



Commission No. 183043

# **Project Manual**

Roofing Fall 2018

Kendall County Public Safety Center

## **Kendall County**

Yorkville, Illinois 60560

August 14, 2018

**Wold** | Ruck Pate  
110 North Brockway Street, Suite 220  
Palatine, IL 60067  
woldae.com | 847 241 6100

**PLANNERS  
ARCHITECTS  
ENGINEERS**



**SECTION 00 01 01**

**PROJECT IDENTIFICATION PAGE**

**PROJECT MANUAL**

PROJECT IDENTIFICATION

BIDDING REQUIREMENTS

CONDITIONS OF THE CONTRACT

GENERAL REQUIREMENTS

AND SPECIFICATIONS FOR:

**ROOFING FALL 2018  
KENDALL COUNTY PUBLIC SAFETY CENTER**

**1102 CORNELL LANE  
YORKVILLE, ILLINOIS 60560**

KENDALL COUNTY  
YORKVILLE, ILLINOIS 60560

Bid Time: 2:00 p.m.

Bid Date: August 28, 2018

Bid Place: Kendall County Facilities Management  
804 West John Street  
Yorkville, Illinois 60560



**SECTION 00 01 03**

**TITLE PAGE**

PROJECT TITLE AND LOCATION: ROOFING FALL 2018  
Kendall County Public Safety Center  
1102 Cornell Lane,  
Yorkville, Illinois 60560

OWNER: Kendall County, Illinois  
111 West Fox Street,  
Yorkville, Illinois 60560

ARCHITECTS: Wold Architects and Engineers  
110 North Brockway, Suite 220  
Palatine, Illinois 60067  
Tel. (847) 241-6100

DATE: August 14, 2018



**SECTION 00 01 05**

**PROFESSIONAL CERTIFICATIONS**

**Roofing Fall 2018 - Kendall County Public Safety Center  
Kendall County, Illinois**

Wold Architects and Engineers

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Architect under the laws of the State of Illinois.

  
Signature

August 14, 2018

Date

001-009790

Registration

Frederick L. Schuster

Typed Name





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**SECTION 00 11 13  
ADVERTISEMENT FOR BIDS**

**PUBLIC SAFETY CENTER ROOFING 2018  
1102 CORNELL LANE  
YORKVILLE, ILLINOIS 60560**

Kendall County will receive single prime sealed bids for Public Safety Center Roofing 2018 until 2:00 PM local time on August 28, 2018 at the Facilities Management Office, 804 John Street, Yorkville, IL 60560, at which time and place all bids will be publicly opened and read aloud.

Bidding documents, including the Bid Form, Drawings and Specifications, will be provided to the following:

Construction Data Company (ConstructConnect)	(800) 652-0008	<a href="http://www.cdcnews.com">www.cdcnews.com</a>
Construction Market Data (ConstructConnect)	(800) 424-3996	<a href="http://www.cmdgroup.com">www.cmdgroup.com</a>
Dodge Data & Analytics	(877) 784-9556	<a href="http://www.construction.com">www.construction.com</a>
Greater Peoria Contractors & Suppliers Association	(309) 692-5710	<a href="http://www.gpcsa.org">www.gpcsa.org</a>
iSqFt (ConstructConnect)	(800) 364-2059	<a href="http://www.isqft.com">www.isqft.com</a>
Northern Illinois Building Contractors Association	(815) 229-5636	<a href="http://www.nibca.build">www.nibca.build</a>

This project includes: Roofing.

American Reprographics Company ([www.e-arc.com](http://www.e-arc.com)), 640 North LaSalle Street, Suite 240, Chicago, Illinois, will have complete sets of the Bidding Documents available to prospective bidders and subcontractors for download through their Public Planroom under the "Print Center" link on their homepage. The Bid Documents will be available on or about August 14, 2018. There is no cost to download the drawings, however, prospective bidders must provide all requested information when completing the download process in order that they will receive proper updates. Prospective bidders may choose to purchase hard copies of the Bidding Documents from American Reprographics Company at their own expense.

Documents will also be available on the Kendall County website at: <http://www.co.kendall.il.us/call-for-bids/>.

A **mandatory** pre-bid meeting will be held at 10:00 AM local time on August 20, 2018, at the Facilities Management Office, 804 John Street, Yorkville, IL 60560, after which prospective bidders will have an opportunity to inspect the work area.

Make proposals on the bid forms supplied in the Project Manual. No oral, telegraphic or telephonic proposals or modifications will be considered. Submit with each bid, a certified check or acceptable bidder's bond payable to Kendall County in an amount equal to ten percent (10%) of the total bid. The successful bidder will be required to furnish satisfactory Labor and Material Payment Bond, and Performance Bond.

The successful bidder is required to pay the general prevailing wage for work as ascertained by the Illinois Department of Labor, and shall submit certified payroll records, in compliance with the Prevailing Wage Act (820 ILCS 130) and shall comply with all applicable Illinois and federal statutory requirements regarding labor, including without limitation, the Illinois Human Rights Act, the Employment of Illinois Workers on Public Works Act, Title VII of the Civil Rights Act of 1964, as amended, the Americans with Disabilities Act, the Age Discrimination in Employment Act, Section 504 of the Federal Rehabilitation Act.

Bids may not be withdrawn within thirty (30) days after the scheduled time of opening bids, without the consent of the Owner. The Owner reserves the right to accept any bid or to reject any or all bids, or parts of such bids, and waive informalities or irregularities in bidding.

The Owner requires Substantial Completion of the project on or before November 1, 2018 .

Facilities Management Department  
Kendall County, Illinois

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**SECTION 00 21 13**

**INSTRUCTIONS TO BIDDERS**

The Instructions to Bidders, AIA Document A701, 1997 is attached after this section.

**END OF SECTION 00 21 13**



# AIA<sup>®</sup> Document A701<sup>™</sup> – 1997

## *Instructions to Bidders*

### for the following PROJECT:

*(Name and location or address):*

Roofing Fall 2018  
Kendall County Public Safety Center  
1102 Cornell Lane  
Yorkville, Illinois 60560

### THE OWNER:

*(Name and address):*

Kendall County  
Yorkville, Illinois 60560

### THE ARCHITECT:

*(Name and address):*

Wold Architects and Engineers  
110 North Brockway Street  
Suite 220  
Palatine, Illinois 60067

### 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.

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## **ARTICLE 1 DEFINITIONS**

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

## **ARTICLE 2 BIDDER'S REPRESENTATIONS**

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

## **ARTICLE 3 BIDDING DOCUMENTS**

### **§ 3.1 COPIES**

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded when the Architect's Office receives notification from the contractor holding a contract with the Owner within the time limits specified on the advertisement for bids.



§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

### § 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

### § 3.3 SUBSTITUTIONS

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.3.5 Where the Contractor chooses to use an item approved by request but other than one shown on the details or specified, he shall be responsible for the coordination of any necessary changes in other work, and shall bear the cost of such changes.

### § 3.4 ADDENDA

§ 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

#### **ARTICLE 4 BIDDING PROCEDURES**

##### **§ 4.1 PREPARATION OF BIDS**

§ 4.1.1 Bids shall be submitted in duplicate on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

##### **§ 4.2 BID SECURITY**

§ 4.2.1 No bid will be considered, unless it is accompanied by a certified check or acceptable Bid Bond payable without condition to the Owner in an amount equal to ten percent (10%) of the total bid. The certified check or Bid Bond which must accompany each bid is required as a guarantee that the bidder will enter into a contract with the Owner for the work described in the proposal and furnish a performance and payment bond and certificates of insurance as specified after notice by the Owner or Architect that contracts have been awarded to him and are ready for execution.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

§ 4.2.3 The Owner will have the right to retain the bid security of the three lowest Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected. The Bid Security of other bidders will be returned by the Owner within a reasonable time after the opening of bids.

##### **§ 4.3 SUBMISSION OF BIDS**

§ 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

#### § 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder for a period of thirty (30) days following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

### ARTICLE 5 CONSIDERATION OF BIDS

#### § 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

#### § 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

#### § 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates, Allowances, and Unit Prices in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid, Allowances, and Alternates accepted.

### ARTICLE 6 POST-BID INFORMATION

#### § 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

#### § 6.2 OWNER'S FINANCIAL CAPABILITY

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

#### § 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and

- 3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

## **ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND**

### **§ 7.1 BOND REQUIREMENTS**

§ 7.1.1 The successful Bidder shall provide Performance and Labor and Material Payment Bond in an amount equal to 100% of the Contract Sum, with sureties acceptable to the Owner. Bonds shall be written on AIA Form A312. The attorney-in-fact who executes the bond on behalf of the surety shall affix the bond a certified and current copy of the power of attorney. Bonds shall be submitted within 72 hours of the execution of the Agreement.

*(Paragraphs Deleted)*

## **ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

The Agreement for the Work will be written on the form including in the Bidding Documents.

SECTION 00 41 13

BID FORM

BID PROPOSAL FOR: ROOFING – FALL 2018
KENDALL COUNTY PUBLIC SAFETY CENTER
1102 CORNELL LANE
YORKVILLE, ILLINOIS 60560

BID TO: Kendall County
Facilities Management Department
Attn: James Smiley, Director
804 West John Street
Yorkville, Illinois 60560

BID FROM: \_\_\_\_\_

We have examined the Contract Documents for the proposed ROOFING – FALL 2018 as prepared by Wold Architects and Engineers, Palatine, Illinois, and the conditions affecting the work.

In accordance therewith the undersigned proposes to furnish all labor and materials for Construction as set forth in the Contract Documents, including Addenda Nos. \_\_\_\_\_ issued thereto.

- 1. Accompanying this proposal is a Bid Security for all work, required to be furnished by Contract Documents, the same being subject to forfeiture in the event of default by the undersigned.
3. I understand the Owner reserves the right to reject any or all bids, and it is agreed that this bid may not be withdrawn for a period of thirty (30) days from the opening thereof.

A. Base Bid

- 1. The Bidder agrees to perform all work including General, Mechanical and Electrical Construction for the Base Bid Sum of:
\_\_\_\_\_ Dollars \$\_\_\_\_\_
2. The Bidder further agrees to complete the Project, provided a contract is executed within 30 calendar days, not later than \_\_\_\_\_ 2018.

B. Alternates

- 1. The Bidder agrees to add to or deduct from the Base Bid Sum the following amounts to perform the alternate work described in Section 01 23 00, including all associate costs.
a. Alternate No. 1 Raise Make-Up Air Unit
Add \_\_\_\_\_ Dollars (\$\_\_\_\_\_)

C. Unit Prices and Allowance

1. The Bidder agrees to add or deduct designated work as described for each Unit Price at the amounts stipulated below and to add to the Base Bid the Allowance as calculated below based on the unit prices and indicated quantities. The Unit Prices and Allowance may be accepted or rejected individually by the Owner at its sole discretion.

	Item	Unit Price	Allowance Qty	Extended Allowance Amount
1.1	Replace wet insulation - flat	\$ /Bd Ft	5,000 Bd Ft.	\$
1.2	Replace wet insulation – tapered	\$ /Bd Ft	5,000 Bd Ft.	\$
1.3	Allowance total (sum of extended allowance amounts above)			\$

DATE \_\_\_\_\_

FIRM NAME \_\_\_\_\_

OFFICIAL ADDRESS \_\_\_\_\_  
 \_\_\_\_\_

TELEPHONE NUMBER \_\_\_\_ (\_\_\_\_) \_\_\_\_\_

FAX NUMBER \_\_\_\_ (\_\_\_\_) \_\_\_\_\_

BY \_\_\_\_\_

TITLE \_\_\_\_\_

**END OF SECTION 00 41 13**

SECTION 00 52 13

AGREEMENT FORM – STIPULATED SUM

THIS Agreement is entered into the day and year first set forth below between KENDALL COUNTY, ILLINOIS (hereinafter “Kendall County”), with its principal place of business at 111 W. Fox St., Yorkville, Illinois, 60560 and <insert contractor name> (hereinafter referred to as “Contractor”) with its principal place of business at <insert contractor address>. In consideration of the mutual covenants hereinafter set forth, and other good and valuable consideration, the parties hereto agree as follows:

1. **Effective Date & Term:** This Agreement shall be effective as of its execution and continue until <insert project name and location> has been completed or as terminated by either party pursuant to the terms in the Agreement.
2. **The Work:** Contractor will provide Kendall County with construction, labor, materials and services for <insert project description> in accordance with the following documents (the **Contract Documents**):
  - a. The Project Manual, dated \_\_\_\_\_ prepared by Wold Architects and Engineers, Inc (the Architect.)
  - b. The Drawings, as listed in the Drawing Index, Sheet \_\_\_\_\_, dated \_\_\_\_\_, prepared by the Architect.
  - c. The General Conditions of the Contract for Construction, AIA A201, as edited and incorporated in the Project Manual.
  - d. The Bidding Requirements: Advertisement for Bids and Instructions to Bidders, as incorporated in the Project Manual.
  - e. The Bid Form and bid submittals as submitted by the Contractor with it’s bid.
  - f. The General Requirements, Division 1 and Specifications, Divisions 2 – 49 as contained in the Project Manual, dated \_\_\_\_\_, prepared by the Architect.
  - g. The Addenda: Addendum # \_\_\_\_\_ dated \_\_\_\_\_, \_\_\_ pages and \_\_\_ drawings, Addendum # \_\_\_\_\_ dated \_\_\_\_\_, \_\_\_ pages and \_\_\_ drawings.
3. **Modifications:** Agreed-upon changes, which increase or decrease the scope of work to be performed, subject to a mutually agreeable adjustment in the Contract Sum and Contract Time. All changes or adjustments must be in writing, signed by both parties to the Agreement.
4. **Payment:** In consideration for Contractor providing the Work, to the satisfaction of Kendall County, as set forth in this Agreement, Kendall County agrees to pay the Contract Sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_.00.) Contractor must present an Application for Payment to the Architect for certification of the amount due, in accordance with Contract Documents. The total amount due shall be paid in accordance with the Local Government Prompt Payment Act, 50 ILCS 505/1, *et seq.* Kendall County reserves the right to reject any portion of the invoice that is outside the scope of the approved work or outside the scope of any additional approved work.
5. **Time:** The Contractor shall achieve Substantial Completion of the Work by \_\_\_\_\_, and shall achieve Final Completion within 60 calendar days thereafter. Time shall be changed only by written agreements signed by both parties.
6. **Indemnification:** Contractor agrees to indemnify hold harmless, and defend, with counsel of Kendall County’s own choosing, Kendall County, including its past, present, and future board members, elected officials, insurers, employees, and agents from and against claims, liabilities, obligations, losses, penalties,

finances, damages, and expenses and costs relating thereto, including but not limited to reasonable attorneys' fees and other legal expenses, which Kendall County, its board members, elected officials, insurers, employees, or agents may sustain, incur or be required to pay arising out of Contractor's negligence, willful acts, errors, omissions, or performance or failure to adequately perform its obligations pursuant to this Agreement. Nothing contained herein shall be construed as prohibiting Kendall County, its past, present, and future elected officials, officers, employees, board members, and agents from defending through the selection and use of their own agents, attorneys and experts, any claims, suits, demands, proceedings and actions brought against them. Pursuant to 55 ILCS 5/3-9005, any attorney representing Kendall County, under this paragraph, shall be approved by the Kendall County State's Attorney and shall be appointed as a Special Assistant State's Attorney. Kendall County's participation in its defense shall not remove Contractor's duty to indemnify and hold the Kendall County harmless as set forth above. Kendall County does not waive its defenses or immunities under the Local Government and Government Employee Tort Immunity Act. (745 ILCS 10.1 et seq.) by reason of indemnification or insurance. Indemnification obligations shall survive the termination of this Agreement.

7. **Bonds:** The Contractor shall provide Performance and Payment Bonds Written on AIA Document A312, in the amount of 100% of the contract amount with sureties acceptable to Kendall County.
8. **Insurance:** Contractor will obtain and continue in force, during the term of this Agreement, all insurance as set forth herein. Each insurance policy shall not be cancelled or changed without thirty (30) calendar days prior written notice, given by the insurance carrier to Kendall County at the address set forth below. Before starting work hereunder, Contractor shall deposit with Kendall County certificates evidencing the insurance it is to provide hereunder: (a) Worker's Compensation and Occupational Disease Disability insurance, in compliance with the laws of the jurisdiction where the work is being performed, (b) Employer's comprehensive general liability insurance for both personal injury and property damage in the minimum amount of \$1,000,000 per occurrence and \$2,000,000 aggregate per project, (c) Comprehensive business automobile liability insurance in the minimum amount of \$1,000,000 combined single limit, and (d) Minimum umbrella occurrence insurance of \$5,000,000 per occurrence and \$5,000,000 aggregate. Kendall County shall be named as an Additional Insured on a Primary and Non-Contributory basis with respect to all liability coverage. Further, all liability and workers' compensation policies must include a waiver of subrogation in favor of Kendall County. Kendall County shall also be designated as the certificate holder. Kendall County's failure to demand such certificate of insurance shall not act as a waiver of Contractor's obligation to maintain the insurance required under this Agreement. The insurance required under this Agreement does not represent that coverage and limits will necessarily be adequate to protect Contractor, nor shall it be deemed as a limitation on Contractor's liability to Kendall County under this Agreement.
9. **Property Damage:** All loss or damage arising out of the nature of the work performed by Contractor including, but not limited to any damage caused to Contractor's equipment during the performance of said work shall be sustained at Contractor's expense. Contractor shall also be held responsible for any and all damage caused by Contractor in the performance of services under this Agreement. Any damage caused by Contractor to the County's parking lots, islands, sidewalks, buildings, and/or other Kendall County property may be repaired by Kendall County, in its sole discretion, and either deducted from the payment owed to the Contractor or billed to Contractor, at Kendall County's discretion.
10. **Independent Contractor:** Contractor is an Independent Contractor and is not an employee of, partner of, agent of, or in a joint venture with Kendall County. Contractor understands and agrees that Contractor is solely responsible for paying all wages, benefits and any other compensation due and owing to Contractor's officers, employees, and agents for the performance of services set forth in the Agreement. Contractor further understands and agrees that Contractor is solely responsible for making all required payroll deductions and other tax and wage withholdings pursuant to state and federal law for



Contractor's officers, employees and/or agents who perform services as set forth in the Agreement. Contractor also acknowledges its obligation to obtain appropriate insurance coverage for the benefit of Contractor, Contractor's officers, employees and agents and agrees that Kendall County is not responsible for providing any insurance coverage for the benefit of Contractor, Contractor's officers, employees and agents. Contractor hereby indemnifies and agrees to waive any right to recover alleged damages, penalties, interest, fees (including attorneys' fees), and/or costs from Kendall County, its board members, officials, employees, insurers, and agents for any alleged injuries that Contractor, its officers, employees and/or agents may sustain while performing services under the Agreement.

11. **Non-Appropriation:** In the event Kendall County is in default under the Agreement because funds are not appropriated for a fiscal period subsequent to the one in which the Agreement was entered into which are sufficient to satisfy all or part of the County's obligations under this Agreement during said fiscal period, the County agrees to provide prompt written notice of said occurrence to Contractor. In the event of a default due to non-appropriation of funds, Contractor and/or Kendall County has the right to terminate the Agreement upon providing thirty (30) calendar days written notice to the other party. No additional payments, penalties and/or early termination charges shall be required upon termination of the Agreement.
12. **Termination:** Notwithstanding any other provision of this Agreement, this Agreement may be terminated by Kendall County upon written notice delivered to Contractor at least thirty (30) calendar days prior to the effective date of termination, or by Contractor upon written notice delivered to Kendall County at least sixty (60) calendar days prior to the effective date of termination.
13. **Warranties:** All services to be undertaken by Contractor shall be carried out by competent and properly trained personnel of Contractor to the highest standards and to the satisfaction of Kendall County. All services, materials and components shall conform to relevant manufacturers' and equipment suppliers' specifications, and all materials and spare parts shall be obtained from the original equipment manufacturers or from suppliers approved by them. No warranties implied or explicit may be waived or denied.
14. **Assignment:** Neither party shall assign, sublet, sell, or transfer its interest in this Agreement without the prior written consent of the other.
15. **Confidentiality:** It is understood and agreed to by Contractor that all contracts entered into by a government body, such as Kendall County, are open to public review and as such will be on file with the County Clerk's office and may be released pursuant to the Illinois Freedom of Information Act (5 ILCS 140, *et seq.*).
16. **Notice:** Any notice required or permitted to be given pursuant to this Agreement shall be duly given if sent by fax, certified mail, or courier service and received, in the case of notice to Kendall County, KCFM, Attention: Director, Facilities Management, 804 John Street, Suite B, Yorkville, Illinois, 60560, fax (630) 553-4125, with copy sent to: State's Attorney, Attention: Eric Weis, 807 John Street, Yorkville, Illinois, 60560, fax (630) 553-4204. And, in the case of Contractor, to: <contractor representative>, <contractor name>, <contractor address, city, state zip>, <contractor fax>.
17. **Force Majeure:** Neither party will be responsible to the other for damage, loss, injury, or interruption of work if the damage, loss, injury, or interruption of work is caused solely by conditions that are beyond the reasonable control of the parties, and without the intentional misconduct or negligence, of that party (hereinafter referred to as a "force majeure event"). To the extent not within the control of either party, such force majeure events include: acts of God, acts of any governmental authorities, fire, explosions or other casualties, vandalism, and riots or war. A party claiming a force majeure event ("the claiming party") shall promptly notify the other party in writing, describing the nature and estimated duration of

the claiming party's inability to perform due to the force majeure event. The claiming party with all reasonable dispatch will remedy the cause of such inability to perform.

18. **Certification:** Contractor certifies that Contractor, its parent companies, subsidiaries, and affiliates are not barred from entering into this Agreement as a result of a violation of either 720 ILCS 5/33E-3 or 5/33E-4 (bid rigging or bid rotating) or as a result of a violation of 820 ILCS 130/1 *et seq.* (the Illinois Prevailing Wage Act).

Contractor further certifies by signing the Agreement that Contractor, its parent companies, subsidiaries, and affiliates have not been convicted of, or are not barred for attempting to rig bids, price-fixing or attempting to fix prices as defined in the Sherman Anti-Trust Act and Clayton Act. 15 U.S.C. § 1 *et seq.*; and has not been convicted of or barred for bribery or attempting to bribe an officer or employee of a unit of state or local government or school district in the State of Illinois in that Officer's or employee's official capacity. Nor has Contractor made an admission of guilt of such conduct that is a matter of record, nor has any official, officer, agent, or employee of the company been so convicted nor made such an admission.

19. **Compliance with State and Federal Laws:** Contractor agrees to comply with all applicable federal, state and local laws and regulatory requirements and to secure such licenses as may be required for its employees and to conduct business in the state, municipality, county and location. Such obligation includes, but is not limited to, environmental laws, civil rights laws, prevailing wage laws, and labor laws.
20. **Equal Opportunity/Non-Discrimination:** The Contractor and any Subcontractors will not discriminate against any employee or applicant for employment because of race, color, religion, sex, ancestry, national origin, place of birth, age or handicap unrelated to bona fide occupational qualifications. Contractor, its officers, employees, and agents agree not to commit unlawful discrimination and agree to comply with all applicable provisions of the Illinois Human Rights Act, Title VII of the Civil Rights Act of 1964, as amended, the Americans with Disabilities Act, the Age Discrimination in Employment Act, Section 504 of the Federal Rehabilitation Act, and all applicable rules and regulations.
21. **Prevailing Wage:** To the extent that this Agreement may call for the construction, demolition, maintenance and/or repair of a "public work" as defined by the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"), such work shall be covered under the Act. The Act requires Contractors and subcontractors to pay laborers, workers and mechanics performing covered work on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website at: <https://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/2017-Rates.aspx>

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. All Contractors and subcontractors rendering services under this Agreement must comply with all requirements of the Act, including, but not limited to, all wage, notice and record-keeping duties.

22. **Employment of Illinois Workers on Public Works Act:** If at the time the Agreement is executed, or if during the term of the Agreement, there is a period of excessive unemployment in Illinois as defined in the Employment of Illinois Workers on Public Works Act, 30 ILCS 570/0.01 *et seq.*, (hereinafter referred to as "the Act"), Contractor, its consultants, subcontractors and agents agree to employ Illinois laborers on this Project in accordance with the Act. Contractor understands that the Act defines (a) "period of excessive unemployment" as "as any month following two consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded 5%, as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures," and (b)

"Illinois laborer" as "any person who has resided in Illinois for at least thirty (30) calendar days and intends to become or remain an Illinois resident." See 30 ILCS 570/1. Contractor understands and agrees that its failure to comply with this provision of the Agreement may result in immediate termination of the Agreement.

23. **Conflict of Interest:** Both parties affirm no Kendall County officer or elected official has a direct or indirect pecuniary interest in Contractor or this Agreement, or, if any Kendall County officer or elected official does have a direct or indirect pecuniary interest in Contractor or this Agreement, that interest, and the procedure followed to effectuate this Agreement has and will comply with 50 ILCS 105/3.
24. **Remedies:** In any action with respect to this Agreement, the Parties are free to pursue any legal remedies at law or in equity. If Kendall County is required to take legal action to enforce performance of any of the terms, provisions, covenants and conditions of this Agreement, and by reason thereof, Kendall County is required to use the services of an attorney, then Kendall County shall be entitled to reasonable attorneys' fees, court costs, expenses, and expert witness fees incurred by Kendall County pertaining thereto and in enforcement of any remedy, including costs and fees relating to any appeal.
25. **Waiver:** The Parties' waiver of any term, condition, or covenant or breach of any term, condition, or covenant, shall not constitute a waiver of any other term, condition, or covenant, or the breach thereof.
26. **Background Checks/Security:** Contractor shall exercise general and overall control of its officers, employees and/or agents. Contractor agrees that no one shall be assigned to perform work at Kendall County's facilities on behalf of Contractor, Contractor's consultants, subcontractors and their respective officers, employees, agents and assigns unless Contractor has completed a criminal background investigation for each individual to be performing work at the site. In the event that the individual's criminal background investigation reveals that the individual has a conviction record that has not been sealed, expunged, or impounded under Section 5.2 of the Criminal Identification Act, Contractor agrees that the individual shall not be assigned to perform work on or at Kendall County's facilities absent prior written consent from Kendall County. Kendall County, at any time, for any reason and in Kendall County's sole discretion, may require Contractor and/or Contractor's consultants, and/or subcontractors to remove any individual from performing any further work under this Agreement.
27. **MSDS:** When applicable, Contractor shall furnish Material Safety Data Sheets for their products, in compliance with the Illinois Toxic Substance Disclosure to Employee Act, Safety Inspection and Education Act & "Right to Know" law, 820 ILCS 255/1 *et seq.*, 820 ILCS 220/0.01 *et seq.* and 820 ILCS 225/0.1 *et seq.*
28. **Counterparts:** This Agreement may be executed in counterparts (including facsimile signatures), each of which shall be deemed to be an original and both of which shall constitute one and the same Agreement.
29. **Waiver of Lien:** Contractor hereby waives any claim of lien against subject premises on behalf of Contractor, its officers, insurers, employees, agents, suppliers and/or subcontractors employed by this Agreement.
30. **Occupational Safety and Health Act:** The Contractor and any Subcontractors shall comply with all the provisions of the Federal Occupational Safety and Health Act of 1970 (84 Stat. 1590), as amended.
31. **Drug Free Workplace:** Contractor and its consultants, employees, contractors, subcontractors, and agents agree to comply with all provisions of the Substance Abuse Prevention on Public Works Act, 820 ILCS 265/1 *et seq.* and the Illinois Drug Free Workplace Act, 30 ILCS 580/1 *et seq.*
32. **Default:** The Agreement may be canceled or annulled by Kendall County in whole or in part by written notice of default to the Contractor upon nonperformance or violation of ITB and/or Agreement's terms.

Failure of the Contractor to deliver services within the time stipulated in its offer, unless extended in writing by Kendall County, shall constitute an Agreement default.

33. **Governing Law & Venue:** This Agreement shall be construed in accordance with the law and Constitution of the State of Illinois and if any provision is invalid for any reason such invalidations shall not render invalid other provisions which can be given effect without the invalid provision. Notwithstanding any other provision to the contrary, venue in all legal proceedings between the parties shall be in the Circuit Court of Kendall County, Illinois, Twenty-Third Judicial Circuit, State of Illinois.
34. **Taxes:** Kendall County is exempt from federal excise and transportation taxes. Kendall County is also exempt from payment of Illinois Sales Tax. TAX EXEMPTION IDENTIFICATION NUMBER: E9995-9003-07. The County agrees to notify Contractor promptly in the event of a change in its tax-exempt status. No submitted bids can include any amounts of money for these taxes.

Agreed, this \_\_\_\_\_ day of \_\_\_\_\_, 2018

_____	_____
Contractor Name	Kendall County, Illinois
_____	_____
Signature	Signature
_____	_____
Printed Name	Printed Name
_____	_____
Title	Title

**END OF SECTION 00 52 13**

**SECTION 00 73 43**  
**PREVAILING WAGES**

Illinois Department of Labor (IDOL) Prevailing Wages for Kendall County with an effective date of September 1, 2017 is attached after this section.

**END OF SECTION 00 73 43**

**Prevailing Wage rates for Kendall County effective Sept. 1, 2017**

Trade Title	Region	Type	Class	Base Wage	Fore-man Wage	M-F OT	OSA	OSH	H/W	Pension	Vacation	Training
ASBESTOS ABT-GEN	ALL	ALL		41.20	42.20	1.5	1.5	2	13.77	13.20	0.00	0.50
ASBESTOS ABT-MEC	ALL	BLD		37.46	39.96	1.5	1.5	2	11.62	11.06	0.00	0.72
BOILERMAKER	ALL	BLD		48.49	52.86	2	2	2	6.97	19.61	0.00	0.90
BRICK MASON	ALL	BLD		45.38	49.92	1.5	1.5	2	10.45	16.68	0.00	0.90
CARPENTER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.88	0.00	0.63
CEMENT MASON	ALL	ALL		44.84	46.84	2	1.5	2	10.00	21.01	0.00	0.50
CERAMIC TILE FNShER	ALL	BLD		38.56	38.56	1.5	1.5	2	10.65	11.18	0.00	0.68
COMMUNICATION TECH	ALL	BLD		40.15	42.55	1.5	1.5	2	11.51	11.24	0.00	1.41
ELECTRIC PWR EQMT OP	ALL	ALL		37.89	51.48	1.5	1.5	2	5.00	11.75	0.00	0.38
ELECTRIC PWR EQMT OP	ALL	HWY		41.45	56.38	1.5	1.5	2	5.50	12.87	0.00	0.73
ELECTRIC PWR GRNDMAN	ALL	ALL		29.30	51.48	1.5	1.5	2	5.00	9.09	0.00	0.29
ELECTRIC PWR GRNDMAN	ALL	HWY		32.00	56.38	1.5	1.5	2	5.50	9.92	0.00	0.66
ELECTRIC PWR LINEMAN	ALL	ALL		45.36	51.48	1.5	1.5	2	5.00	14.06	0.00	0.45
ELECTRIC PWR LINEMAN	ALL	HWY		49.67	56.38	1.5	1.5	2	5.50	15.40	0.00	0.88
ELECTRIC PWR TRK DRV	ALL	ALL		30.34	51.48	1.5	1.5	2	5.00	9.40	0.00	0.30
ELECTRIC PWR TRK DRV	ALL	HWY		33.14	56.38	1.5	1.5	2	5.50	10.29	0.00	0.59
ELECTRICIAN	ALL	BLD		47.72	51.97	1.5	1.5	2	14.81	13.36	0.00	1.67
ELEVATOR CONSTRUCTOR	ALL	BLD		51.94	58.43	2	2	2	14.43	14.96	4.16	0.90
FENCE ERECTOR	ALL	ALL		45.56	49.20	2	2	2	11.02	21.51	0.00	0.70
GLAZIER	ALL	BLD		42.45	43.95	1.5	1.5	2	14.04	20.14	0.00	0.94
HT/FROST INSULATOR	ALL	BLD		50.50	53.00	1.5	1.5	2	12.12	12.96	0.00	0.72
IRON WORKER	ALL	ALL		45.61	49.25	2	2	2	11.52	22.65	0.00	0.81
LABORER	ALL	ALL		41.20	41.95	1.5	1.5	2	13.77	13.20	0.00	0.50
LATHER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.88	0.00	0.63
MACHINIST	ALL	BLD		47.56	50.06	1.5	1.5	2	7.05	8.95	1.85	1.47

MARBLE FINISHERS	ALL	ALL	ALL	33.95	33.95	1.5	1.5	1.5	2	10.45	15.52	0.00	0.47
MARBLE MASON	ALL	BLD	ALL	44.63	49.09	1.5	1.5	1.5	2	10.45	16.28	0.00	0.59
MATERIAL TESTER I	ALL	ALL	ALL	31.20	31.20	1.5	1.5	1.5	2	13.77	13.20	0.00	0.50
MATERIALS TESTER II	ALL	ALL	ALL	36.20	36.20	1.5	1.5	1.5	2	13.77	13.20	0.00	0.50
MILLWRIGHT	ALL	ALL	ALL	46.35	48.35	1.5	1.5	1.5	2	11.79	18.88	0.00	0.63
OPERATING ENGINEER	ALL	BLD	1	50.10	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	2	48.80	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	3	46.25	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	4	44.50	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	5	53.85	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	6	51.10	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	7	53.10	54.10	2	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	FLT		38.00	38.00	1.5	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	HWY	1	48.30	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	2	47.75	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	3	45.70	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	4	44.30	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	5	43.10	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	6	51.30	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	7	49.30	52.30	1.5	1.5	1.5	2	18.80	14.35	2.00	1.30
ORNAMNTL IRON WORKER	ALL	ALL		45.56	49.20	2	2	2	2	11.02	21.51	0.00	0.70
Painter	ALL	ALL		44.18	46.18	1.5	1.5	1.5	1.5	10.30	8.20	0.00	1.35
PAINTER SIGNS	ALL	BLD		37.45	42.05	1.5	1.5	1.5	2	2.60	3.18	0.00	0.00
PILEDRIVER	ALL	ALL		46.35	48.35	1.5	1.5	1.5	2	11.79	18.88	0.00	0.63
PIPEFITTER	ALL	BLD		47.50	50.50	1.5	1.5	1.5	2	10.05	17.85	0.00	2.12
PLASTERER	ALL	BLD		42.75	45.31	1.5	1.5	1.5	2	14.00	15.71	0.00	0.89
PLUMBER	ALL	BLD		49.25	52.20	1.5	1.5	1.5	2	14.34	13.35	0.00	1.28
ROOFER	ALL	BLD		42.30	45.30	1.5	1.5	1.5	2	9.08	12.14	0.00	0.58
SHEETMETAL WORKER	ALL	BLD		45.77	47.77	1.5	1.5	1.5	2	10.65	14.10	0.00	0.82
SPRINKLER FITTER	ALL	BLD		47.20	49.20	1.5	1.5	1.5	2	12.25	11.55	0.00	0.55



STEEL ERECTOR	ALL	ALL	45.06	48.66	2	2	2	10.52	20.76	0.00	0.70
STONE MASON	ALL	BLD	45.38	49.92	1.5	1.5	2	10.45	16.68	0.00	0.90
TERRAZZO FINISHER	ALL	BLD	40.54	40.54	1.5	1.5	2	10.65	12.76	0.00	0.73
TERRAZZO MASON	ALL	BLD	44.38	47.88	1.5	1.5	2	10.65	14.15	0.00	0.82
TILE MASON	ALL	BLD	45.49	49.49	1.5	1.5	2	10.65	13.88	0.00	0.86
TRUCK DRIVER	ALL	ALL	37.91	38.46	1.5	1.5	2	8.10	7.97	0.00	0.15
TRUCK DRIVER	ALL	ALL	38.06	38.46	1.5	1.5	2	8.10	7.97	0.00	0.15
TRUCK DRIVER	ALL	ALL	38.26	38.46	1.5	1.5	2	8.10	7.97	0.00	0.15
TRUCK DRIVER	ALL	ALL	38.46	38.46	1.5	1.5	2	8.10	7.97	0.00	0.15
TUCKPOINTER	ALL	BLD	45.42	46.42	1.5	1.5	2	8.32	15.42	0.00	0.80

**Legend**

**M-F OT** Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

**OSA** Overtime pay required for every hour worked on Saturdays

**OSH** Overtime pay required for every hour worked on Sundays and Holidays

**H/W** Health/Welfare benefit

Explanations KENDALL COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

EXPLANATION OF CLASSES

**ASBESTOS - GENERAL** - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

**ASBESTOS - MECHANICAL** - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain. CERAMIC TILE FINISHER

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

#### COMMUNICATIONS TECHNICIAN

Construction, installation, maintenance and removal of telecommunication facilities (voice, sound, data and video), telephone, security, and data inside wire, interconnect, terminal equipment, central offices, PABX and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

#### MARBLE FINISHER

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

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

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

#### OPERATING ENGINEER - BUILDING

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

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

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

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

Class 5. Assistant Craft Foreman.

Class 6. Graddall.

Class 7. Mechanics; Welder.

## OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

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

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

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

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

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

Class 6. Field Mechanics and Field Welders

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

#### OPERATING ENGINEERS - FLOATING

Diver. Diver Wet Tender, Diver Tender, ROV Pilot, ROV Tender

#### TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

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

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

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

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

#### TERRAZZO FINISHER

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

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

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

## SECTION 01 11 00

### SUMMARY OF THE WORK

#### PART 1: GENERAL

##### 1.01 SUMMARY

- A. This Section includes the following:
1. Work covered by the Contract Documents.
  2. Work phases.
  3. Work under other contracts.
  4. Products ordered in advance.
  5. Owner-furnished products.
  6. Use of premises.
  7. Owner's occupancy requirements.
  8. Punchlist Completion.
  9. Work restrictions.
  10. Specification formats and conventions.
  11. General requirements

##### 1.02 PROJECT IDENTIFICATION

- A. Project Name: Roofing - Fall 2018 Kendall County Public Safety Center,  
Yorkville, Illinois
- B. Owner: Kendall County  
111 West Fox Street  
Yorkville, Illinois 60560
1. Owner's Project Coordinator: James Smiley, Facilities Management Director  
804 West John Street  
Yorkville, Illinois 60560
- C. Architect: Wold Architects and Engineers  
110 North Brockway, Suite 220,  
Palatine, Illinois, 60067

##### 1.03 SUMMARY OF THE WORK

Briefly and without force and effect upon the Contract Documents, the Work of this single prime Contract can be summarized as follows:

- A. Work under this Contract includes:
1. Recover roofing systems of ballasted single ply, EPDM and related work.
  2. Keep Architect fully informed about progress of the work, performance of the work and potential problems.

##### 1.04 WORK PHASES

- A. Start work immediately upon contract award by the County, and achieve substantial completion no later than the completion date stipulated on the bid form.

## **1.05 USE OF PREMISES**

- A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
  - 1. Contractor is to visit site and be familiar with existing conditions. Contractor will be required to accept existing conditions on site prior to mobilizing.
- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Allow for Owner occupancy of Project site and use by the public.
  - 2. Driveways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  - 3. Public Streets: Maintain clear of automobile parking, equipment or material storage unless arrangements have been made with the appropriate jurisdiction.
  - 4. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.
- C. Do not allow construction waste and debris to accumulate; remove debris as it accumulates and, unless specified otherwise, dispose of legally off-site.
- D. Conform to City's noise control regulations, including limited hours of construction operations.
- E. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

## **1.06 LAYING OUT WORK**

- A. Locate all general reference points. Where dimensions or observed scope of work differ substantially from Drawings, notify Architect for decision.
- B. Lay out Work from the reference points furnished and be responsible for all lines, elevations, and measurements inside workspace. Exercise proper precaution to verify figures shown on Drawings before laying out work and will be held responsible for any error resulting from his failure to exercise such precaution.
- C. Hire the services of a locator company to locate all privately owned utilities that may be disturbed by construction operations.
- D. Coordinate utility connections with municipality/utility company in which project is being constructed.



## **1.07 OWNER'S OCCUPANCY REQUIREMENTS**

- A. Full Owner Occupancy: Owner will occupy portions of the site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. The building includes secure detention areas. Access to such areas shall be at the sole discretion and convenience of the Owner.
  - 2. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 3. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

## **1.08 WORK RESTRICTIONS**

- A. Contractor shall limit use of site to areas designated by the Owner.
- B. Access to the interior of the building shall be at the convenience of the Owner.
  - 1. Should the Contractor require access to the interior of the building:
    - a. Maintain access, building utilities, and services to allow full and free use of the facility during this time. All temporary conditions, re-routing of services, utilities and/or power are the Contractor's responsibility.
    - b. Coordinate access and storage of materials and equipment with the Owner's designated building representative. To the fullest extent possible provide for normal building operation, and the safety of the building's occupants. Work shall be cleaned and available for use at the end of each shift.
    - c. Coordinate schedule with the Owner's designated building representative.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect not less than seven (7) days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Architect's or Owner's permission.

## **1.09 SPECIFICATION FORMATS AND CONVENTIONS**

- A. Specification Format: The Specifications are organized into Division and Sections using the 49-division format and CSI/CSC's "Master Format" numbering system.
  - 1. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.
- 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.

## **1.10 GENERAL REQUIREMENTS**

### **A. WARRANTY:**

1. The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor’s warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### **B. PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS**

1. Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.
2. The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.
3. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.
4. Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor’s cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons.

### **C. SUPERINTENDENT**

1. The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

#### D. CONTRACTOR'S CONSTRUCTION SCHEDULES

1. The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work as required by Section 01 32 00 Construction Scheduling. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

#### E. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, the Architect will determine review timelines. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, coordinating the work, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of its obligations. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action. Shop drawings submitted prior to issuance of the building permit are at the Contractor's risk.
2. The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.
3. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.
4. The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been reviewed by the Architect.
5. The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's review of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's review thereof.

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

#### F. CUTTING AND PATCHING

1. The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.
2. The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

#### G. CLEANING UP

1. The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.
2. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

#### H. ROYALTIES, PATENTS AND COPYRIGHTS

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

#### I. INDEMNIFICATION

1. To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section "Indemnification".
2. In claims against any person or entity indemnified under this Section "Indemnification" by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Section shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

#### J. PROJECT MANAGER

1. The Contractor shall employ a competent project manager who shall be present and run all construction progress meetings. The project manager shall be responsible for providing accurate and up-to-date construction and submittal schedules at each construction progress meeting.
2. When requested by the Owner or Architect, the project manager shall:
  - a. Assist in resolving scope conflicts between sub-contractors in a timely fashion to ensure project progress matches published construction schedule.
  - b. Have sub-contractors attend construction progress meetings.
  - c. Manage the resolution of issues that arise during the punchlist/closeout/warranty period when the job superintendent is no longer on site.

#### K. COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

1. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner

#### L. SUBCONTRACTUAL RELATIONS

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

#### M. MINOR CHANGES IN THE WORK

1. The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

#### N. CHANGES IN CONTRACT SUM

1. For any adjustments to the Contract Sum based on other than the unit prices method, the Contractor agrees to charge and accept payment for his overhead, bond, insurance, office project management and supervision estimating time/costs, field management and supervision including the field superintendent, foreman and all other management staff onsite, as-built modification and profit, use or replacement of tools, shop burden, equipment rental (other than specifically required additional hoisting equipment, required excavating equipment or similar equipment necessary solely as a result of the change), engineering costs, cost of safety measures (including those imposed by OSHA), parking charges, general jobsite clean-up, testing, permits (unless a new permit is required) or any other costs not associated with the change and profit at the following percentages of the cost attributable to the change in the Work:
  - a. Ten percent (10%) for Work (labor, labor insurance and materials) by the Contractor not involving subcontractors;
  - b. Five percent (5%) for Work (labor, labor insurance and materials) by subcontractors;
  - c. When both additions and credits are involved in any one proposal request, the allowance for overhead, bond, insurance, office project management, estimating time, field supervision, as-built modification and profit shall be figured on the basis of the net increase, if any;
  - d. For additional Work ordered as described above which will be executed by Subcontractors of the Contractor, it is agreed Subcontractors will be permitted to charge ten percent (10%) for work not involving sub-subcontractors and five percent (5%) for Work by sub subcontractors. to the net subcontract amount the Contractor may add five percent (5%).
2. A breakdown of material and an hourly breakdown of labor must be submitted with each request for additional compensation.

#### O. PROGRESS AND COMPLETION

1. Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.
2. The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by the Contract Documents to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance.
3. The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

#### P. DELAYS AND EXTENSIONS OF TIME

1. If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or 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; or by delay authorized by the Owner pending arbitration or litigation as provided for herein; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine. The Contractor's sole remedy for delay shall be extension of Contract Time.

## Q. APPLICATIONS FOR PAYMENT

1. At least ten days before the date established for each progress payment, the Contractor shall submit four copies to the Architect an itemized Application for Payment (AIA Document G702 and G703) prepared in accordance with the schedule of values for completed portions of the Work. Such application shall be notarized, , and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.
2. Applications for Payment may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.
3. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.
4. Contractor shall request payment of ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the Work and ninety percent (90%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site up to the first day of that month, less the aggregate of previous payment in each case.
5. A sworn 'Contractor's Affidavit' shall be submitted with each payment request in sufficient form for the Owner to determine Contractor's right to payment and compliance with the Illinois Mechanic's Lien law. Each payment request shall include properly executed waivers of lien in conformity with information set forth on a properly completed Contractor's Affidavit. In the event that the Owner is satisfied with Contractor's payment procedures, the Owner may accept partial waivers of lien of subcontractors and suppliers who were included in the immediate proceeding payment. The Contractor shall submit waivers on a current basis, but the Owner may allow Subcontractors and suppliers to be not more than one payment late with their partial waivers.
6. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.
7. The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

## R. CERTIFICATES FOR PAYMENT

1. The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part.

2. The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### S. DECISIONS TO WITHHOLD CERTIFICATION

1. The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions because of:
  - a. defective Work not remedied;
  - b. third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
  - c. failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
  - d. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
  - e. damage to the Owner or a separate contractor;
  - f. reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
  - g. repeated failure to carry out the Work in accordance with the Contract Documents.
2. When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.
3. If the Architect withholds certification for payment, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

#### T. PROGRESS PAYMENTS

1. After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.



2. The Contractor shall pay each Subcontractor no later than ten days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. Per 50 ILCS 505/9, the Contractor must pay subcontractors within fifteen (15) days of receipt of payment from the local government entity for undisputed work. If the Contractor, without reasonable cause, fails to make payment to subcontractors within this period of time, in addition to the payment due the Contractor shall pay interest in the amount of 2% per month, calculated from the expiration of the fifteen (15) day period until fully paid. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

#### U. SUBSTANTIAL COMPLETION

1. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.
2. When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
3. Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.
4. When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time which the Contractor shall complete all items on the list accompanying the Certificate to sixty (60) calendar days. The Contractor will submit a punchlist completion schedule within ten (10) days of receipt of Certificate of Substantial Completion. Any cost incurred by the Architect or Architect's consultants (after 60 calendar days of substantial completion) to close out the project will be deducted from the Contractor's contract by change order. 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. Warranties on punchlist items will commence on the date of final payment.

#### V. SAFETY OF PERSONS AND PROPERTY

1. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
  - a. employees on the Work and other persons who may be affected thereby;
  - b. the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
  - c. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

2. The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
3. The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.
4. When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.
5. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations of Indemnification.
6. The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.
7. The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

#### W. UNCOVERING OF WORK

1. If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.
2. If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

#### X. CORRECTION OF WORK

1. Before Or After Substantial Completion: The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

2. After Substantial Completion: In addition to the Contractor's warranty obligations, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner or Architect to do so unless the Owner or Architect has previously given the Contractor a written acceptance of such condition. The Owner or Architect shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner or Architect fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct at the Contractor's expense. The one-year period for correction of Work shall be extended with respect to portions incomplete or defective Work noted on the Certificate of Substantial Completion shall commence at final payment. The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor.
3. The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
4. The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.
5. Nothing contained in this Section "Correction of Work" shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in the Section relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

#### Y. TESTS AND INSPECTIONS

1. Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.
2. If such procedures for testing, inspection or approval reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

#### Z. NOTICE OF CLAIMS

1. Claims by the Contractor must be initiated by written notice to the Owner and the Architect and must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

AA. CONTINUING CONTRACT PERFORMANCE

1. Pending final resolution of a Claim by the Contractor, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Architect.

**END OF SECTION 01 11 00**

## **SECTION 01 21 00**

### **ALLOWANCES**

#### **PART 1: GENERAL**

##### **1.01 SUMMARY**

- A. This Section includes administrative and procedural requirements governing allowances.
  - 1. Certain materials and / or labor are specified in the Contract Documents by lump sum allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and / or labor to a later date when additional information is available for evaluation.

##### **1.02 SELECTION AND PURCHASE**

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

#### **PART 2: PRODUCTS (Not Applicable)**

#### **PART 3: EXECUTION**

##### **3.01 SCHEDULE OF ALLOWANCES**

- A. Allowance No. 1: State the amount to be added to the base bid for the quantities of roof insulation replacement as indicated on the bid form, at the proposed unit price rates. Bidder agrees that the Owner may accept or reject this allowance at its sole discretion.

**END OF SECTION 01 21 00**

## **SECTION 01 22 00**

### **UNIT PRICES**

#### **PART 1: GENERAL**

##### **1.01 SUMMARY**

- A. This Section specifies administrative and procedural requirements for unit prices.
  - 1. In the space indicated on the Bid Form, submit unit prices as required by this section and listed in the Unit Price Schedule. Only one value for each unit price will be allowed.
  - 2. A unit price is a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the quantities of Work required by the Contract Documents are increased or decreased.
  - 3. Unit prices include all necessary material, overhead, profit and applicable taxes.
  - 4. Refer to individual Specification Sections for construction activities requiring the establishment of unit prices.
- B. While unit prices are not to be used in the selection of the successful Bidder, they must be submitted and approved prior to execution of the Contract.
  - 1. The Owner reserves the right to reject a unit price he deems unsatisfactory and to require a resubmittal.
  - 2. The Owner reserves the right to reject the Contractor's measurement of quantities, and to have this Work measured by an independent surveyor.
- C. The Owner reserves the right to throw out a bid that does not include a unit price or assign a unit price based on other bidders unit prices.

#### **PART 2: PRODUCTS – (Not Applicable).**

#### **PART 3: EXECUTION**

##### **3.01 UNIT PRICE SCHEDULE**

- A. Unit Price #1: Replace Wet Insulation, Flat
  - 1. State the amount on the Bid Form to add or deduct from the Contract Sum to remove, and replace Existing wet roof insulation, flat, thickness to match existing, state the amount per board foot.
- B. Unit Price #2: Replace Wet Insulation, Tapered
  - 1. State the amount on the bid form and add or deduct from the contract sum to remove and replace existing wet roof insulation, tapered, thickness and slope to match existing. State the amount per board foot.

**END OF SECTION 01 22 00**



## **SECTION 01 23 00**

### **ALTERNATES**

#### **PART 1: GENERAL**

##### **1.01 DESCRIPTION**

- A. This Section describes the limits of the requested alternates to the Contract work. Refer to the Product/Execution Articles of the appropriate Specifications and the Drawings for information pertaining to the work of each alternate.
- B. Each proposal under an alternate shall include all incidental work and all adjustments necessary to accommodate the changes. All work shall meet the requirements of the Drawings, Specifications and appropriate details.
- C. Submit each alternate proposal as an individual cost for the particular alternate and shall be proposed under the premise that no other alternates have been accepted. Should the work of an alternate called for by the Bid Form not affect the cost of the work, state "No Change" in the space provided. If an alternate is left blank, the Owner reserves the right to throw out the entire bid or interpret the alternate as "No Change".
- D. Include taxes which are applicable to work involved in alternates as well as costs, if any, for increased coverage of bonds and insurance.
- E. Any of the alternates may be accepted by Owner and will be used in determining the low bidder.
- F. Owner may, at his option, vary the scope of the work by authorizing alternates which will add to the work, deduct from the work or substitute materials, equipment or methods.
- G. Each Bidder shall examine the Drawings and Specifications to determine the extent to which his work is affected by bid alternates. Include in the space provided on the bid form the cost of any added or deducted work resulting from each alternate.
- H. Contractor is responsible for providing work if applicable to each alternate, whether or not an added or deducted cost is included on his bid form.

#### **PART 2: EXECUTION**

##### **2.01 IMPLEMENTATION**

- A. If the Owner elects to proceed on the basis of one or more of the alternates, make all modifications to the Work required in the furnishing and installation of the selected alternate or alternates subject to the approval of the Architect at no additional cost to the Owner except as proposed in the Bid.
- B. Coordinate pertinent related work and modify surrounding work as required to properly integrate the work under each alternate, and to provide the complete construction required by Contract Documents.
- C. If so stated in the Agreement, or modifications thereto, provide alternate materials, equipment and/or construction as specified.

## **2.02 ALTERNATES**

### **A. Alternate No. 1 Raise Make-Up Air Unit**

1. In lieu of re-roofing with existing unit in place, remove and reinstall existing Make-Up Air Unit to allow reroofing, including without limitation, disconnection of electrical, gas, and duct connections, removal of unit, extension of curb, supports and flashings, reinstallation of unit, extension and reconnection of electrical, gas and duct connections, start-up and testing of unit operation.

**END OF SECTION 01 23 00**

## SECTION 01 25 00

### SUBSTITUTIONS AND PRODUCT OPTIONS

#### PART 1: GENERAL

##### 1.01 DESCRIPTION

- A. This Section defines procedures to be followed to gain acceptance of products in the Work which are not listed in the individual specification sections. A two step process is required.
- B. Requests for acceptance for bidding purposes of alternative manufacturers is encouraged except where specifically prohibited by this Project Manual.
- C. Submit Prior Approval request via email to mail@woldae.com with the following information in the subject line: Prior Approval 183043 XX XX XX (Specification Section).

##### 1.02 PRODUCT OPTIONS NOT REQUIRING PRE-BID SUBMITTAL

- A. Where a single manufacture is specified and acceptable manufacturer are also listed, acceptable manufacturers must provide an identical product or accept responsibility for all design implications when providing a product other than the specified product.
- B. Where products are specified by reference standards, any product established by a material testing agency to meet these standards is acceptable.
- C. Where multiple manufacturers and associated models are specified, select any one named.
- D. Where manufacturer(s) alone are specified, select any manufacturer and the product recommended in writing by the manufacturer as most suited to the application shown on the Drawings and Specifications.
- E. Where the phrase "or equal" follows the name of a manufacturer, any product which meets the performance and appearance standards established by the specified manufacturer may be selected, subject to the Architect's acceptance.
- F. Where a manufacturer is listed in both a technical specification section and the Material Finish/Color Schedule, on Architectural Drawings and a color is provided.

##### 1.03 PRODUCT SUBSTITUTIONS REQUIRING PRE-BID SUBMITTALS

- A. Step One - Manufacturers Acceptance
  - 1. Individual specification sections may be amended by the Architect during the bid period to include additional names of manufacturers determined to be capable of providing acceptable materials.
  - 2. To propose the names of specific manufacturers, submit, or arrange for suppliers to submit, written requests to Architect or appropriate Architect's Consultant. Requests received ten (10) calendar days prior to bid date will be considered.
    - a. Provide sufficient review data. Include specified manufacturer's model numbers and proposed manufacturer's product literature, noting product numbers for proposed substitutions, and where appropriate, samples and data relating to construction details. If the product is not identical to specified product, submit letter stating proposed manufacturer will custom make products to meet specified product.

- b. Architect's acceptance is based upon his determination that a manufacturer is capable of supplying acceptable materials. Approval is not assured or implied for a specific material, item of equipment, color or finish.
- c. Official notification will be by addendum to the Contract Documents. However, in addition, if letters of request are delivered in duplicate with accompanying stamped self addressed envelopes, copies may be returned with Architect's decision in advance.

**B. Step Two - Product Acceptance**

1. Upon award of a construction contract, accepted manufacturers may submit for review to the Architect through the General Contractor or Construction Manager, specific products, materials or equipment items as substitutes for those specified. Contractor to provide letter stating they will reimburse Architect to review substitutions.
2. Architect will review substitute products for performance, appearance, color, finish, size and suitability for inclusion in the work. If a substitute product is not accepted, submit another product by the same or other accepted manufacturer or provide the specified product.
3. Match specified colors and dimensions exactly, whether or not they are standard with the substitute product, unless a minor variation is accepted by the Architect.
4. If a substitute product is accepted, coordinate any necessary changes in other related work and pay for these changes. Pay cost of architectural or engineering services, if any, required to incorporate substitute products in the Work.

**1.04 SUBSTITUTIONS BY CHANGE ORDER**

- A. A substitution for a specified product may be permitted by "change order" at no additional cost to the Owner if product proposed is determined to be equivalent in performance and suitability, and if at least one of the following conditions apply:
  1. Owner is given a credit for the work.
  2. Product is of superior quality than product specified.
  3. Product color or finish selection is preferable.
  4. Products specified and upon which building is designed have been discontinued by manufacturer.
- B. Provide Architect, through Owner, reasonable compensation for product evaluation.

**END OF SECTION 01 25 00**

## SECTION 01 26 63

### CHANGE ORDERS

#### 1.01 CHANGE ORDER PROCEDURES

- A. Changes in the Project scope of work affecting the project cost can be made only through AIA Document G701 - Change Order.
- B. The procedures for processing changes in the scope of Work are listed as follows:
  - 1. The Architect prepares one of the following documents to modify the scope of work. Documents and attachments revising the drawings and specifications will be distributed electronically and the Contractor will be responsible for printing.
    - a. Supplemental Instructions (SI) which are used for no cost changes.
    - b. Proposal Request (PR) to be used for proposed changes that need written approval on cost prior to proceeding.
    - c. Construction Change Directive AIA Document G714 (CCD) which is used when the work must proceed immediately and time and material cost submitted as soon as possible for review by the Architect.
  - 2. The Contractor reviews and responds as follows:
    - a. Supplemental Instructions (SI): This no cost change is to be carried out in accordance with the following modifications to the contract documents described herein. If this change effects cost, do not proceed with this change. Notify the Architect in writing within 10 days of receipt that an itemized (labor and material) quotation will be submitted within 21 days of initial receipt of this Supplemental Instruction. If a cost is not submitted within 21 days, this Supplemental Instruction will be accepted at no additional cost.
    - b. Proposal Request (PR): Submit an itemized (labor and material) quotation for the proposed modifications to the contract documents as described herein within 21 days of receipt. If a cost is not submitted within 21 days, this Proposal Request can be accepted at no additional cost. Written approval is required prior to proceeding with this change.
    - c. Construction Change Directive AIA Document G714 (CCD): Proceed immediately to carry out this change in the contract documents as described herein. If this revision effects cost, submit an itemized (labor and material) quotation within 21 days of receipt. If a cost is not submitted within 21 days this Change Directive will be accepted at no additional cost.
  - 3. The Architect will review the Contractor's labor and material itemized quotation and respond in writing whether it is acceptable or needs revision. When all pricing is accepted by the Architect and Owner, a Change Order will be processed. Change Orders will be processed at increments determined by the Architect throughout the construction schedule.
- C. See General Conditions and Supplementary Conditions of the Work for methods of determining cost or credit, mark-up and schedule on submitting claims.

**END OF SECTION 01 26 63**

**SECTION 01 31 19**  
**PROJECT MEETINGS**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. Schedule and administer pre-construction meeting, periodic progress meetings, and specially called meetings throughout the progress of the work.
  - 1. Notify Architect in advance.
  - 2. Prepare agenda for meetings.
  - 3. Make physical arrangements for meetings.
  - 4. Preside at meetings.
- B. Representatives of contractors, subcontractors and suppliers attending the meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. Architect may attend meetings to ascertain that Work is expedited consistent with Contract Documents and the construction schedules.

**1.02 PRE-CONSTRUCTION MEETING**

- A. Schedule within 15 days after date of Notice to Proceed.
- B. Location: A central site, convenient for all parties, designated by Contractor.
- C. Attendance:
  - 1. Owner's representative
  - 2. Architect and their professional consultants
  - 3. Resident Project representative
  - 4. Contractor's superintendent
  - 5. Major subcontractors
  - 6. Major suppliers
  - 7. Others as appropriate
- D. Suggested Agenda:
  - 1. Distribution and discussion of:
    - a. List of major subcontractors and suppliers

- b. Projected construction schedules Refer to Section 01 32 00
  - Critical Path Method. Schedule for entire construction period.
  - Submittal Schedule
  - Schedule pre-scheduling conf.
2. Critical work sequencing.
3. Project coordination and scheduling:
  - a. Designation of responsible personnel.
  - b. Pre-installation conference - Roofing
4. Procedures and processing of:
  - a. Field decisions
  - b. Proposal Requests/Supplemental Instructions
  - c. Submittals
    - 1) Mechanical Electrical Coordination drawings
  - d. 21 day time limit on claims
  - e. Change orders
  - f. Applications for payment
5. Adequacy of distribution of Contract Documents.
6. Procedures for maintaining Record Documents.
7. Use of premises:
  - a. Work and storage areas
  - b. Owner's requirements
8. Construction facilities, controls and construction aids.
9. Temporary utilities.
10. Safety and first-aid procedures
11. Security procedures
12. Housekeeping procedures Refer 01 50 00
  - Debris removed weekly
  - Daily clean requirements
  - Failure to maintain clean site will result in Owner cleaning and back charging Contractor.



### **1.03 PROGRESS MEETINGS**

- A. Schedule regular periodic meetings, as required.
- B. Hold called meetings as required by progress of the work.
- C. Location of the meetings: The project field office of the Contractor.
- D. Attendance:
  - 1. Architect and their professional consultants may attend as needed.
  - 2. Subcontractors as appropriate to the agenda.
  - 3. Suppliers as appropriate to the agenda.
  - 4. Others
- E. Suggested Agenda:
  - 1. Review, approval of minutes of previous meeting.
  - 2. Review of work progress since previous meeting.
  - 3. Field observations, problems, conflicts.
  - 4. Problems which impede Construction Schedule.
  - 5. Review of off-site fabrication, delivery schedules.
  - 6. Corrective measures and procedures to regain projected schedule.
  - 7. Revisions to Construction Schedule.
  - 8. Plan progress, schedule, during succeeding work period.
  - 9. Coordination of schedules.
  - 10. Review submittal schedules; expedite as required.
  - 11. Maintenance of quality standards.
  - 12. Review proposed changes for:
    - a. Effect on Construction Schedule and on completion date.
    - b. Effect on other contracts of the Project.
  - 13. Other business

**END OF SECTION 01 31 19**

## **SECTION 01 31 26**

### **ELECTRONIC COMMUNICATION PROTOCOLS**

#### **PART 1: GENERAL**

##### **1.01 SUMMARY**

- A. The Architect will provide the Contractor with one (1) electronic copy of the background drawing relevant to their request. Requested files will be provided via email to the Contractor in AutoDesk AutoCAD format.
- B. The terms and conditions on the attached form “Agreement Between Architect and Contractor for Transfer of Computer Aided Drafting (CAD) Files on Electronic Media” apply to all Electronic Documents issued by Wold Architects and Engineers or it’s consultants for the project.
- C. Electronic Document Availability
  - 1. Pre Bid: AutoCAD backgrounds pertaining only to Survey and/or proposed grading will be available prior to bid. Requesting Contractors must complete “Attachment A - Agreement Between Civil Engineer and Contractor for Transfer of Computer Aided Drafting (CAD) Files on Electronic Media” at time of request.
  - 2. After Bid: Backgrounds as requested by the awarded contractors at the discretion of the Architect or Engineer. Electronic Documents are available upon completion of “Attachment A - Agreement Between Architect and Contractor for Transfer of Computer Aided Drafting (CAD) Files on Electronic Media” by the Contractor on project.
- D. See attached form “Attachment A – Agreement Between Architect and Contractor for Transfer of Computer Aided Drafting (CAD) Files on Electronic Media.”

**PART 2: PRODUCTS – (Not Applicable)**

**PART 3: EXECUTION – (Not Applicable)**

**END OF SECTION 01 31 26**

**ATTACHMENT A – AGREEMENT BETWEEN ARCHITECT AND CONTRACTOR FOR THE TRANSFER OF COMPUTER AIDED DRAFTING (CAD) FILES ON ELECTRONIC MEDIA**

**Roofing Fall 2018 – Kendall County Public Safety Center**

The purpose of this agreement is to grant permission from the Transmitting Party (Architect and/or Engineer) to the Receiving Party for the Receiving Party’s use of electronic media on the Project, and to set forth the terms. All data transmitted is defined as the electronic media and is considered confidential and containing business proprietary information. Wold Architects & Engineers and its consultants grant Bidders and Contractors a limited license to use Electronic Media issued by Wold Architects & Engineers exclusively for this project. The terms are set forth as follows:

1. The files are transmitted for the Receiving Party’s convenience and remain the sole property of Wold Architects and Engineers and/or its consultants. No warranty, expressed or implied, is made respecting this electronic data.
2. The Architect and/or Engineer makes no representation regarding the accuracy, completeness, or permanence of Electronic Media files (ie CAD files). Addenda information or revisions made after the date indicated on the files may not have been incorporated. In the event of a conflict between the Architect and/or Engineers sealed Contract Drawings and Electronic Media files, the sealed Contract Drawings shall govern. It is the Owner, Contractor, or Third Party’s responsibility to determine if any conflicts exist.
3. The information contained in the Electronic Media may not include final data or represent exact as-built conditions. The accuracy of the information is not guaranteed and the recipient shall be solely responsible to verify and check all field conditions against the information and to make all adjustments necessary to utilize such information for its work.
4. The Electronic Media files shall not be considered to be Contract Documents as defined by the General Conditions of the Contract for Construction.
5. Wold Architects and Engineers and their consultants shall not be responsible for any decline in accuracy or readability due to the medium on which the Electronic Media are stored, or for any unintentional transmission of computer viruses.
6. Information contained in the Electronic Media shall not be used by Contractor (Receiving Party) for any purpose other than as a convenience in the preparation of Shop Drawings, layout, and other purposes related to the Project. Any other use or reuse by the Receiving Party or others, will be at the Receiving Party’s sole risk and without liability or legal exposure to the Architect, Engineers, or their consultants.
7. This Agreement is entered into as of the day and year written below and will terminate upon Substantial Completion of the Project, as defined in the General Conditions of the Contract for Construction, unless otherwise agreed by the parties and set forth below.
8. The Architect reserves the right to determine what content will be distributed to the Receiving Party.

By signing below, the Receiving Party agrees to the terms set forth by this Agreement.

**AUTHORIZED ACCEPTANCE:**

**By Receiving Party/Contractor of Record**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Print Name of Company

\_\_\_\_\_  
Date

## SECTION 01 32 00

### CONSTRUCTION SCHEDULING

#### PART 1: GENERAL

##### 1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Contractor's Construction (CPM) Schedule.
  2. Shop Drawing Submittals Schedule
  3. CPM Reports

##### 1.02 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
  2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
1. Float time is for the exclusive use or benefit of the Contractor to meet schedule milestones and Contract completion date.
  2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
  3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- G. Major Area: A story of construction, a separate building, or a similar significant construction element.
- H. Milestone: A key or critical point in time for reference or measurement.
- I. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

### **1.03 SUBMITTALS**

- A. Submittals Schedule: Submit six copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
  2. Specification Section number and title.
  3. Submittal category (action or informational).
  4. Name of subcontractor.
  5. Description of the Work covered.
  6. Scheduled date for Architect's final release or approval. (Assume 15 working day turnaround.)
  7. Identify submittals that effect critical path.
- B. Contractor's Construction (CPM) Schedule: Submit two printed copies of initial schedule large enough to show entire schedule for entire construction period.
- C. CPM Reports: Concurrent with CPM schedule, submit three printed copies of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, original duration, early start date, early finish date, late start date, late finish date, and total float.
1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.

### **1.04 QUALITY ASSURANCE**

- A. Prescheduling Conference: Conduct conference at Project site to review methods and procedures related to the Contractor's Construction (CPM) Schedule, including, but not limited to, the following:
1. Discuss constraints, including phasing, work stages, area separations, interim milestones and partial Owner occupancy.
  2. Review delivery dates for Owner-furnished products.
  3. Review schedule for work of Owner's separate contracts.
  4. Review time required for review of submittals and resubmittals.
  5. Review requirements for tests and inspections by independent testing and inspecting agencies.
  6. Review time required for completion and startup procedures.
  7. Review and finalize list of construction activities to be included in schedule.
  8. Review submittal requirements and procedures.
  9. Review procedures for updating schedule.

### **1.05 COORDINATION**

- A. Coordinate requirements in this Article with "Submittals Schedule" Article in Part 2. If a submittal review sequence policy governs, revise this Article to comply with requirements. See Evaluations for discussion on submittal review sequence policies.

## **PART 2: PRODUCTS**

### **2.01 SUBMITTALS SCHEDULE**

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates. Identify items that affect critical path.

### **2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)**

- A. General: Prepare network diagrams using CPM (critical path method) format.

- B. Preliminary Network Diagram: Submit diagram within 14 days from the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's Construction Schedule using a CPM network analysis diagram.
  - 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted prior to first pay request.
  - 2. Establish procedures for monitoring monthly and updating CPM schedule if work is not on schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
  - 3. Use "one workday" as the unit of time. Activities should not be shorter than 2 work days or longer than 10 work days for projects with a construction period over 6 months and/or longer than 5 work days for projects with a construction period under 6 months.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.
  - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Purchase of materials.
    - c. Delivery.
    - d. Fabrication.
    - e. Installation.
  - 2. Processing: Process data to produce output data or a computer-drawn, logic network diagram. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.

### **PART 3: EXECUTION**

#### **3.01 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Contractor's Construction Schedule Updating:
  - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

**END OF SECTION 01 32 00**



## SECTION 01 33 00

### SUBMITTALS

#### PART 1: GENERAL

##### 1.01 DESCRIPTION

- A. This Section defines procedures for the following submittals required by the Contract Documents.
- B. Provide submittals as noted in each Section.
- C. Allow for two weeks review of submittals to avoid delay of Work.
- D. Include with submittal preparation, field verifications of measurements, field construction criteria, verification of catalog numbers and similar data, and coordination of Work requirements and Contract Documents.
- E. Submit all color samples within 45 days of contract award for Architect's use in color selections. The Architect will not start the color schedule until all samples are received.

#### PART 2: REQUIRED SUBMITTALS

##### 2.01 SHOP DRAWINGS AND SAMPLES

- A. Submit shop drawings in accordance with Article 3 of the General Conditions and the following.
- B. Prepare clearly identified shop drawings or schedules to this specific project, containing only data applicable. Include with the shop drawings or schedules a letter of transmittal listing and dating the submitted drawings in sets.
- C. Contractor to review all submittals prior to submittal to Architect, and indicate such review with a stamp and signature. Review submittals for conformance to Drawings, Specifications, coordination with other trades and adjacent construction and verification of field dimensions. Failure of Contractor to adequately review submittals shall be cause for rejection.
- D. Prepare and submit electronically (with exception for color charts and samples) to Architect for review, all shop drawings and manufacturers catalog sheets showing illustrated cuts of items to be furnished, scale details, sizes, dimensions, performance characteristics, capacities, wiring diagrams, weights and arrangements. Each submittal to include a transmittal on contractor letterhead. Submittal to be in the form of one combined PDF, professionally assembled so all documents are facing the same way.
  - 1. The Contractor will provide submittals labeled as follows:
    - a. 183043, KCPSC,  
XX-XX-XX-X [SPECIFICATION # AND CONSECUTIVELY NUMBERED SUBMITTAL]  
\_\_\_\_\_ [SPECIFICATION NAME] \_\_\_\_\_ [SUBMITTAL NAME].  
  
[Example: 183043, KCPSC, 04 20 00-1, Non-Bearing Masonry – Masonry Accessories]
- E. Reproduction or exact replication of contract documents are not an acceptable form of shop drawings. Contractor is to generate shop drawings based on the information identified in the contract documents and notify the architect of discrepancies in the documents.

- F. The Architect will take one of the following actions on submittals:
1. "Reviewed": Contractor shall proceed with ordering and/or fabrication.
  2. "Review Comments": Contractor shall proceed with ordering and/or fabrication after taking into account noted comments.
  3. "Rejected": Contractor shall provide a submittal that meets the intent of the specifications.
  4. "Revise and Resubmit": Contractor shall modify submittal to address comments and resubmit.
- G. If equipment other than that used in the design of this project is proposed to be used, the Contractor and/or supplier shall verify electrical differences, dimension variations and weight increases. The Contractor shall be responsible for any extra costs incurred as a result of equipment substitutions.
- H. Information submittals and submittals that are not required shall be for Architects' and Engineers' use and be available for the design team's review at the jobsite. Quantity of submittals will be the same for Architect as noted under shop drawings. These submittals will not be reviewed, stamped or returned to the Contractor.
- I. Unless otherwise specified, submit to the Architect's office samples of size, and nature representing typical qualities. Where required, submit a sufficient number of samples to demonstrate the complete range of variations of the material or quality. Written acceptance of the Architect is required prior to ordering any item for which samples are required.
- J. Submit samples to Architect's office, securely packaged, with the name of the Project clearly indicated on the package exterior. Each physical sample shall have a label or tag, firmly attached to the sample, bearing the following information: (a) Name of Project, (b) Name of Supplier, (c) Name of Contractor, and (d) Product information such as manufacturer's designation, finish, type, class, grade, etc. as is appropriate. The Architect will retain one copy of each sample.

## **2.02 LIST OF MATERIALS**

- A. Within 7 days after the award of the Contract (notice to proceed or letter of intent), submit 4 copies of a complete list of all material, products, and equipment proposed to be used in construction to the Architect for acceptance. Do not order materials until the proposed listed materials, products and equipment to be used in construction are accepted by the Architect.
- B. Where two or more makes or kinds of items are named in the specifications (or additional names are called for in addenda), the Contractor shall state which particular make or kind of each item he proposes to provide. If the Contractor fails to state a preference, the Owner shall have the right to select any of the makes or kinds named without change in price.
- C. This list shall be arranged generally in order of specification sections. The items listed shall fully conform to project requirements and specifications. All materials are subject to the Architect's acceptance. After acceptance, changes or substitutions will not be permitted.
- D. Clearly identify or list the material, product or equipment by manufacturer and brand by listing the names for all items, including those where only one material or product is specified. Each and every material, product and equipment shall be specifically named, not listed "as specified".

## **2.03 MATERIAL SAFETY DATA**

- A. Submit for Owner's information and record, MSDS for all materials. Architect will not review MSDS information. \

**2.04 LIST OF SUBCONTRACTORS**

- A. Refer to the General Conditions of the Contract for Construction.
- B. Propose use of subcontractors or sub-subcontractors who are established, reputable firms of recognized standing with a record of successful and satisfactory past performance. Include the following information: specification section, item of work, subcontractor or supplier, material/manufacturer (as specified will not be allowed), project manager, phone and facsimile numbers. List major sub-subcontractors for mechanical and electrical work. Use only those subcontractors (and sub-sub-contractors, when appropriate) who are acceptable to the Architect and Owner on the Work.
- C. **Prior to contract award, submit electronically a signed and notarized MN Responsible Contractor Compliance Affidavit for each subcontractor as outlined in General Conditions of the Contract for Construction. Changes to subcontractors during the project will require resubmittal of MN Responsible Contractor Compliance Affidavit.**

**2.05 SCHEDULE OF VALUES**

- A. Requirements
  - 1. Submit separate Schedule of Values for each building or phase to Architect ten (10) days prior to first Application For Payment (AIA Form G702, G702a).
  - 2. Use Schedule of Values only as basis for Contractor's Application For Payment.
- B. Form of Submittal
  - 1. Base format on Sections listed in Section 00 01 10 Table of Contents, as well as, the Mechanical and Electrical Table of Contents. Break down labor and material separately.
  - 2. Provide a separate line item on the schedule of values for coordination drawings as defined in Division 23 Specification Section 23 05 00 "Common Work Results for HVAC".
  - 3. Round off amounts to nearest ten dollars.

**2.06 PROGRESS SCHEDULE**

- A. Refer to the Section 01 32 00 Construction Scheduling for submittal requirements.

**2.07 SUBMITTAL LIST**

- A. The following submittal list is a guide for submittals required for specification divisions 2-14 on the project. Inconsistencies or omissions from the list does not relieve the contractor from required submittals delineated in each specification section.

Section	Pre-Installation Conference	Product Data, Install Instruction, Wiring Diagrams	Shop Drawing	Samples	Mock-Up Panel	Design Data, Mix Design	Reports/Sched. Calculations	Qualification/Certification	Source Quality Control Tests/Reports	Reference Specs	Warranty	Maint. & Operation Manual	MSDS
07 53 25	X		X	X				X	X		X	X	
07 62 00			X	X							X	X	

Section	Pre-Installation Conference	Product Data, Install Instruction, Wiring Diagrams	Shop Drawing	Samples	Mock-Up Panel	Design Data, Mix Design	Reports/Sched. Calculations	Qualification/Certification	Source Quality Control Tests/Reports	Reference Specs	Warranty	Maint. & Operation Manual	MSDS
07 72 00		X	X										
22 00 01		X	X								X	X	X
23 00 01		X	X								X	X	X
26 00 01		X	X								X	X	X

**END OF SECTION 01 33 00**

## SECTION 01 50 00

### TEMPORARY FACILITIES AND CONTROLS

#### PART 1: GENERAL

##### 1.01 SUMMARY

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- B. Support facilities include, but are not limited to, the following:
  - 1. Dewatering facilities and drains.
  - 2. Project identification and temporary signs.
  - 3. Housekeeping and waste disposal facilities.
  - 4. Field offices.
  - 5. Storage and fabrication sheds.
  - 6. Lifts and hoists.
  - 7. Construction aids and miscellaneous services and facilities.
  - 8. Temporary heating, cooling, and ventilation.
  - 9. Temporary power and lighting.
- C. Security and protection facilities include, but are not limited to, the following:
  - 1. Environmental protection.
  - 2. Barricades, warning signs, and lights.
  - 3. Temporary enclosures.
  - 4. Fire protection.

##### 1.02 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weather-tight; exterior walls are insulated and weather-tight; and all openings are closed with permanent construction or substantial temporary closures.

##### 1.03 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
  - 1. Occupants of Project.
  - 2. Architect.
  - 3. Testing agencies.
  - 4. Personnel of authorities having jurisdiction.
- B. Water Service: Use water from Owner's existing water system without metering and without payment of use charges.
  - 1. Pay for pumps, pipe, hoses, and backflow preventors as required to distribute water.
- C. Electric Power Service: Use electric power from Owner's existing system without metering and without payment of use charges. Provide portable generators if construction needs exceed available system capacity without interference to Owner's ongoing use.

## **PART 2: PRODUCTS**

### **2.01 MATERIALS**

- A. General: Provide new materials or undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section "Carpentry."
- C. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- D. Water: Potable.
- E. Wood Walkways:  $\frac{3}{4}$ " Plywood, framed with 2x\_\_ joists (size as required to support span), with wood rails to contain occupants.
- F. Poly Film Guard: 3 mil. self adhering clear poly film utilizing tack water-based adhesive.

### **2.02 EQUIPMENT**

- A. General: Provide equipment suitable for use intended.
- B. Field Offices: None required, none provided.
- C. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
  - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- D. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- E. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.

## **PART 3: EXECUTION**

### **3.01 INSTALLATION, GENERAL**

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### **3.02 TEMPORARY UTILITY INSTALLATION**

- A. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
  - 1. Provide rubber hoses as necessary to serve Project site.
  - 2. Where installations below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.
  - 3. Provide pumps if required due to low static pressure on-site. Equip pumps with surge and storage tanks and automatic controls to supply water uniformly at reasonable pressures.
  - 4. Provide backflow prevention devices to protect Owner's water system.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
- C. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- D. Telephone Service:
  - 1. Provide a portable cellular telephone for superintendent's use in making and receiving telephone calls.

### **3.03 SUPPORT FACILITIES INSTALLATION**

- A. Field Offices: None required, none provided.
- B. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
- C. Dewatering Facilities and Drains: Maintain existing roof drainage systems. Maintain roof free of water.
- D. Project Identification and Temporary Signs: Prepare Project identification and other signs in sizes indicated. Install signs where indicated to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.
  - 1. Prepare temporary signs to provide directional information to construction personnel.
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 1 Section for progress cleaning requirements.
  - 1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.

2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.

F. Housekeeping

1. Do not allow debris to accumulate on-site or within the building work areas. The contractor shall implement and provide the following cleaning services:
  - a. Debris shall be removed from the construction site and police exterior project site area on a weekly basis at a minimum to clean-up any wind-blown or excess construction materials or debris and dispose of in construction dumpsters to maintain a clean project site.
  - b. Debris shall be removed from interior of the buildings on a daily basis and disposed of in construction dumpsters.
  - c. Lower waste materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
  - d. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.
  - e. Once floor slabs are in place, walk-off mats shall be provided at all exterior entrances that are utilized by the workers. Mats shall be cleaned on a daily basis and change out mats on a monthly basis.
  - f. Areas without final floor finish in place shall be cleaned of debris and swept on a daily basis.
  - g. Areas that workers have access to with final floor finish in place shall be vacuumed on a daily basis. Carpeted major circulation paths shall be covered with poly film guard. Replace poly film guard when it develops holes or tears as they occur. Poly film guard to be replaced if left in place over 45 days. Horizontal and vertical surfaces shall be wiped down as construction dust has accumulated.
  - h. Where Contractor has periodic access to ancillary spaces occupied by Owner, thoroughly clean after each use, so as to not disrupt Owner's ongoing operations.
  - i. Failure to maintain a clean construction area may result in the Owner cleaning the site and back-charging the Contractor.
  - j. Remove waste materials, rubbish and debris from the site and legally dispose of at public or private dumping areas off the Owner's property.

G. Storage and Fabrication Sheds: None required, none provided.

H. Lifts and Hoists: Provide facilities for hoisting materials and personnel. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

### **3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION**

A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.



- B. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
  - 1. For safety barriers, sidewalk bridges, and similar uses, provide minimum **¾-inch** thick exterior plywood and appropriate 2x\_\_\_ framing for support.
- C. Food Consumption: Limit food and soft drink consumption to outside of the building.
- D. Building Environmental Protection:
  - 1. When operating equipment adjacent to occupied areas of the building:
    - a. Coordinate in advance temporary shutdown of building air supply systems.
    - b. Close all windows and cover other openings with poly securely taped whenever equipment or vehicle exhaust fumes are present.
    - c. Reactivate air supply systems when exhaust emitting activities have been completed.
- E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather-tight enclosure for building exterior.
- F. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses as required by the local fire marshal.

### **3.05 OPERATION, TERMINATION, AND REMOVAL**

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
  - 2. Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are the property of Contractor. Owner reserves right to take possession of Project identification signs.

2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section "Closeout Procedures."

**END OF SECTION 01 50 00**

**SECTION 01 73 29**  
**CUTTING AND PATCHING**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. Execute cutting, fitting or patching of Work, required to:
  - 1. Make several parts fit properly.
  - 2. Uncover Work to provide for installation of ill-timed Work.
  - 3. Remove and replace defective Work.
  - 4. Remove and replace Work not conforming to requirements of Contract Documents.
  - 5. Install specified Work in existing construction.
  - 6. Provide finished surfaces (to match adjacent existing surfaces) to fill in voids caused by removal or replacement of materials.
- B. Pay for costs caused by ill-timed or defective Work, or Work not conforming to Contract Documents, including costs for additional services of Architect/Engineer.

**PART 2: PRODUCTS**

**2.01 MATERIALS**

- A. Replacement of Work Removed: Comply with specifications for type of Work to be done.
- B. Placement of Work to fill Voids caused by Removal: Comply with latest industry standards for type of Work to be done.

**PART 3: EXECUTION**

**3.01 INSPECTION**

- A. Inspect existing conditions of Work, including elements subject to movement or damage during:
  - 1. Cutting and patching.
- B. After uncovering Work, inspect conditions affecting installation of new products.

**3.02 PREPARATION PRIOR TO CUTTING**

- A. Provide shoring, bracing and support as required to maintain structural integrity of Project.
- B. Provide protection for other portions of Project.
- C. Provide protection from elements.

### **3.03 PERFORMANCE**

- A. Neatly cut or demolish along straight, true, square lines.
- B. Execute cutting and demolition by methods which will prevent damage to other Work, and will provide proper surfaces to receive installation of repairs and new Work.
- C. Restore Work which has been cut or removed; install new products to provide complete Work in accordance with requirements of Contract Documents.
- D. Refinish entire surfaces as necessary to provide an even finish.
  - 1. Continuous Surfaces: To nearest intersections.
  - 2. Assembly: Entire refinishing.

**END OF SECTION 01 73 29**

## **SECTION 01 74 00**

### **FINAL CLEANING**

#### **PART 1: NOT USED**

#### **PART 2: PRODUCTS**

##### **2.01 CLEANING MATERIALS**

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

#### **PART 3: EXECUTION**

##### **3.01 FINAL CLEANING**

- A. Employ experienced workers or professional cleaners for final cleaning.
- B. At completion of construction and just prior to acceptance or occupancy, conduct a final inspection of exposed interior and exterior surfaces.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from interior and exterior surfaces.
- D. Repair, patch and touch up marred surfaces to match adjacent finishes.
- E. Broom clean paved surfaces; rake clean other surfaces of grounds.
- F. Remove debris and foreign material from roofs.
- G. Maintain cleaning until the Building or portion thereof, is occupied by the Owner.

**END OF SECTION 01 74 00**

## SECTION 01 77 00

### PROJECT CLOSEOUT

#### PART 1: GENERAL

##### 1.01 SUBSTANTIAL COMPLETION

- A. Refer to the General Conditions of the Contract for Construction.
- B. When the Project is determined by the Architect to be sufficiently complete to permit utilization for the intended use, the Architect will issue a Certificate of Substantial Completion.
- C. To receive the Certificate of Substantial Completion, perform the following:
  - 1. Submit to the Architect a notice declaring that work is believed to be substantially complete.
  - 2. Submit a list of work items that remain to be completed or corrected and the date this work will be accomplished.
  - 3. Obtain Occupancy certificate when required from Authority Having Jurisdiction.
- D. Architect will visit the project to evaluate the request for issuance of a Certificate of Substantial Completion.
  - 1. If the Architect concurs that the Project is substantially complete, the Architect will deliver a Certificate of Substantial Completion and a list of work items necessary for completion or correction prior to request for inspection for final completion.
  - 2. If the Architect determines that the work is not substantially complete, the Architect will deliver to the Contractor a written statement including reasons.
  - 3. Complete work on the items required by the Architect for achieving substantial completion and make additional written requests for issuance of a Certificate of Substantial Completion until the Architect determines that sufficient Work has been performed.

##### 1.02 FINAL INSPECTION

- A. When the Work is considered complete, submit written certification that:
  - 1. Contract Documents have been reviewed.
  - 2. Work has been completed and inspected by the Contractor for compliance with Contract Documents and is ready for final inspection.
  - 3. Building Permit Final has been submitted.
- B. Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should Architect consider that the Work is incomplete or defective:
  - 1. Architect will notify the Contractor in writing, listing the incomplete or defective work.
  - 2. Take immediate steps to remedy the stated deficiencies, and send a second written certification to Architect that the Work is complete.

3. Architect will reinspect the Work.
- D. When the Architect finds that the Work is acceptable under the Contract Documents, he will request preparation of closeout submittals.

### **1.03 REINSPECTION FEES**

- A. Should Architect perform reinspections due to failure of the Work to comply with the claims of status of completion made by the Contractor:
1. Owner will compensate Architect for such additional services.
  2. Owner will deduct the amount of such compensation from the final payment.

### **1.04 CLOSEOUT SUBMITTALS TO ARCHITECT**

- A. When the Architect has determined that the Construction Work is acceptable under the Contract Documents and the Contract fully performed, prepare and submit final Application for Payment to the Architect together with one original and one copy of the following:
1. A letter recommending acceptance of the Project and indicating all punch list items are complete.
  2. Contractor's Affidavit of Payment of Debts and Claims, AIA Document G706, with bonds for any exceptions.
  3. Consent of Surety to Final Payment on Consent of Surety Company to Final Payment, AIA Document G707.
  4. Contractors Affidavit of Release of Liens, AIA Document G706A.
  5. Project Record Documents, if required.
  6. Warranties and Bonds.

### **1.05 FINAL ADJUSTMENT OF ACCOUNTS**

- A. Submit a final statement of accounting to Architect.
- B. Statement shall reflect all adjustments to the Contract Sum:
1. The original Contract Sum.
  2. Additions and deductions resulting from:
    - a. Previous Change Orders
    - b. Allowances
    - c. Unit Prices
    - d. Deductions for uncorrected Work
    - e. Penalties and Bonuses
    - f. Deductions for liquidated damages
    - g. Deductions for reinspection payments and costs incurred by Architect or Architect's Consultants if project is not closed out within sixty (60) days of Substantial Completion.



- h. Other adjustments
- 3. Total Contract Sum, as adjusted.
- 4. Previous payments.
- 5. Sum remaining due.
- C. Architect will prepare a final Change Order, reflecting approved adjustments to the Contract Sums which were not previously made by Change Orders.

**1.06 FINAL APPLICATION FOR PAYMENT**

- A. Submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

**END OF SECTION 01 77 00**

## SECTION 01 78 23

### OPERATING, MAINTENANCE AND WARRANTY DATA

#### 1.01 GENERAL

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under the Contract.
- B. Prepare operating, maintenance and warranty data as specified in this Section and as referenced in other pertinent section of Project Manual.
- C. Instruct Owner's personnel in the maintenance of products and in the operation of equipment and systems.

#### 1.02 QUALITY ASSURANCE

- A. Preparation of data shall be done by personnel with the following qualifications:
  - 1. Trained and experienced in maintenance and operation of the described products.
  - 2. Completely familiar with requirements of this Section.
  - 3. Skilled as a technical writer to the extent required to communicate essential data.
  - 4. Skilled as a draftsman competent to prepare required drawings.

#### 1.03 FORM OF SUBMITTALS

- A. Prepare data in the form of an instructional manual for use by the Owner's personnel.
- B. Format shall conform to the following:
  - 1. Size: 8½" x 11".
  - 2. Paper: 20 pound minimum, white, for typed pages.
  - 3. Text: Manufacturer's printed data, or neatly typewritten.
  - 4. Drawings
    - a. Provide reinforced punched binder tab, bind in with text.
    - b. Fold larger drawings to the size of the text pages.
  - 5. Provide fly-leaf for each separate product, or each piece of operating equipment.
    - a. Provide typed description of product, and major component parts of equipment.
    - b. Provide indexed tabs.
  - 6. Cover: Identify each volume with typed or printed title "OPERATING, MAINTENANCE AND WARRANTY INSTRUCTIONS". List:
    - a. Title of Project
    - b. Identity of separate structure as applicable.

c. Identity of general subject matter covered in the manual.

C. Binders

1. Commercial quality three-ring binders with durable and cleanable plastic cover.
2. Maximum ring size: 2 inch.
3. When multiple binders are used, correlate the data into related consistent groupings.

D. Digital Format: Submit one PDF copy of the O&M Manual on a DVD Disk.

**1.04 CONTENT OF MANUAL**

A. Arrange neatly typewritten table of contents for each volume, in the following systematic order.

1. Contractor, name of responsible principal, address and telephone number.
2. A list of each product required to be included, indexed to the content of volume.
3. List, with each product, the name, address and telephone number of:
  - a. Contractor or installer.
  - b. Maintenance contractor, as appropriate.
  - c. Identify the area of responsibility of each.
  - d. Local source of supply for parts and replacement.
  - e. Include warranty information as specified.
4. Identify each product by product name and other identifying symbols such as set in Contract Documents.

B. Product Data

1. Include only those sheets which are pertinent to the specific product.
2. Annotate each sheet to:
  - a. Clearly identify the specific product or part installed.

C. Content, for moisture-protection and weather-exposed products:

1. Manufacturer's data, giving full information on products.
  - a. Applicable standards
  - b. Chemical composition
  - c. Details of installation
2. Instructions for inspection, maintenance and repair.

D. Additional requirements for maintenance data: The respective section of the Project Manual.

### **1.05 SUBMITTAL SCHEDULE**

- A. Submit one copy of completed data in final form within thirty days of substantial completion. Copy will be returned with comments.
- B. Submit two copies of approved data in final form ten (10) days after comments are received.

**END OF SECTION 01 78 23**

## SECTION 01 78 39

### PROJECT RECORD DOCUMENTS

#### 1.01 GENERAL

- A. Fully cooperate with the Architect to accomplish the following.
- B. These requirements supplement the requirements set forth in the General Conditions.
- C. Maintain at each site one record copy, as applicable, of:
  - 1. Drawings and Details with addenda marked in.
  - 2. Specifications with addenda marked in.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Architect/Engineer Supplemental Instructions, Proposal Requests or written instructions.
  - 6. Approved shop drawings, product data and samples.
  - 7. Field test records.

#### 1.02 MAINTENANCE OF RECORD DOCUMENTS AND SAMPLES

- A. Store record documents and samples in Contractor's field office in files and racks. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with the Construction Specifications Institute MASTERFORMAT.
- C. Maintain record documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make record documents and samples available at all times for inspection by Architect or Owner.

#### 1.03 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Continuously record information and changes.
- C. Drawings: Legibly mark to record actual construction.
  - 1. Depths of various elements of foundation in relation to finish first floor datum.
  - 2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - 3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
  - 4. Field changes of dimension and detail.

5. Changes made by Field Order or by Change Order.
  6. Details not on original contract drawings.
- D. Specifications and Addenda - Legibly mark each Section to record:
1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.
  2. Changes made by Field Order or by Change Order.
- E. Shop Drawings – Label each set by corresponding specification section. At the completion of the project, provide the Owner with one complete set, reviewed and stamped by architect, organized by specification section in the following formats:
1. Paper (various sizes) folded to 8 1/2" x 11" and boxed with project name and completion date clearly labeled on exterior.
  2. Scanned PDF copy on a compact disk, ordered by specification section.

#### **1.04 SUBMITTAL**

- A. Deliver Record Documents to the Owner at contract close-out.
- B. Accompany submittal with transmittal letter in duplicate, containing:
1. Date
  2. Project title
  3. Title and number of each Record Document

**END OF SECTION 01 78 39**



**SECTION 06 10 00**  
**ROUGH CARPENTRY**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Preservative treated wood construction for roof platform and ramp.
- B. Concealed wood blocking, nailers, and supports.

**1.02 SUBMITTALS**

- A. None.

**1.03 DELIVERY, STORAGE, AND HANDLING**

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

**PART 2 PRODUCTS**

**2.01 GENERAL REQUIREMENTS**

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
  - 1. Species as indicated below for each use.
  - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee ([www.alsc.org](http://www.alsc.org)) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

**2.02 DIMENSION LUMBER**

- A. Sizes: Nominal sizes 2 x 8, S4S.
- B. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
  - 1. Lumber: S4S, No. 2 or Standard Grade, MC19,
    - a. Lumber exposed to the weather shall be preservative treated as specified below.

**2.03 ACCESSORIES**

- A. Fasteners and Anchors:
  - 1. Nails and screws: Corrosion-resistant coated or stainless steel.
  - 2. Bolts: Hot dip galvanized, per ASTM A153.

**2.04 PRESERVATIVE TREATMENT**

- A. Preservative Pressure Treatment of Lumber Above Grade: AWP A U1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
  - 1. Kiln dry lumber after treatment to maximum moisture content of 19 percent.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

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

### **3.02 PLATFORM CONSTRUCTION**

- A. Construct platform of preservative treated lumber, with minimum 2" nominal framing and planks, and 4" x 4" vertical posts through-bolted at each corner. Construct ramp of 2" nominal planks perpendicular to traffic direction.
- B. Construct platform level, plumb, and square. Construct ramp with slope of 1" per foot. Secure ramp to platform.
- C. Ramp and platform shall be suitable for a 300 LB concentrated load at any point without excessive deflection.

### **3.03 BLOCKING, NAILERS, AND SUPPORTS**

- A. Provide incidental concealed wood blocking wherever required for attachment of other work.

### **3.04 ROOF-RELATED CARPENTRY**

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
- B. Provide wood curb extensions (Alternate) where indicated on the Drawings.
  - 1. Size and Location: As indicated on drawings.

### **3.05 TOLERANCES**

- A. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

### **3.06 CLEANING**

- A. Prevent sawdust and wood shavings from entering the storm drainage system.
- B. After erection and attachment of lumber, remove clay, mud, or other foreign materials from carpentry work
- C. Clean the work are, remove scraps, waste, sawdust and other debris from the work area and dispose properly off-site.

**END OF SECTION 06 10 00**

## SECTION 07 53 17

### EPDM BALLASTED RECOVER ROOFING

#### PART 1: GENERAL

##### 1.01 SUMMARY

###### A. Section includes:

1. Ballasted EPDM recover roofing system.
2. Insulation overlay, flashing, ballast, walkways, fasteners, adhesives, splicing cement, lap sealant, general purpose sealants, and all accessories and labor necessary for a complete, weathertight installation.
3. Removal and disposal of existing ballast
4. Removal and replacement of existing wet roof insulation on a unit price basis..
5. Removal and reinstallation of existing metal coping and counterflashings. Incidental sheet metal work, sealants and fastening for reinstallation.
6. Clean-up and restoration of damaged caused by the Work to the building and grounds, including without limitation, re-sodding of any damaged lawns.
7. Alternate Bid: extension of curb for raising designated mechanical equipment (refer to Section 01 23 00 Alternates for complete description.).

###### B. Related Sections:

1. Section 06 10 00 – Rough Carpentry: Curb extension (Alternate), wood platform and ramp construction.
2. Section 07 62 00 – Sheet Metal
3. Section 22 00 01 – Minor Plumbing Alterations: Replacement of roof drain strainers, other plumbing alterations.
4. Section 23 00 01 – Minor HVAC Alterations: Disconnection and reconnection of designated HVAC equipment.
5. Section 26 00 00 – Electrical Systems: Disconnection and reconnection of electrical equipment.

##### 1.02 QUALITY ASSURANCE

###### A. Installer: Currently approved, in writing, by manufacturer of system prior to awarding of roofing contract.

###### B. The roofing assembly shall be furnished and installed to resist the design uplift pressures calculated according to the the following (or the most stringent thereof):

1. International Building Code (IBC 2012 including County Amendments) and American Society of Civil Engineers (ASCE 7 – 2010)
  - a. Occupancy: Institutional I-3, Condition IV
  - b. Risk Category III
  - c. Exposure Category: C

- d. Design Wind velocity
    - 1)  $V_{ult} = 102$  MPH
    - 2)  $V_{asd} = 93$  MPH
  - e. Roof height < 20 ft above grade
2. ANSI/SPRI RP-4 "Wind Design Standard For Ballasted Single-Ply Roofing Systems"
- a. Side Laps and End Laps: Tape splices must be a minimum of 2-1/2" wide using 3" Factory-Applied Tape (FAT) OR a minimum of 5-1/2" wide using 6" Field-Applied SecurTAPE.
  - b. Splice Intersections: 'T'-Joints are to be flashed with a bead of lap sealant and 6"x6" minimum or Pressure-Sensitive 'T'-Joint Cover.
3. For wind uplift, use a safety factor of : 2.0

### 1.03 PRE-ROOFING CONFERENCE

- A. Hold roofing pre-construction conference at project site not more than one week prior to beginning roofing.
- B. Attendance is mandatory for roofing contractor, roofing foreman, Architect's representative, Owner's representative, sheet metal subcontractor, and anyone else responsible for items penetrating or in contact with the roof.
- C. Agenda:
  - 1. Review in detail Architect's specifications, roof plans and all roof and flashing details.
  - 2. If a manufacturer's specification is used, review and resolve all deviations or differences from Architect's specifications.
  - 3. If Underwriters Laboratories requirements are part of specification, review and understand these requirements, and resolve all conflicts between the UL requirements and Architect's and manufacturer's specifications.
  - 4. Review roof plans; for slope, deck type, drainage, membrane attachment, expansion joints flashing and details. Resolve all conflicts between what is considered good roofing practice and specifications.
  - 5. Review proposed roofing system and recommended work practices for its installation.
  - 6. Study all plans to determine whether different roof areas have different requirements.
  - 7. Designate which areas on site will be available for use as storage and working areas.
  - 8. Review procedure to be followed to provide proper protection of roof system during and after construction of roof.
  - 9. On occupied structures, review means and methods to be utilized to maintain structure weathertight during reroofing.

### 1.04 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
  - 1. Installer certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install specified roofing system.
  - 2. Manufacturer's recommended methods of installation and data to demonstrate compliance with specified requirements.

3. Product Data: Manufacturer's data sheets for all products.
  4. Calculations: Ballast calculations
  5. Shop Drawings:
    - a. Details of all laps, seams, terminations, fastening,, flashings, supports, protections, and other conditions.
    - b. Sheet metal work.
  6. Samples:
    - a. Ballast material, 1 lb bag.
    - b. Insulation materials, 1 piece, each type, approximately 6" x 6".
    - c. Sealant colors, metal colors 1 set, approximately 3" x 5" (actual materials).
  7. Reports: Report wet insulation, if any, including location of measurements and readings for all locations of existing insulation tested during the work.
  8. Informational Submittals: MSDS: submit for all materials.
- B. Warranty: At Substantial Completion, submit final warranty and letter from manufacturer stating warranty has been activated.
- C. Maintenance Data: Submit in accordance with Section 01 78 23.

#### **1.05 PRODUCT HANDLING, STORAGE AND DELIVERY**

- A. Deliver material including insulation, in manufacturer's protective containers, and comply with manufacturer's instructions for storage and handling.
- B. Deliver materials requiring fire resistance classification and/or flame spread rating with labels intact.
- C. All materials must be protected from damage during transit, handling, storage and installation.
- D. Store all materials on clean raised platforms with weather protective covering. Store membrane rolls flat on pallets.
- E. Adhesives and curable materials shall be stored at temperatures above 50°F, but not exceeding 80°F.
- F. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined in the MSDS published by the manufacturer.
- G. Do not store concentrated loads on roof deck.
- H. All materials determined to have been damaged shall be replaced with new material.

#### **1.06 JOB CONDITIONS**

- A. Examine substrate and conditions under which work is to be performed. Do not proceed with work until all unsatisfactory conditions have been corrected.
- B. Proceed with installation of roofing after substrate preparation has been performed.
- C. Wet Insulation: Investigate existing roof assembly for wet insulation insulation in areas indicated on the Drawings, and wherever trapped moisture is evident during the work. Submit written report to Architect. Request authorization for replacement of insulation when wet insulation is encountered.

- D. Weather conditions: Proceed with roofing work only when weather conditions comply with manufacturer's recommendations, and will permit materials to be applied and cured in accordance with those recommendations. Do not exceed temperature limitations recommended by roofing materials manufacturer.
1. Cold Weather Installation:
- a. The following are guidelines for EPDM installation when temperatures fall below 40 degrees Fahrenheit. Consult roofing manufacturer for more specific requirements.
    - 1) Store all adhesives, tapes and sealants at room temperatures (60 to 80 degrees F) prior to application.
    - 2) Stir adhesives thoroughly before and during application.
    - 3) Be conscious of changes in adhesive, such as thickening and return to heated environment.
    - 4) Use roofing sheet sizes with the least amount of factory folds.
    - 5) Do not apply adhesive when combinations of temperatures and humidity cause water condensation on the adhesive during the drying process.
    - 6) Prevent adhesive, tapes and sealant materials from freezing at all times.
- E. Only as much new roofing as can be made weather tight shall be installed each day. This includes all flashing work. All perimeters of work in progress shall be made watertight with positive seal at the end of each work day.
- F. Any substrate to receive new insulation, membrane or flashing shall be thoroughly dry. Existing wet materials must be removed prior to the application of the new membrane system. Should surface moisture occur on the substrate, the contractor shall provide adequate equipment to dry the substrate.
- G. Prior to and during application, the contractor shall ensure that all dirt, debris, and dust be removed from surfaces to be roofed for both new and reroofing substrates.
- H. Precautions shall be taken to prevent wind blow-off or wind damage during the course of the roofing application. This may necessitate additional securement and temporary ballast.
- I. The contractor shall verify and ensure that all roof drain lines are unblocked before starting work. If any drain blockages are found, they shall be reported in writing to the Architect.
- J. Temporary waterstops shall be installed at the end of each work day or if inclement weather conditions dictate. These temporary waterstops shall be removed at the start of the next work day and disposed of properly.
- K. Do not install the roofing membrane in direct contact with any product containing asphalt, coal tar pitch, creosote or other harmful materials. Consult the manufacturer for special installation requirements.
- L. Do not allow waste products containing petroleum, grease, acid, solvents, vegetable or mineral oil, animal oil, animal fat, coal tar pitch, etc. or direct steam venting to come into direct contact with the roofing membrane. Contact the manufacturer for recommendations if such conditions exist.
- M. All work shall be scheduled and executed without exposing interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all reasonable risks. Arrange work sequences to avoid use of newly constructed roofing for storage, walking surfaces and equipment movement. Contractor shall provide all necessary protection and barriers to segregate the work areas and prevent damage to adjacent areas. If excessive foot traffic over newly installed membrane is necessary, the Contractor shall provide plywood over a layer of EPS insulation to prevent damage.
- N. All existing materials designated to be removed shall be immediately containerized for lawful disposal.
- O. Any unusual or concealed conditions discovered during the course of the work shall be immediately reported in writing to the Architect.

- P. When a system is specified to meet an Underwriter's Laboratory (UL) rating, all materials used in the system must be properly labeled and/or approved for the particular rating/system.
- Q. Adhesives, caulking materials, primer wash and sealants contain ingredients which can be toxic and very flammable. Use these products only in fully ventilated areas. Avoid breathing vapor and do not use near heat, sparks, or open flames. Do not smoke while using these materials or when in areas near them.  
Safety Data Sheets (SDS) must be on location at all times during the transportation, storage and application of materials.
- R. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- S. When loading materials onto the roof, the Carlisle Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- T. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- U. Provide protection, such as 3/4" thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- V. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- W. New roofing shall be complete and weathertight at the end of the work day.
- X. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane. An overlay of ECO membrane must be adhered around units which have the potential to emit solvents, grease or oil.

#### **1.07 WARRANTY**

- A. Manufacturer's warranty (from a specified manufacturer) includes materials and workmanship to maintain roof in watertight condition.
- B. Provide single source, single responsibility.
- C. Provide 20 year No Dollar Limit total roofing system Warranty, from a specified manufacturer. Warranty shall commence on the date of Substantial Completion. Warranty shall include membrane, flashings, and all new roofing materials. Warranty shall include extended coverage for winds to 72 MPH.
- D. Submit in accordance to Section 01 78 23.

#### **1.08 SITE CONDITIONS**

- A. Building space directly under roof area covered by this specification will be utilized by on-going operations, including secure detention areas.
  - 1. Do not interrupt Owner operations.
- B. Access the roof from exterior only.

## **PART 2: PRODUCTS**

### **2.01 MANUFACTURER**

- A. Basis of Design is system manufactured by Carlisle-SynTec “Sure-Seal” Design B, ballasted, loose-laid EPDM roofing. Roofing system shall carry a UL Class A fire rating
- B. Equivalent systems of the following manufacturers are acceptable:
  - 1. Firestone Building Products, [www.firestonebpe.com](http://www.firestonebpe.com)
  - 2. Johns-Manville

### **2.02 ROOFING SYSTEM**

- A. Roofing and flashing membrane: 60 mil EPDM, non-reinforced, with Factory-Installed Tape sidelaps. Membrane shall conform to of ASTM D4637
- B. Special flashing membranes:
  - 1. Flashing and membrane overlay for grease-exposure areas around Kitchen Exhaust fans: 60 mil ECO, non-reinforced.
  - 2. Uncured elastoform flashing.
- C. Related Materials:
  - 1. Provide products for use with specified roofing system including, but not limited to tape primer/wash, weathered membrane cleaner, bonding cement, lap cement, seam tape, peel and stick tape, flashing, lap sealant, water cut-off mastic, 2-part pourable sealer, universal reinforced perimeter fastening strips, prefabricated flashing, pre-formed inside and outside corner flashings, termination bar, fasteners, and pipe boots, protection fabric.
- D. Insulation recover board: Insulfoam “R-Tech FF”, ½” thickness fan-fold extruded polystyrene insulation, conforming to ASTM C578 Type VIII, 1.25 PSF nominal density, with polymeric facers.
- E. Insulation for replacement of existing wet roof insulation: Polyisocyanurate with Long-Term Thermal Resistance Value of 5.7 per inch and faced with a universal fiber glass reinforced facer as approved by roofing manufacturer to maintain warranty. (ASTM C1289).
  - 1. Flat, thickness to match existing layers.
  - 2. Tapered, to match existing slope, approximately ½” per foot.
- F. Ballast: Rounded Water-Worn Gravel, nominal 1-1/2” rounded water-worn gravel which conforms to gradation #4 when sized in accordance with ASTM D 448 method of sizing.
- G. Walkways: Protective surfacing for roof traffic shall be concrete pavers, 18”x 18”nominal size, minimum 18 pounds per square weight, foot loose laid over a slip sheet of cured EPDM membrane or two layers of HP Protective Mat.\
- H. Fasteners: Manufacturer’s recommended fasteners for each application and condition of installation. Fasteners shall be corrosion resistant polymer coated, or stainless steel, conforming to requirements of Factory Mutual Approval Standard 4470.
  - 1. Plates: galvalume or galvanized steel; 2” da. 20 gauge for membrane securement, 3” dia 26 gauge for insulation securement.
- I. Termination bar: 1” x 0.098 extruded aluminum, punched 6” OC, with integral sealant ledge.



- J. Pipe and Conduit Supports: Eaton Dura-Block #DBE10 series with clamp for pipes 2" nominal size and smaller, DBR10 series roller supports for pipes over 2" nominal. Base of UV resistant rubber or EPDM with 14 gauge galvanized steel strut channel or roller assembly attached to top. Size as required to support pipes/conduits.

### **PART 3: EXECUTION**

#### **3.01 SUBSTRATE PREPARATION**

- A. Comply with membrane manufacturer's instructions for preparation of substrate to receive elastomeric sheet roofing. Clean substrate of dust, debris and other substances detrimental to EPDM roofing work.
- B. Do not begin the Work of this Section until all existing conditions have been accepted. Report unsatisfactory conditions to the Architect in writing.
- C. Conform to cold weather requirements as specified in Part 1 when conditions warrant.
- D. Remove existing ballast, dirt and debris from roof, and clean existing membrane. Provide temporary ballast of sand bags, tires, or other suitable materials to prevent blow-off during the work. Removal of existing ballast may be phased in conjunction with substrate preparation and installation of recover membrane.
- E. Cut through existing roof membrane in a grid 10' x 10', making 8' long cuts. Do not remove existing membrane completely.
- F. Inspect existing roof assembly for wet insulation. Report conditions to Architect.
1. Insulation Repair: Upon written authorization, remove and replace existing wet insulation with like new insulation on a unit price basis.

#### **3.02 INSULATION OVERLAY:**

- A. Install one layer of fan-fold roof recover insulation board in accordance with manufacturer's instructions, over entire existing roof membrane area. Offset insulation edges from cuts in existing membrane. Neatly cut and fit around penetrations and perimeter construction.
- B. Mechanically attach overlay insulation at with one fastener at each corner of the leading and trailing edges, and one fastener per 12 SF along long sides, staggered.

#### **3.03 MEMBRANE INSTALLATION**

- A. General:
1. The EPDM membrane shall be loose-laid over clean, dry, prepared existing roof membrane substrate with recover insulation overlay in place, in accordance with the approved shop drawings and manufacturers details and instructions. Allow membrane to relax approximately 30 minutes after placement, before beginning seaming and securement.
2. Form field seams with seam tape wherever possible. Comply with manufacturer's requirements for seam enhancements applicable to warranty duration. Seal all exposed seam edges.
3. Secure membrane at perimeter of each roof level, roof section, expansion joint, curb, skylight, interior wall, penthouse, etc, and at any angle change which exceeds 2" on one horizontal foot, and at other penetrations, in accordance with manufacturer's details and using manufacturer's recommended fasteners, metal seam plates and fastener spacings.
- a. Provide pressure-sensitive reinforced universal securement strip at roof perimeter.

B. Parapet flashings:

1. Remove existing sheet metal coping and cleats, salvage coping for re-use. Remove any loose or unsound existing flashings and termination bars. Extend new membrane up and over parapet, bonding flashing to substrate, and secure along exterior vertical edge of parapet, sealing membrane to parapet. Coordinate flashing installation with perimeter securement of roof membrane.
2. Re-install existing coping with new continuous cleat and concealed splice plates as specified in Section 07 62 00.

C. Base flashings at walls:

1. Remove and salvage existing counterflashing. Remove base flashing, termination bars and sealants. Flash perimeter and terminate in accordance with manufacturer's recommendations at existing termination height. Take care not to obstruct existing masonry weeps. Provide termination bar secured to existing wall substrate. Seal top edge to wall substrate.
2. Re-install existing counterflashing as specified in Section 07 62 00.

D. Membrane Flashings

1. Flash all perimeters and penetrations in accordance with manufacturer's instructions and the following.
2. Remove existing pipe flashings, pipe boots, pourable sealer pockets and other penetration flashings. Provide flashings at curbs, vent pipes, scuppers, inside/outside corners and membrane terminations with materials and adhesive as recommended by manufacturer.
  - a. At existing exhaust fans and other mechanical equipment which will remain in place, terminate new flashing as high as possible below lip of equipment, seal, and install slip-in metal counterflashing as specified in Section 07 62 00.
  - b. Use preformed corners where possible.
3. Where existing mechanical equipment is to be removed and curbs extended (Alternate) turn membrane flashing over top of extended curb and install metal receiver and counterflashing as specified in Section 07 62 00.
4. Provide pourable sealer pockets where existing small-diameter pipes and conduits penetrate roof membrane. Fill with 2-component pourable sealer compound.
5. Grease protection: Provide ECO membrane overlay and flashing at Kitchen exhaust fan, extending approximately 3' beyond curb perimeter, over new EPDM field membrane and extending to top of curb.

E. Ballast: Uniformly distribute ballast over completed roof membrane to achieve ballast weight required by design parameters, but not less than 12 PSF in the field and 15 PSF in the perimeter and corners.

**3.04 MISCELLANEOUS**

- A. Provide concrete paver walkways over protection material as recommended by roof manufacturer.
- B. Provide concrete pavers splashblocks under all downspouts and gutters draining onto a roof over protection material as recommended by roof manufacturer.
- C. Provide pipe supports for existing piping, spaced not more than 6' OC.

### **3.05 WATERSTOPS**

- A. Install temporary cutoffs around incomplete edges of roofing assembly at the end of each work day and when work must be postponed due to inclement weather. Straighten the insulation line using loosely laid pieces of insulation. Seal the EPDM membrane to the deck or existing membrane by performing the following procedure: Fold the edge of the roofing membrane back a minimum of 12". Clean the surface of the folded-back membrane with Tape Primer/Wash or other approved cleaning method. Apply a ¼" bead of Lap Caulk or Pourable Sealer on the cleaned area of the sheet. If the roofing membrane installation is to be delayed for 14 days or more, or if the substrate surface is rough, apply two ¼" beads of sealant. Remove the temporary seals completely when work resumes, cutting out the contaminated membrane. Remove all sealant, contaminated membrane, insulation fillers, etc. from the work area and properly dispose off-site.

### **3.06 CLEANUP**

- A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Remove and dispose of debris daily.
- B. Upon completion, remove any remaining debris, clean adjacent building surfaces of dirt, stains, sealant and adhesive residue, and other foreign materials resulting from the Work.
- C. Leave roof areas and site clean of debris and trash.

### **3.07 INSPECTION**

- A. Have an authorized representative of manufacturer supplying roofing system perform two in-progress inspections, as well as one final and one inspection one year after completion of job. Make corrections as noted in inspection reports.

**END OF SECTION 07 53 17**

## SECTION 07 62 00

### SHEET METAL COPING AND FLASHING

#### PART 1: GENERAL

##### 1.01 SUMMARY

A. Section includes:

1. Removal and reinstallation of existing sheet metal coping, flashing and counterflashing.
2. New Cleats, splice plates and fasteners for reinstallation of existing materials.
3. Provide new copings and counterflashings to match existing where existing material is damaged or unsuitable for re-use.
4. Sealants associated with sheet metal work.

##### 1.02 QUALITY ASSURANCE

- A. Referenced Standards: Recommended practices as set forth by the Sheet Metal and Air Conditioning Contractors Association, Inc. (SMACNA) in the "Architectural Sheet Metal Manual" are by reference made a part of this work.
- B. Perform Work in a manner that will maintain warranties on associated work specified in other sections.

##### 1.03 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
1. Shop Drawings: none.
  2. Samples: Actual metal samples of each color indicated.

#### PART 2: PRODUCTS

##### 2.01 GENERAL

- A. Provide all accessories, other items essential to completeness of installation, though not indicated, specified. All such items, unless otherwise indicated, specified: Of same kind of material as item to which applied. Nails, screws, bolts: Of types best suited for purpose intended, of composition that is compatible with metal to which it will contact.
- B. Type, locations of various kinds, gauges, thickness, finish of Sheet Metal to be used is specified hereinafter, however, where sheet metal is indicated and kind, type of metal is not definitely specified, noted, provide 24 ga. prefinished galvanized steel.

##### 2.02 MATERIALS

- A. Sheet Metal (Exposed)
1. Cleats for reinstallation of existing copings, and other concealed items: G-90 Galvanized steel, 22 gauge for use with existing steel materials or 0.080" mil. finish aluminum for use with existing aluminum materials.

2. Concealed splice plates and replacement coping and counterflashing material as needed: Match existing material and finish, using products of Petersen Aluminum (PacClad, Berridge, or Firestone Building Products (UNA-CLAD), subject to approval of color.
  - a. Minimum 24 ga. G-90 galvanized steel or 0.050" aluminum. prefinished with Kynar 500 or Hylar 5000 fluorocarbon coating.
3. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within 20 year warranty period.
  - a. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - 1) Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - 2) Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - 3) Cracking, checking, peeling, or failure of paint to adhere to bare metal.
4. Provide factory applied protective film. Do not remove until after fabrication and installation is complete.

### **2.03 MISCELLANEOUS MATERIALS**

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal, corrosion-resistant coated or stainless steel.
  1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal with factory-applied coating.
    - b. Blind Fasteners: Stainless-steel rivets suitable for metal being fastened.
  2. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329 or Series 300 stainless steel.
    - a. For securement of coping cleats to wood nailers, use screws or barbed, ring-shank, or spiral-shank nails with minimum penetration of 1-1/4".
    - b. For securement of coping cleats to masonry use self-treading corrosion-resistant coated masonry screws.
- C. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
- D. Butyl sealant, for coping joints and other metal-metal movement joints: Butyl sealant, conforming to ASTM C1311; Tremco Butyl Sealant or equal.
- E. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

### **2.04 FABRICATION**

- A. Accurately form work with brakes straight, true and sharp. Make plain surfaces free from waves and buckles. Match profiles exactly at connections. Bead or return exposed edges for strength and appearance. Provide ribs, cleats and reinforcement necessary to make the sections rigid and substantial. Allow for expansion and contraction.

- B. Overlap seams in the direction of flow. Finished width of lock seams and soldered lap seams: Not less than 1". Finished width of unsoldered lap seams: Not less than 3".
- C. Locate joints of sheet metal work exposed to view with respect to column centers, mullions, control joints or other architectural features as indicated on the Drawings or as directed by the Architect. Use concealed cover plates. Where appearance is not a factor, sheet metal work may be fabricated in 8 or 10-foot lengths.
- D. Generally, joints shall be single locked and soldered or double locked and sealed. Field joints shall be designed to permit expansion. Shop form corner pieces. Internal corners shall be lapped, riveted and sealed. External corners shall be lapped, riveted and sealed where exposed to view and locked and soldered where appearance is not a factor. Locate field joints not less than 12" nor more than 3 feet from actual corner.
- E. Fabricate sheet metal to be installed using concealed clips or other concealed fasteners where possible. Form joints and hem edges to conceal uncoated edges of metal. Handle prefinished sheet metal with care to prevent scratching or damaging surface.

### **PART 3: EXECUTION**

#### **1.01 WORKMANSHIP**

- A. Examine surfaces to be covered by sheet metal. Report any improper defective surfaces to Contractor, Architect in writing. Beginning of Sheet Metal Work over surfaces: Presumed as acceptance of surfaces as satisfactory by Sheet Metal Sub-contractor.
- B. Verify field dimensions prior to fabrication.
- C. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 3. For copings, provide continuous cleats, For counterflashings, space cleats not more than 12 inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
  - 4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
  - 5. Install butyl sealant in all metal-metal movement joints.
  - 6. Torch cutting of sheet metal flashing and trim is not permitted.
  - 7. Do not use graphite pencils to mark metal surfaces.
- D. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.
- E. Insure that all work is precisely done, true to line, and free from over bending, burning, deforming, stretching, distortion, waves and buckles.
- F. Seal under and around all fasteners which penetrate elastomeric roofing or flashing.

### **1.02 REPAIR**

- A. Repair or replace all damaged or defective work.

### **1.03 CLEANING**

- A. Clean exposed sheet metal of roofing materials, mortar, hand marks, other foreign materials.
- B. Remove protective covering from sheet metal.
- C. Touch up minor scratches in finish with matching paint, compatible with specified finish.

**END OF SECTION 07 62 00**



## SECTION 22 00 01

### MINOR PLUMBING ALTERATIONS

#### PART 1: GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Replace roof drain baskets in reroof area.
  - 2. Replacement of missing or damaged roof drain flashing clamps and hardware in reroof area.
  - 3. Testing of roof drains after completion of roofing work

##### 1.03 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in chases.
- E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.
- F. The following are industry abbreviations for plastic materials:
  - 1. ABS: Acrylonitrile-butadiene-styrene plastic.
  - 2. CPVC: Chlorinated polyvinyl chloride plastic.
  - 3. PE: Polyethylene plastic.
  - 4. PVC: Polyvinyl chloride plastic.
- G. The following are industry abbreviations for rubber materials:
  - 1. EPDM: Ethylene-propylene-diene terpolymer rubber.
  - 2. NBR: Acrylonitrile-butadiene rubber.

##### 1.04 QUALITY ASSURANCE

- A. Conform to Illinois Plumbing Code and local amendments for all material and workmanship.

- B. **Lead Containing Materials:** The existing building may contain lead-containing materials, including lead paint. It is the Contractor's responsibility to meet all governmental regulations when dealing with the disposing of lead containing materials.
- C. **Lead Free Requirements:** All plumbing pipes, fittings, valves, fixtures, and other components in systems providing water for human consumption shall be 'lead-free' in accordance with the "Reduction of Lead in Drinking Water Act" and the "Safe Drinking Water Act", where the term 'lead-free' is defined to mean – "not containing more than 0.2 percent lead when used with respect to solder and flux; and not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures."
  - 1. Lead-free products shall be compliant with the requirements of either NSF 61-G or NSF 372.
  - 2. Lead-free products shall bear a certified mark by a nationally accredited certification body.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.
- C. Storage of materials and equipment shall not impede the work of other contracts.
- D. Handling of equipment and products shall be according to manufacturers instructions and in compliance with the articles of their warranty.
- E. Protect products from weather, unless product is slated for exterior installation. If outdoor storage is necessary, support products off the ground or pavement in watertight enclosures.

#### **1.06 COORDINATION**

- A. Coordinate plumbing work with roofing work specified in Division 7.

#### **1.07 PRODUCT SUBSTITUTIONS**

- A. Equipment manufacturer's where indicated on the drawings are the basis for design. The contractor accepts responsibility for all design implications when providing approved equipment other than the design basis.

#### **1.08 INTERPRETATION OF PLANS**

- A. Drawings are diagrammatic only. They are intended to indicate size and/or capacity where stipulated, approximate location and/or direction, and approximate general arrangement of one phase of work to another, but not the exact detail of construction. All work shall be constructed from field measurements taken at the site. This shall include all rises, drops and offsets necessary to avoid structural members or equipment and materials installed by other trades. The contractor shall coordinate the ductwork and piping layout before construction. No additional costs will be allowed for piping and ductwork fabrications without field verification of available space. If it is found, before installation, that a more convenient, suitable or workable arrangement of any or all phases of construction would result by altering the arrangement indicated on the Drawings, the architect/engineer may require the contractor to change the arrangement of his work without additional cost to the owner.
- B. The drawings and specifications are intended to supplement each other. Any items shown on the drawings and not mentioned in the specifications, or vice versa, shall be executed the same as if mentioned and shown.
- C. The greatest quantity or more expensive work shall govern where there is a conflict noted anywhere on the drawings and/or specifications.

## **1.09 FIRE SAFETY PRECAUTIONS**

- A. The Contractors shall exercise extreme care to maintain and exercise adequate fire safety precautions throughout the work. This shall include providing sufficient fire fighting devices, watchmen, standby helpers or other precautions during construction, in use of temporary heat, welding, brazing, sweating, testing or other phases of work.
- B. At all times, access shall be maintained for fire department trucks to the building.
- C. All welding brazing, cutting and sweating operations performed in vicinity of or accessible to combustible materials shall be adequately protected to make certain that sparks or hot slag does not reach the combustible material and start a fire.
- D. All glass, glazed materials and other finish, in the vicinity of welding, brazing and cutting, shall be masked by the Contractor performing the welding work.
- E. When necessary to do cutting, welding, brazing, sweating and similar work in vicinity of wood, in shafts, or vicinity of any combustible material (and the combustible material cannot be removed), the materials shall be adequately protected with fire resistant blankets or similar approved coverings. In addition, a helper shall be stationed nearby with proper fire extinguishers (provided by the Contractor performing the work) to guard against sparks and fire.
- F. Whenever combustible materials have been exposed to sparks, molten metal, hot slag or splatter, a person shall be kept at the place of work to make sure the smoldering fires have not been started. Whenever cutting or welding operations are carried on in a vertical pipe shaft, a person to act as a fireguard shall be employed to examine all floors below the point of cutting or welding. This fireguard shall be kept on duty after completion of work to guard against fires and shall examine each level after this time, prior to leaving. There shall be no exceptions to this requirement and failure to comply will be construed as negligence.

## **PART 2: PRODUCTS**

### **2.02 MISCELANEOUS MATERIALS**

- A. Roof drain accessories: Extension rings, strainers, flashing clamps: Cast iron, matching existing drain bodies. Bolts and miscellaneous hardware: stainless steel or bronze, size and type to suit existing drain bodies.
- B. Flexible Transition Couplings for vent extensions above roof (nonpressure drainage piping):: ASTM C 1173 with elastomeric sleeve, ends same size as piping to be joined, and corrosion-resistant metal band on each end.

## **PART 3: EXECUTION**

### **3.01 EXAMINATION**

- A. Inspect existing conditions. Determine types and sizes of materials and equipment necessary to suit existing systems being altered and extended. Verify all dimensions by field measurements. Verify that all drainage and vent piping and specialties may be installed in accordance with pertinent codes and regulations, the original design, and the referenced standards.

### **3.02 ROOF DRAIN ALTERATIONS AND TESTING**

- A. Replace missing and damaged items at existing roof drains:
  - 1. Strainers
  - 2. Flashing clamps
  - 3. Bolts and miscellaneous hardware
  - 4. Under-deck clamps

- B. Upon completion of roofing work, test roof drains.
1. Set plug in drains 4' – 6' downstream from roof drain.
  2. Flood roof to a minimum of 1" above roof drain rim.
  3. Wait 30 minutes, inspect interior for leaks.
  4. Correct all leaks and re-test until leak-free.

**END OF SECTION 22 00 01**

## SECTION 23 00 01

### MINOR HVAC ALTERATIONS

#### PART 1: GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Alternate Bid: Disconnection, remove, reinstall, reconnect, start-up and test designated existing roof-mounted HVAC equipment and services to allow raising of curbs under Section 06 10 00 and flashing under 07 53 17.
- B. Related Work:
  - 1. Disconnection and reconnection of electrical power connections: Section 26 00 01.

##### 1.03 DELIVERY, STORAGE, AND HANDLING

- A. Storage of materials and equipment shall not impede the work of other contracts.
- B. Handling of equipment and products shall be according to manufacturer's instructions and incompliance of their warranty.
- C. Protect products from weather, unless the product is slated for exterior installation. If outdoor support is necessary, support products off the ground or pavement in water tight enclosures.

##### 1.04 COORDINATION

- A. Coordinate equipment disconnection and reconnection with work specified under Divisions 7 and 26.
- B. Interruption of Existing Natural-Gas Service: Do not interrupt natural-gas service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide purging and startup of natural-gas supply according to requirements indicated:
  - 1. Notify Owner no fewer than two days in advance of proposed interruption of natural-gas service.

##### 1.05 INTERPRETATION OF PLANS

- A. Drawings are diagrammatic only. They are intended to indicate size and/or capacity where stipulated, approximate location and/or direction, and approximate general arrangement of one phase of work to another, but not the exact detail of construction. All work shall be constructed from field measurements taken at the site. This shall include all rises, drops and offsets necessary to avoid structural members or equipment and materials installed by other trades. The contractor shall coordinate the ductwork and piping layout before construction. No additional costs will be allowed for piping and ductwork fabrications without field verification of available space. If it is found, before installation, that a more convenient, suitable or workable arrangement of any or all phases of construction would result by altering the arrangement indicated on the Drawings, the architect/engineer may require the contractor to change the arrangement of his work without additional cost to the owner.

- B. The drawings and specifications are intended to supplement each other. Any items shown on the drawings and not mentioned in the specifications, or vice versa, shall be executed the same as if mentioned and shown.
- C. The greatest quantity or more expensive work shall govern where there is a conflict noted anywhere on the drawings and/or specifications.

#### **1.06 FIRE SAFETY PRECAUTIONS**

- A. Exercise extreme care to maintain and exercise adequate fire safety precautions throughout the work. This shall include providing sufficient fire fighting devices, watchmen, standby helpers or other precautions during construction, in use of temporary heat, welding, brazing, sweating, testing or other phases of work.
- B. At all times, access shall be maintained for fire department trucks to the building.
- C. All welding brazing, cutting and sweating operations performed in vicinity of or accessible to combustible materials shall be adequately protected to make certain that sparks or hot slag does not reach the combustible material and start a fire.
- D. All roofing, insulation, and finished surfaces in the vicinity of welding, brazing and cutting, shall be masked by the Contractor performing the welding work.
- D. When necessary to do cutting, welding, brazing, sweating and similar work in vicinity of wood, in shafts, or vicinity of any combustible material (and the combustible material cannot be removed), the materials shall be adequately protected with fire resistant blankets or similar approved coverings. In addition, a helper shall be stationed nearby with proper fire extinguishers (provided by the Contractor performing the work) to guard against sparks and fire.
- E. Whenever combustible materials have been exposed to sparks, molten metal, hot slag or splatter, a person shall be kept at the place of work to make sure the smoldering fires have not been started. Whenever cutting or welding operations are carried on in a vertical pipe shaft, a person to act as a fireguard shall be employed to examine all floors below the point of cutting or welding. This fireguard shall be kept on duty after completion of work to guard against fires and shall examine each level after this time, prior to leaving. There shall be no exceptions to this requirement and failure to comply will be construed as negligence.

#### **1.07 TESTING, ADJUSTING AND BALANCING**

- A. The Contractor shall be certain that all systems are ready for proper operation prior to testing and adjusting.
- B. Test HVAC equipment before disconnection and after reconnection. Test the following:
  - 1. Refrigerant pressures
  - 2. Fan RPM
  - 3. Motor voltage and current
  - 4. Burner operation.
  - 5. Submit report of before and after conditions, note discrepancies.

#### **1.08 SUBMITTALS**

- A. Test Reports.
- B. Start-Up and Inspection reports.

## **1.09 PERMITS, LICENSES AND FEES**

- A. The Contractor shall secure all permits and licenses, both temporary and permanent required for their work. The Contractor shall pay all fees and expenses required for the permits and licenses.
  - 1. The Contractor shall make all arrangements with each utility company and pay all service charges associated with new services or modifications to existing services.
  - 2. The Contractor shall request inspections as required by regulating agencies and/or regulations. The Contractor shall pay all charges for inspections.
  - 3. Contractor shall furnish the Owner with a certificate of final inspection and approval by enforcement authorities.
  - 4. Comply with requirements of Division 00.

## **PART 2: PRODUCTS**

### **2.01 MATERIALS**

- A. Use materials matching original construction.
- B. Gas connections:
  - 1. Steel Pipe: ASTM A 53/A 53M, black steel, Schedule 40, Type E or S, Grade B.
    - a. Malleable-Iron Threaded Fittings: ASME B16.3, Class 150, standard pattern.
    - b. Wrought-Steel Welding Fittings: ASTM A 234/A 234M for butt welding and socket welding.
    - c. Unions: ASME B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends.
    - d. Forged-Steel Flanges and Flanged Fittings: ASME B16.5, minimum Class 150, including bolts, nuts, and gaskets of the following material group, end connections, and facings:
      - 1) Material Group: 1.1.
      - 2) End Connections: Threaded or butt welding to match pipe.
      - 3) Lapped Face: Not permitted underground.
      - 4) Gasket Materials: ASME B16.20, metallic, flat, asbestos free, aluminum o-rings, and spiral-wound metal gaskets.
      - 5) Bolts and Nuts: ASME B18.2.1, carbon steel aboveground and stainless steel underground.
  - 2. Joints:
    - a. 2" and smaller: threaded, joint compound suitable for natural gas.
    - b. Larger than 2": welded. Welding filler metals, comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

## **PART 3: EXECUTION**

### **3.01 HVAC DEMOLITION AND CUTTING AND PATCHING**

- A. Perform and provide all cutting and patching of as required for the execution of the work. No structural members shall be cut without the written approval of the Engineer/Architect and any such cutting shall be done in a manner satisfactory to the Engineer/Architect.
- B. All patching of or repair of damage to work in place shall be done in a neat and workmanlike manner with the approval of the Engineer/Architect. The Contractor whose operations require cutting of work in place, or who cause damage which entails repairs of such work, shall employ mechanics of the particular trade whose work must be cut or which is damaged, and shall pay all costs of such patching or repair.

- C. Contractor shall be responsible for any additional cutting, patching, mounting/installation modifications, etc., not called out on the drawings but required for the successful completion of the job. This would include additional work required due to any existing jobsite condition (i.e., the construction of walls, ceiling spaces, clearances, available voltages, mounting requirements, existing equipment coordination, hazardous materials, etc) that the contractor had an opportunity to determine in the pre-bid walk-through and could have reasonably determined before the bid by visual inspection or by asking the Engineer or Owner. No additional money shall be awarded for additional work incurred caused by existing jobsite conditions which could have been verified by the contractor prior to bid. In addition, no additional money shall be awarded for failure to properly coordinate with other trades.
- D. Refer to Division 01 Section "Cutting and Patching" for general requirements and procedures.
- E. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
- F. If pipe, insulation, or equipment to remain or be reused is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.
- G. Lead Containing Materials: The existing building may contain lead-containing materials, including lead paint. It is the Contractor's responsibility to meet all governmental regulations when dealing with the disposing of lead containing materials.

### **3.02 EQUIPMENT AND SYSTEM INSTALLATION - COMMON REQUIREMENTS**

- A. Perform alterations to existing equipment in conformance with original manufacturer's instructions and recommendations. If specific recommendations for the applicable equipment are not available:
  - 1. Follow original manufacturer's most recent recommendations for similar equipment, if available.
  - 2. In the absence of recommendations from original manufacturer, follow industry best practices. Notify Engineer/Architect in advance and submit proposed procedures for review prior to implementation.
- B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
- C. For replacement and extension of existing materials use new materials equal to the original construction.
  - 1. If existing unsatisfactory conditions are encountered during the work, notify Engineer/Architect in writing, provide information on conditions observed and recommendation for correction.
- D. Gas system alterations:
  - 1. Piping joint construction
    - a. Ream ends of pipes and tubes and remove burrs
    - b. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
    - c. Threaded Joints:
      - 1) Thread pipe with tapered pipe threads complying with ASME B1.20.1.
      - 2) Cut threads full and clean using sharp dies.
      - 3) Ream threaded pipe ends to remove burrs and restore full inside diameter of pipe.
      - 4) Apply appropriate tape or thread compound to external pipe threads unless dryseal threading is specified.
      - 5) Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
    - d. Welded Joints:
      - 1) Construct joints according to AWS D10.12/D10.12M, using qualified processes and welding operators.
      - 2) Bevel plain ends of steel pipe.



- 3) Patch factory-applied protective coating as recommended by manufacturer at field welds and where damage to coating occurs during construction.
  - 4) Flanged Joints: Install gasket material, size, type, and thickness appropriate for natural-gas service. Install gasket concentrically positioned.
2. Comply with National Fuel Gas Code, and the requirements of the local Authorities Having Jurisdiction purging of and alterations to natural-gas piping.
  3. Inspect natural-gas system, verify that natural-gas utilization devices are turned off in piping section affected. Close valves to limit area of disruption to the minimum.

### **3.03 DISCONNECTION AND RECONNECTION OF EXISTING ROOF-MOUNTED HVAC EQUIPMENT**

- A. Disconnect, remove, reconnect, start-up and test designated existing roof-mounted HVAC equipment to allow raising and flashing of curbs.
- B. Evacuate and reclaim refrigerant. Disconnect and temporarily cap refrigerant lines to prevent contamination.
- C. Disconnect ductwork. Salvage connection materials for reuse.
- D. Disconnect control wiring. Protect wiring for reuse.
- E. Disconnect gas piping and cap temporarily to prevent contamination.
- F. Disconnect anchorage to curbs or structure. Salvage anchors for reuse.
- G. Supervise hoisting of unit specified under Section 07 01 50.
- H. After curbs are extended, supervise reinstallation.
- I. Anchor unit securely to curb. Existing anchors may be reused if in satisfactory condition and suitable for new application.
- J. Reconnect all disconnected ductwork, control wiring, gas piping and refrigerant lines, extend existing connections as necessary to suit elevated location.
- K. Re-charge system with appropriate refrigerant charge.
- L. Verify electrical power connections have been completed under Section 26 00 01.
- M. Start-up, test and adjust unit for proper operation. Document refrigerant pressures and fan RPM, motor voltage and current, burner operation, and submit start-up report.
- N. Test gas systems affected by alterations. Submit test and inspection reports.

**END OF SECTION 23 00 01**

## **SECTION 26 00 01**

### **ELECTRICAL SYSTEMS**

#### **PART 1 - GENERAL**

##### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### **1.02 GENERAL**

- A. The general conditions, special conditions and general requirements apply to all work under this division.

##### **1.03 SUMMARY**

- A. This Section includes the following:
  - 1. Alternate bid: Disconnection and reconnection of electrical conduits and wiring serving designated HVAC equipment to allow raising equipment under Section 23 00 01 to accommodate roofing work.
- B. This project shall consist of furnishing all labor, materials, services, and equipment necessary for and incidental to the completion of the hereinafter described electrical work as required by the Plans and Specifications.

##### **1.04 CODES, FEES AND PERMITS**

- A. The complete electrical installation shall conform to all of the requirements and recommendations of the following codes and standards.
  - 1. National Electrical Code, 2005 and local amendments.
  - 2. National Board of Fire Underwriters
  - 3. National Electrical Manufacturer's Association
  - 4. Underwriter's Laboratories
  - 5. N.E.C.A. Standard of Installation
  - 6. ADA Guidelines.
- B. All fees, permits, licenses, etc. necessary to complete the electrical work shall be paid by the Contractor.

##### **1.05 DRAWINGS AND SPECIFICATIONS**

- A. These documents are intended to supplement each other such that information contained in either shall be executed in like manner. The drawings are in general diagrammatic and not intended to show exact locations. Contractor shall coordinate installation with other documents and on-site conditions.
- B. If a question exists regarding the exact intention of the documents, instructions shall be obtained from the architect/engineer before proceeding. If instructions cannot be obtained due to time or communication limitations, the greater quantity, superior quality, or condition most favorable to the owner shall be assumed.
- C. Contractors shall be responsible to review all drawings, including, but not limited to architectural, mechanical, structural, civil and landscaping for portions of their work to be included in this contractor's scope of work. No extras or credits will be allowed due to a contractor's failure to review and coordinate with all other disciplines.

## **1.06 WORKMANSHIP**

- A. All work shall be performed in a neat manner by experienced and skilled professionals in the electrical trade; only quality work will be accepted.
- B. Install equipment to facilitate service, maintenance and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future access with minimum interference to other items in the vicinity.
- C. Any materials or equipment damaged during construction shall be either replaced or repaired to a new condition as determined by the Architect. Any repaired materials or equipment shall retain original warranty.

## **1.07 MATERIALS AND EQUIPMENT**

- A. All materials and equipment shall be as specified and indicated by the Plans. Items specified with the option of equals may be substituted for at the Contractor's option. However, Contractor may be required to verify equal status and final approval is by the engineer.
- B. All installed materials and equipment shall be new and free of defects.
- C. Protect materials and equipment stored on site from weather and physical damage.

## **1.08 COORDINATION**

- A. Contractor shall be responsible for total site layout and coordination of the electrical work with other trades and site conditions. Minor revisions may be required to meet these requirements, however, shall not be implemented without approval. Work schedules shall be dictated by that of other trades and the project schedule. Cutting, patching, trenching, etc., as required for the completion of the electrical work shall be the responsibility of this Contractor.

## **1.09 GUARANTEE**

- A. All work shall be unconditionally guaranteed for a period of one year from final payment to be free from any defects due to faulty workmanship or materials. Contractor shall replace, repair, or alter at their expense, any items brought to his attention during this period.

## **1.10 SUBMITTALS**

- A. Shop drawings: None.

## **PART 2 - PRODUCTS**

### **2.01 RACEWAYS**

- A. All conductors shall be enclosed in a concealed raceway system, unless indicated otherwise.
  - 1. Conceal conduit within finished walls, ceilings, and floors, unless otherwise indicated.
  - 2. Minimum Raceway Size: 1/2-inch (16-mm) trade size. 3/4-inch for home runs.
  - 3. Install neat and orderly, perpendicular or parallel with building construction.
  - 4. Support with non-corrosive metallic straps, clamps or hangers.
  - 5. Coordinate routing with other trades. Conduit location is secondary to mechanical and general construction elements of building.
  - 6. Conduits penetrating walls, etc., shall be sealed to maintain the integrity of the assembly.

- B. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
1. Exposed Conduit: Rigid steel conduit or IMC.
  2. Concealed Conduit, Aboveground: Rigid steel conduit or IMC.
  3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
  4. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
- C. Comply with the following indoor applications, unless otherwise indicated:
1. Exposed, Not Subject to Physical Damage: EMT.
  2. Exposed, Not Subject to Severe Physical Damage: EMT
  3. Exposed and Subject to Severe Physical Damage: Rigid steel conduit or IMC. Includes raceways in the following locations:
  4. Concealed in Ceilings and Interior Walls and Partitions: EMT.
  5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
  6. Damp or Wet Locations: Rigid steel conduit or IMC.
  7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, stainless steel in damp or wet locations.
- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Threaded rigid steel conduit fittings.
  2. EMT: Steel set-screw type.
- E. Junction and Outlet Boxes: Boxes shall be of galvanized code gauge steel as manufactured by Appleton, Steel City, Raco or equal. Boxes shall comply with the following requirements:
1. Minimum size 4" square or octagon by 1 1/2" deep.
  2. Plaster or extension rings as required.
  3. Masonry type where required.
  4. Pull and junction boxes sized per code.
  5. Supported independent of conduit system.
  6. Offset back-to-back boxes a minimum of 6".
  7. Type FS for surface exterior applications.

## 2.02 CONDUCTORS

- A. Copper Conductors: UL listed. The conductors shall be annealed (soft) copper having a conductivity of 98% pure copper, 600 volt minimum rating and meet or exceed all applicable ASTM, NEMA, UL, ICEA specifications. The specific types shall be as specified herein, and sized as shown or required, unless otherwise noted. Conductors 8 AWG and larger shall be stranded per N.E.C. No conductor smaller than 12 AWG shall be used unless specifically noted. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
1. 600V Feeder Conductors - Type THHN/THWN.
  2. Branch Circuit and Control Conductors - Type THHN/THWN.
  3. 600V Feeder, Branch Circuit and Control Conductors Installed Underground or Outdoors in Conduit - Type XHHW.
  4. Control Cable (Low-Voltage) – 600V, 16-gauge, plenum rated heavy-duty multi-conductor type, with PVC/nylon insulation over each conductor, color coded, and PVC overall jacket.
  5. Cord Drops and Portable Appliance Connections – Type SO, hard service cord with stainless-steel, wire-mesh, strain-relief device at terminations to suit application.

## **2.03 GROUNDING AND BONDING**

- A. Grounding shall be in accordance with NEC Article 250 and UL 467.
- B. Grounding and bonding shall be installed in a neat and workmanlike manner. The NEIS Standard Practices for Good Workmanship in Electrical Contracting NECA 1-2006 is hereby adopted to define such workmanship and the installation of conductors and cables.
- C. Equipment grounding conductors shall be installed in all conduits (including feeders and branch circuits), flexible raceway runs, and armor-clad runs.
- D. Conductors:
  - 1. Install stranded conductors for No. 8 AWG and larger for grounding and bonding of exterior exposed cable tray assemblies.
  - 2. Install stranded conductors for No. 12 AWG and larger for other applications, unless otherwise indicated.
- E. Connectors:
  - 1. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
  - 2. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted-pressure-type, with at least two bolts
  - 3. Pipe Connectors: Clamp-type, sized for pipe.
  - 4. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- F. Bonding to equipment subject to vibration or movement: Install so vibration is not transmitted to rigidly mounted equipment.

## **PART 3 - EXECUTION**

### **3.01 ELECTRICAL DEMOLITION, CUTTING AND PATCHING**

- A. Perform and provide all cutting and patching of building materials as required for the installation of the work. No structural members shall be cut without the written approval of the Engineer/Architect and any such cutting shall be done in a manner satisfactory to the Engineer/Architect.
- B. All patching of or repair of damage to work in place shall be done in a neat and workmanlike manner with the approval of the Engineer/Architect. The Contractor whose operations require cutting of work in place, or who cause damage which entails repairs of such work, shall employ mechanics of the particular trade whose work must be cut or which is damaged, and shall pay all costs of such patching or repair.
- C. All holes through pre-cast concrete shall be drilled. Coordinate all pre-cast locations on the architectural and structural drawings.
- D. Contractor shall be responsible for any additional cutting, patching, mounting/installation modifications, etc., not called out on the drawings but required for the successful completion of the job. This would include additional work required due to any existing jobsite condition (i.e., the construction of walls, ceiling spaces, clearances, available voltages, mounting requirements, existing equipment coordination, hazardous materials, etc) that the contractor had an opportunity to determine in the pre-bid walk-through and could have reasonably determined before the bid by visual inspection or by asking the Engineer or Owner. No additional money shall be awarded for additional work incurred caused by existing jobsite conditions which could have been verified by the contractor prior to bid. In addition, no additional money shall be awarded for failure to properly coordinate with other trades.

- E. Electrical Contractor shall perform all demolition and removal of the existing electrical installation as required to complete construction revisions as indicated on the drawings. Coordinate phasing requirements with construction sequence schedule. Coordinate demolition with other trades to prevent disruption to the Owner and minimize the downtime.
- F. All existing materials and equipment shall be carefully removed and handled with care to minimize damage, stored on the site and shall be reused unless indicated otherwise. This existing equipment shall be thoroughly cleaned prior to reinstating. All other existing materials or debris resulting from demolition operations shall become the property of the Contractor, removed from the premises, and legally disposed off-site.
- G. Existing outlets (lighting fixtures, receptacles, switches, signal system devices, etc.) shall remain unless otherwise indicated. Existing work altered during the course of remodeling shall be placed in safe operating condition and shall be restored to satisfactory operating condition.
- H. Conduit shall be concealed within the existing building construction wherever possible, or where otherwise indicated on the drawings. In all existing and remodeled areas having suspended ceilings, conduit shall be concealed above ceilings.
- I. Existing conductors shall be disconnected and removed wherever existing circuits are abandoned, and shall become the property of the Contractor.
- J. Where conditions other than those previously stated occur, this Contractor shall consult with the Engineer prior to performing any work to insure that method of correction will be satisfactory.

### **3.02 MECHANICAL EQUIPMENT CONNECTIONS**

- A. Disconnect existing roof-mounted HVAC equipment to allow equipment curbs to be raised under Section 23 00 01.
- B. Reconnect HVAC equipment when equipment has been re-installed. Replace or extend existing raceways and conductors if necessary to serve new location. Replace existing exterior-exposed LFMC.
- C. Test equipment, verify proper motor rotation and equipment operation. Coordinate with HVAC work under Section 23 00 01.

### **3.03 GROUNDING AND BONDING**

- A. Equipment Grounding and Bonding Conductor Application: Comply with NEC Article 250 for types, sizes, and quantities of equipment grounding conductors, except where specific types, larger sizes, or more conductors than required by NEC are indicated.
- B. Bond all sections of exterior exposed cable tray assemblies. Splice bonding conductor to main ground conductor above roof at point of entry to building and at existing antenna mast welded connection.
- C. Conductors:
  - 1. Cable Tray: Provide No. 8 stranded bare conductors for exterior grounding and bonding of cable tray on roof.
  - 2. Other applications: Install solid conductor for No. 14 AWG and smaller, and stranded conductors for No. 12 AWG and larger, unless otherwise indicated.

D. Conductor Terminations and Connections:

1. General: Make connections in such a manner as to minimize possibility of galvanic action or electrolysis. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
2. Provide electroplated or hot-tin-coated materials to assure high conductivity.
3. Make connections with clean bare metal at points of contact.
4. Make copper to steel connections with stainless steel separators and mechanical clamps.
5. Coat and seal connections involving dissimilar metals with inert material such as red lead paint to prevent future penetration of moisture to contact surfaces.
6. Exothermic Welded Connections: Use for connections to structural steel and for underground connections except those at test wells. Provide at connections to ground rods and plate electrodes. Comply with manufacturer's written recommendations and instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.
7. Terminate insulated equipment grounding conductors for feeders and branch circuits with pressure-type grounding lugs. Where metallic raceways terminate at metallic housings without mechanical and electrical connection to the housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to the ground bus in the housing. Bond electrically non-continuous conduits at both entrances and exits with grounding bushings and bare grounding conductors.
8. Tighten screws and bolts for grounding and bonding connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values for connectors and bolts. Where manufacturer's torque requirements are not indicated, tighten connections to comply with torque tightening values specified in UL 486A and UL 486B.
9. Compression-Type Connections: Use hydraulic compression tools to provide the correct circumferential pressure for compression connectors. Use tools and dies recommended by the manufacturer of the connectors. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on the ground conductor.
10. Moisture Protection: Where insulated ground conductors are connected to ground rods or ground buses, insulate the entire area of the connection and seal against moisture penetration of the insulation and cable.
11. Equipment Grounding - Wire Terminations: For No. 12 AWG and larger, use pressure-type grounding lugs; for No. 14 AWG and smaller grounding conductors, terminate with winged pressure-type connectors.
12. Test resistance of completed grounding and bonding and systems and submit test results.

**3.04 SPECIAL INSTRUCTIONS TO THE CONTRACTOR**

- A. This is a CRITICAL FACILITY. Do not turn-off or shut-down any equipment or circuits without written authorization from the Owner, even when indicated to be part of the Work. Owner will provide written authorization for shutdown times. Review specific shutdown and start-up procedures and timelines with Owner prior to performing the action.
- B. Upon completion of construction test all newly installed and altered systems and components for functionality.
- C. Locations and routing of all conduits, wiring, cables, homeruns, etc. shall be determined by the Electrical Contractor, and shall be done in a neat and orderly fashion.

**END OF SECTION 26 00 01**