at the upper end of the post to facilitate raising the post.
  4. Material of construction: Steel.
  5. Balancing spring: A stainless steel spring balancing mechanism shall be provided to provide smooth, easy, controlled operation when raising and lowering the safety post. [For installation in highly corrosive atmospheres, Model LU-3 incorporates a special alloy spring mechanism].
  6. Hardware: All mounting hardware shall be Type 316 stainless steel.
  7. Finishes: Factory finish shall be [insert: yellow powder coat steel.
  8. Products - Basis of Design: Bilco Ladder Up Safety Post (LU-1).

### **2.03 NON-PENETRATING ROOFTOP SUPPORTS/ASSEMBLIES**

- A. Non-Penetrating Rooftop Support/Assemblies: Manufacturer-engineered and factory-fabricated, with pedestal bases that rest on top of roofing membrane, and not requiring any attachment to roof structure and not penetrating roofing assembly.
  1. Design Loadings and Configurations: As required by applicable codes.
  2. Support Spacing and Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
  3. Steel Components: Carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
  4. Hardware, Bolts, Nuts, and Washers: Carbon steel hot-dip galvanized after fabrication in accordance with ASTM A153/A153M.
  5. Manufacturers:
    - a. Basis of Design: PHP Systems/Design.
    - b. Substitutions: Not permitted.
- B. Pipe and Conduit Supports Products and Characteristics:
  1. Base: Injection molded, high density, UV resistant polypropylene.

2. Base density: 55 lb/cf (minimum).
3. Rods:
  - a. PP-10: 1/2".
  - b. PS-1-2: 1/2".
  - c. PSE-2-2: 5/8".
4. Rollers (Carbon Steel Finish): Hot dip galvanized (ASTM A123/A123M).
5. Nuts and Washers: Hot dip galvanized.
6. Framing (Carbon Steel):
  - a. PP-10: 13/16".
  - b. PS-1-2: 1-5/8".
  - c. PSE-2-2: 1-7/8".
  - d. PSE Custom: 1-7/8".
  - e. All products: 12 gage.
7. Framing Form:
  - a. PP10: Roll formed 3 sided tubular shape perforated with 2" slots at 2" centers on one side.
  - b. PSE-1-2: Roll formed 3 sided tubular shape, perforated with 9/16" holes at 1-7/8" centers on three sides.
  - c. PSE-2-2: Roll formed 3 sided tubular shape, perforated with 9/16" holes at 1-7/8" centers on three sides.
  - d. PSE Custom: Roll formed 3 sided tubular shape, perforated with 9/16" holes at 1-7/8" centers on three sides.

Utility Supported	Utility Size Supported	Roller	Rod Length	Base Size	Product
Single Gas Pipe	Less than 2" o.d.	3" cast iron	4"-16" adjustable	10" x 16" x 3"	PP-10
Single Gas Pipe	2" o.d. to 4-1/2" o.d.	3" cast iron	As indicated or required	12" x 12" x 3"	PS-1-2
Single Conduit	3" o.d. or less	None required	4"-16" adjustable	10" x 16" x 3"	PP-10
Two Conduit	3" o.d. or less	Channel and roller hanger	As required for conduit size	18" x 18" x 3"	PSE-2-2
Greater than Two Conduit	3" o.d. or less	Channel and roller hanger	As required for conduit size	18" x 18" x 3"	PSE Custom
Single Mechanical Pipe	2-1/2" o.d. or less	Channel and band hanger	4"-16" adjustable	10" x 16" x 3"	PP-10
Single Mechanical Pipe	Greater than 2-1/2" o.d. but less than 6" o.c.	Channel and band hanger	As required for pipe size	18" x 18" x 3"	PSE-1-2
Two Mechanical Pipes	2-1/2" o.d. or less	Channel and band hanger	4"-16" adjustable	10" x 16" x 3"	PSE-2-2
Two Mechanical Pipes	Greater than 2-1/2" o.d. but less than 6" o.c.	Channel and band hanger	As required for pipe size	18" x 18" x 3"	PSE-2-2
More than two Mechanical Pipes	Greater than 2-1/2" o.d. but less than 6" o.c.	Channel and band hanger	As required for pipe size	18" x 18" x 3"	PSE Custom

## **2.04 PIPE AND DUCT PENETRATION HOUSINGS**

- A. Premanufactured aluminum housing and curb.
- B. Construction:
  - 1. 0.08 inch thick aluminum housing and curb.
  - 2. UV protected powder coated finish 2 mil (0.05 inch) thick.
  - 3. Stainless steel V.P. fasteners.
  - 4. Gasketed lid to housing and housing to curb connection joints.
  - 5. Color: Beige.
- C. Exit Seals:
  - 1. Design: Weather tight seal for vertical surface / plane penetrations. Seal construction shall be manufactured in all aluminum construction and 100% Sil-X-14 silicone gaskets.
    - a. Series 5000 - 0.25 inch to 1.90 inch.
    - b. Series 6000 - 2 inch to 3.125 inch.
    - c. Series 7000 - 3.5 inch large diameter double gasketed inside and out.
- D. Electrical Disconnect Support (EDS) for use with medium vault. Include 2 aluminum support legs and uprights. Unistrut and fasteners and other electrical work provided by others.
- E. Satellite Dish Support (SDS) for use with medium vault. Include one 1-1/2 inch aluminum support for satellite dish and one non-penetrating roof support for dish; unit mechanically fastened inside the vault on roof deck.
- F. Product
  - 1. Roof Penetration Housings; Series AW Vault: [www.roofpenetrationhousings.com](http://www.roofpenetrationhousings.com).
  - 2. Substitutions: Not Permitted.

## **2.05 PORTABLE, NON PENERATING, ROOFTOP SUPPORT SYSTEM FOR MAINTENANCE ACCESS PLATFORM SYSTEM**

- A. Acceptable Manufacturer: PHP Systems/Design, which is located at: 5534 Harvey Wilson Dr. ; Houston, TX 77020; Toll Free Tel: 800-797-6585; Tel: 713-672-5088; Email: request info ([info@phpsd.com](mailto:info@phpsd.com)); Web: [www.phpsd.com](http://www.phpsd.com)
- B. Equipment Platform Access: Elevated walkway systems as manufactured by PHP Systems/Design.
  - 1. Bases High Density Polypropylene plastics with additives for UV protection
  - 2. Support Spacing: As required - Supports shall be coordinated with mechanical equipment.
  - 3. Substructure: 12 gauge back-to-back strut G-1012A, or approved equal supported directly from the bases.
  - 4. Grating: Mill-galvanized carbon steel in accordance with ASTM A525:
    - a. Gauge 14-ga. steel.
    - b. Section Width: 6, 9 or 12 inches
    - c. Channel Height: 2 inches (51 mm)
    - d. Surface Condition: MG-traction grip
  - 5. Handrail: 12 gauge, 1-5/8 inch (41 mm) strut G-5812, or approved equal.
  - 6. All substructures and handrails shall be galvanized steel. Spring nuts and bolts for spring nuts will be electro-plated.
- C. Attachment of Base to Roof Surface when required for Seismic and High Wind Application:
  - 1. No attachment to roof surface.
- D. Portable Support System: Engineered, portable system specifically designed for installation without the need for roof penetrations or flashings, and without causing damage to the roofing membrane.
  - 1. Design system using high density / high impact polypropylene bases with carbon black, anti-oxidants for UV protection, and steel framing for support is 1-5/8 inch (41 mm) B22TH or 1-7/8 inch (48 mm) BTS22TH.
  - 2. Custom design system to fit piping, conduits, equipment, or walkways to be installed and actual conditions of service and loading.
  - 3. Piping Supports: Provide suitable hangers and supports.
  - 4. Duct and Equipment Supports: Factory fabricated to support exact duct sizes and equipment to be installed.

5. Walkways and Platforms: Provide galvanized slotted metal grating, in configurations as indicated, and tubular handrails where indicated.
- E. Bases: Injection molded high density / high impact polypropylene with UV-inhibitors and anti-oxidants, conforming to the following:
1. Moisture Content: Negligible.
  2. Shrinkage/Swelling Due to Moisture: Negligible.
  3. Density: 55.8 lb/cu ft (894 kg/cu m).
  4. Insect Resistance: No known insect damage potential.
  5. Chemical Resistance (oil, brake fluid, gasoline, diesel, antifreeze, battery acid, and sulfuric acid: No visual or physical change apparent.
  6. Flammability: No ignition after 10 minutes, 25 kW/m, when tested in accordance with ASTM D 1929.
  7. Sized as required by loading conditions and as indicated on the drawings.
  8. Shop fabricated with inserts for square tubing or threaded rods as required.
  9. Color: Integral black color as molded.
  10. Bases for Mechanical Attachment: Sealant chamber around penetration point, with injection port for sealing after fastening; beveled lip for sealant bead around entire diameter.
  11. Do not use bases containing carbonated plastics, press molded recycled rubber and plastics, steel, stainless steel, or any injection molded threaded receivers.
- F. Steel Framing:
1. Channel Types: 1-5/8 inch (41.3 mm) B22TH or 1-7/8 inch (47.6 mm) BTS22H, as required for loading conditions.
  2. Thickness: 12 gage (2.7 mm).
  3. Form: Roll-formed 3-sided or tubular shape, perforated with 9/16 inch (14.3 mm) holes at 1-7/8 inch (47.6 mm) centers on three sides.
  4. Finish: Hot dip galvanize in accordance with ASTM A 123 after fabrication, free of roughness, whiskers, unsightly spangles, icicles, runs, barbs, sags, droplets, and other surface blemishes.
  5. Do not use tubing or tube steel.
- G. Stainless Steel Framing:
1. Channel Types: 1-5/8 inch (41.3 mm) or 1-7/8 inch (47.6 mm), as required for loading conditions.
  2. Thickness: 12 gage (2.7 mm).
  3. Form: Roll-formed 3-sided or tubular shape.
  4. Finish: Mill finish.
  5. Do not use tubing or tube steel.
- H. Pipe Supports and Hangers: Conform to MSS SP-58 and MSS SP-69 and as follows:
1. Fabricate of carbon steel where framing is carbon steel; fabricate of stainless steel where framing is stainless steel; finished same as framing.
  2. Sizes 2-1/2 inch (63 mm) and smaller: Single roller supports for piping subject to expansion and contraction; 3-sided channels and pipe clamps.
  3. Sizes 3 inch (76 mm) and larger: Rollers, clevis hangers, or band hangers, to allow for expansion and contraction without movement of the bases or framing.
- I. Accessories: Clamps, bolts, nuts, washers, and other devices as required for a complete system.
1. Carbon Steel: Hot-dip galvanized in accordance with ASTM A 153/A 153M.
  2. Stainless Steel: Mill finish.
  3. For Mechanical Fastening to Deck: On wood and steel decks, use bolts with toggle wings; on concrete decks use threaded rods and adhesive anchors, with rod embedded at least 1-3/4 inches (44 mm) into concrete.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

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

### **3.02 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.
- C. Use care in handling portable support system components during installation, to avoid damage to roofing, flashing, equipment, or related materials.

### **3.03 INSTALLATION**

- A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.

### **3.04 CLEANING**

- A. Clean installed work to like-new condition.

### **3.05 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 92 00**  
**JOINT SEALANTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

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

**1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.
- B. Section 07 84 00 - Firestopping: Firestopping sealants.
- C. Section 07 95 13 - Expansion Joint Cover Assemblies: Sealants forming part of expansion joint cover assemblies.
- D. Section 08 71 00 - Door Hardware: Setting exterior door thresholds in sealant.
- E. Section 08 80 00 - Glazing: Glazing sealants and accessories.
- F. Section 09 21 16 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.
- G. Section 09 30 00 - Tiling: Sealant between tile and plumbing fixtures and at junctions with other materials and changes in plane.
- H. Section 23 31 00 - HVAC Ducts and Casings: Duct sealants.

**1.03 REFERENCE STANDARDS**

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer.
- B. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants.
- C. ASTM C834 - Standard Specification for Latex Sealants.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- E. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.
- F. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- G. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants.
- H. ASTM C1311 - Standard Specification for Solvent Release Sealants.
- I. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
- J. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.
- K. State of Illinois Title 35 - Environmental Protection.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes 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. Joint-Sealant Schedule: Include the following information using designations provided here in "Sealant Schedule":

1. Joint-sealant application, joint location, and designation.
  2. Joint-sealant manufacturer and product name.
- D. 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.
  - E. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
  - 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. 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.
  - I. Installation Log: Submit filled out log for each length or instance of sealant installed.
  - J. 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.

#### **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.
- C. 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 to manufacturer sufficient samples for testing.
  5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
  6. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.
- D. 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.
- 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. 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 prior to minimum elongation, take necessary measures to correct conditions and re-test; record each modification to products or installation procedures.
- G. Field Adhesion Tests of Joints: Test for adhesion using most appropriate method in accordance with ASTM C1521, or other applicable method as recommended by manufacturer.

## **1.06 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a two year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
  1. Dow Corning Corporation: [www.dowcorning.com/construction/sle](http://www.dowcorning.com/construction/sle).
  2. Master Builders Solutions by BASF; \_\_\_\_\_: [www.master-builders-solutions.basf.us/en-us/#sle](http://www.master-builders-solutions.basf.us/en-us/#sle).
  3. Momentive Performance Materials, Inc (formerly GE Silicones): [www.momentive.com/sle](http://www.momentive.com/sle).
  4. Pecora Corporation: [www.pecora.com](http://www.pecora.com).
  5. Sika Corporation: [www.usa-sika.com](http://www.usa-sika.com).
  6. Tremco Commercial Sealants & Waterproofing: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  7. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 JOINT SEALANTS - GENERAL**

- A. Sealants and Primers: Provide products with levels of volatile organic compound (VOC) content as indicated in Section 01 61 16.
- B. Sealants and Primers: Compliance with VOC Content limits and other requirements of State of Illinois Title 35.

### **2.03 NONSAG JOINT SEALANTS**

- A. Type SS-1 - Non-Staining Hybrid 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.
  2. Non-Staining To Porous Stone: Non-staining to light-colored marble when tested in accordance with ASTM C1248.
  3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
  4. Color: To be selected by Architect from manufacturer's standard range. Minimum 14 color options; if full range includes fewer than 14 color options, custom color options shall be made available to Architect for selection.
  5. Cure Type: \_\_\_\_\_.
  6. Products:
    - a. BASF Construction Chemicals-Building Systems; Masterseal NP100: [www.masterseal.basf.com](http://www.masterseal.basf.com)
    - b. Pecora Corporation; Dynatrol II Hybrid: [www.pecora.com](http://www.pecora.com).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Type SS-2 - Silicone Sealant: ASTM C920, Grade NS, Uses NT; not expected to withstand continuous water immersion.
  1. Movement Capability: Plus 100 percent, minus 50 percent, minimum.
  2. Color: To be selected by Architect from manufacturer's standard range.
  3. Cure Type: Single-component, neutral moisture curing
  4. Products:
    - a. Dow Corning Corp.; 790 Silicone Building Sealant.
    - b. Pecora Corporation; 890NST.

- c. Sika Corporation; Sikasil WS-290.
  - d. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Type SS-3 - 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.
  - 2. Products:
    - a. Pecora Corporation; 898 NST: [www.pecora.com](http://www.pecora.com).
    - b. Sika Corporation; Sikasil GP: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - c. Momentive Performance Materials; SCS1700: [www.momentive.com](http://www.momentive.com).
    - d. Tremco; Tresil 200.
    - e. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Type SS-4 - 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. Color: To be selected by Architect from manufacturer's standard range.
  - 3. Cure Type: Single-component, neutral moisture curing
  - 4. Products:
    - a. Dow Corning Corporation; 795 Silicone Building Sealant: [www.dowcorning.com/construction/sle](http://www.dowcorning.com/construction/sle).
    - b. Pecora Corporation; 890FTS-TXTR.
    - c. Sika Corporation; Sikasil WS-295: [www.usa-sika.com](http://www.usa-sika.com).
    - d. Substitutions: See Section 01 60 00 - Product Requirements.
- E. Type US-1 - Non-Sag "Traffic-Grade" Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Hardness Range: 40 to 50, Shore A, when tested in accordance with ASTM C661.
  - 3. Color: To be selected by Architect from manufacturer's standard range.
  - 4. Products:
    - a. Pecora Corporation; 300 SL.
    - b. Sika Corporation; Sikaflex 2C-SL.
    - c. Tremco Incorporation; Vulkem 45SSL.
    - d. Substitutions: See Section 01 60 00 - Product Requirements.
- F. Type AS-1 - Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging, paintable; not intended for exterior use.
  - 1. Color: To be selected by Architect from manufacturer's standard range.
  - 2. Products:
    - a. Hilti, Inc; CP 506 Smoke and Acoustical Sealant: [www.us.hilti.com/#sle](http://www.us.hilti.com/#sle).
    - b. Hilti, Inc; CP 572 Smoke and Acoustical Spray Sealant: [www.us.hilti.com/#sle](http://www.us.hilti.com/#sle).
    - c. Pecora Corporation; AC-20 FTR, or AIS-919.
    - d. GE Construction Sealants; RCS20.
    - e. USG Corporation.
    - f. Tremco Incorporated; Acoustic Sealant.
    - g. Substitutions: See Section 01 60 00 - Product Requirements.
- G. Type BR-1 - 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. Color: To be selected by Architect from manufacturer's standard range.
  - 3. Products:
    - a. Bostik 300; Bostik Findley.
    - b. Pecora Corporation; BC-158.
    - c. Tremco Incorporated; Butyl Sealant.
    - d. Substitutions: See Section 01 60 00 - Product Requirements.

## **2.04 SELF-LEVELING SEALANTS**

- A. Type SS-5 - Self-Leveling Silicone Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent, explicitly approved by manufacturer for traffic exposure when recessed below traffic surface; not expected to withstand continuous water immersion.
  - 1. Movement Capability: Plus 100 percent, minus 50 percent, minimum.
  - 2. Color: Gray.
  - 3. Service Temperature Range: Minus 40 to 180 degrees F.
  - 4. Products:
    - a. Pecora Corporation; 300SL.
    - b. Sika Corporation; Sikasil 728SL.

## **2.05 ACCESSORIES**

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  - 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
  - 2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
  - 3. Open Cell: 40 to 50 percent larger in diameter than joint width.
  - 4. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.
- D. 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 whatever other measures are necessary to ensure adhesion; re-test in a different location; if unable to obtain satisfactory adhesion, report to Architect.
  - 5. After completion of tests, remove remaining sample material and prepare joint for new sealant installation.

### **3.02 PREPARATION**

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

### **3.03 INSTALLATION**

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. 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.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

### **3.04 SEALANT SCHEDULE**

- A. SS-1 (Hybrid Silicone Sealant)
  - 1. Exposure / Traffic: Exterior joints in vertical surfaces and non-traffic horizontal surfaces.
  - 2. Uses / Applications:
    - a. Control and expansion joints in cast-in-place concrete.
    - b. Vertical control and movement joints at exterior masonry.
    - c. Aluminum window and between windows and other materials.
    - d. Aluminum storefront, entrances and curtain wall between storefront and entrances and other materials.
    - e. Joints between materials listed above and frames of doors and windows.
    - f. Control and expansion joints in plaster soffit and overhead surfaces.
    - g. Concealed roofing sheet metal joints
- B. SS-2 (Silicone Sealant)
  - 1. Exposure / Traffic: Interior moving joints in vertical surfaces and exterior joints in horizontal traffic surfaces without continuous immersion.
  - 2. Uses / Applications:
    - a. Control, expansion joints at expansion, and isolation joints in cast-in-place concrete slabs.
    - b. Joints between tops of non-fire rated walls and underside of floors and beams.
    - c. Perimeter joints between interior wall surfaces and frames.
    - d. Interior tile control and expansion joints not including areas noted as SS-3.
    - e. Other joints between differing materials and as indicated.
- C. SS-3 (Mildew Resistant Silicone Sealant)
  - 1. Exposure / Traffic: Interior wet areas
  - 2. Uses / Applications:
    - a. Locker rooms, Toilet rooms, Shower areas, Kitchens, Janitor Closets
    - b. Joints between plumbing fixtures and adjoining walls, floors, and counters.
    - c. Tile control and expansion joints.
    - d. Metal Lockers and walls in locker rooms
- D. SS-4 (Silicone Sealant)
  - 1. Exposure / Traffic: Exterior joints in vertical surfaces.
  - 2. Uses / Applications:
    - a. Aluminum window and between windows and other materials.
    - b. Aluminum storefront, entrances and curtain wall between storefront and entrances and other materials.
- E. SS-5 (Silicone Sealant)
  - 1. Exposure / Traffic: Exterior joints in horizontal traffic surfaces.
  - 2. Uses / Applications:
    - a. Sealing of concrete roadway and sidewalk joints.
    - b. Sealing of asphalt pavement joints.
- F. US-1 (Single Part Urethane Sealant)
  - 1. Exposure / Traffic: Interior moving joints in vertical surfaces and horizontal ceiling surfaces.
  - 2. Uses / Applications:

- a. Joints between tops of non-fire rated walls and underside of floors and beams.
  - b. Vertical control joints on exposed surfaces of interior unit masonry and concrete walls and partitions
  - c. Perimeter joints between interior wall surfaces and frames.
  - d. Interior exposed sealants in gypsum drywall construction.
  - e. Joints between solid surface materials, plastic laminate and adjacent construction not including areas listed as SS-3.
  - f. Other joints between differing materials and as indicated.
- G. BR-1 (Butyl Sealant)
- 1. Exposure / Traffic: Interior or Concealed Exterior
  - 2. Uses / Applications
    - a. Sealing thresholds.
    - b. Sealing between metal, wood and masonry in concealed roofing locations.
- H. AS-1 (Acoustic Sealant)
- 1. Exposure / Traffic: Interior
  - 2. Uses / Applications:
    - a. Acoustic door/window frame perimeters and adjacent materials
    - b. Joints between tops of non-fire rated acoustic walls and structure
    - c. Joints between different materials and acoustic rated walls.
    - d. Joints at penetrations in acoustic rated walls

**END OF SECTION**