



# **Installation of Bellwood Emergency Back-Up Generators Trade Package Manual**

3/11/2026

**Owner**

Village of Bellwood  
3200 Washington Blvd.  
Bellmont, IL

**Construction Manager**

CORE Construction Services of Illinois, Inc.  
801 Warrenville Road  
Suite 55  
Lisle, IL 60532

**Architect**

Arcadis  
225 W Wacker Drive Suite 2015  
Chicago, IL 60606

# CORE CONSTRUCTION

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# CORE CONSTRUCTION

01 79 00      Demonstration and Training

Prepared by: Nicholas Monreal  
CORE Construction  
Date: 3/11/2026

**SECTION 00 11 13 – ADVERTISEMENT TO BID**

**1.1 PROJECT INFORMATION**

- A. Notice to Bidders: Qualified bidders may submit bids for the project as described in this Document. Submit bids according to section 00 21 13 Instruction to Bidders.
- B. Project Identification: Village of Bellwood Community Generators
  - 1. Architect Project Number 30293396
  - 2. Project Location: Hyde Park Sanitary Lift Station  
Railroad Stormwater Pump Station  
Eastern And St. Charles Pump Station
- C. Owner:
  - 1. Owner's Representative: Joey Monheit/Design/ Construction Director
    - a. 3055 Plymouth Road Suite 205 Ann Arbo, MI 48105
- D. Architect:
  - 1. Project Architect: J. Gawronski  
Arcadis  
225 W Wacker Drive Suite 2015 Chicago
- E. Construction Manager:
  - 1. Construction Manager: CORE Construction Services of Illinois, Inc.  
801 Warrenville Road, Suite 55  
Lisle, Illinois 60532  
(309) 404-4700
- F. Project Description: CORE Construction is the Construction Manager for the above referenced project.
- G. We are requesting finalized pricing based on the final bid documents.
- H. Project consists of the Installation of (3) three Generators for (3) three different locatoions. Railroad Stormwater Pump Station includes: Generator Pad, Security Fence, Security Area Lighting, Power Cabinet, Removable Bollards and installation of previously procured Generator. Hyde Park Sanitary Lift Station includes extension of existing fence, Power Cabinet, and Portable Generator Anchorage Pier. Eastern and St. Charles Pump Station: Installation of prevesiously procured Generator, Generator Pad, Switchboard installation, and removal and replacement of existing concrete.
- I. Construction Contract: Bids will be received for the following Work:
  - 1. Multiple Contract Project consisting of the following prime contracts:
    - a. Bid Package 01 – GENERATOR INSTALLATION AND SITE WORK
  - 2. Refer to section 00 24 13 SCOPE OF BIDS for additional information

**1.2 BID SUBMITTAL AND OPENING**

- A. The Owner will receive sealed lump sum bids until the bid time and date at the location given below. The Owner will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered as follows:
  - 1. **Bid Date: 4/6/2026**
  - 2. **Bid Time: 2:00 PM., EST**
  - 3. **Attention to: Joey Monheit/Design/Construction Director**
  - 4. **Submission via buildingconnected.com**
- B. Bids will be thereafter publicly opened and read aloud in a virtual setting utilizing Microsoft Teams
- C. Bids for the prime bid package should be submitted via buildingconnected.com by the time noted above.. The submitted documentation includes the bid form, bid security and unit price form. Bids submitted with letters of clarification or amendments to the bid form shall be subject to rejection. Sub-trades or suppliers to the prime packages noted above shall submit pricing to the prime bidders. A list of prime bidders shall be made available upon request.
- D. Bids for each bid package should include all scope of work outlined for that bid package in section 00 24 13 Scope of Bids.

**1.3 BID SECURITY**

- A. Bid security shall be submitted with each bid in the amount of 10% of the bid amount. No bids may be withdrawn for a period of 60 days after the opening of bids.
- B. The bid security shall be addressed to the Owner as follows  
CIS Solutions  
3055 Plymouth Road Suite 205 Ann Arbor, MI 48105

**1.4 PREBID MEETING**

- A. Prebid Meeting: Refer to section 00 25 13 – Prebid Meetings
- B. The site may be visited by appointment on any weekday between 8:00 A.M. and 4:00 P.M. until the day of bid opening.

**1.5 RFI'S AND SUBSTITUTION REQUESTS**

- A. All Requests for Information (RFI's) and Submittals shall be sent via email to:  
  
Name: Nicholas Monreal  
Firm: CORE Construction  
Address: 801 Warrenville Road, Suite 55, Lisle, IL 60532  
Phone: 708-404-1083  
Email: nicholasmonreal@coreconstruction.com
- B. All RFI's and Substitution request responses shall be made available to all plan holders via an RFI and Substitution response log which will be distributed via addenda.

- C. Substitution requests shall utilize the substitution request form included in section 00 43 25 Substitution Request Form and provide all request technical information required by section 00 43 25. Substitution requests sent without approved form shall not be considered.
- D. Substitution requests shall comply with requirements of section 01 25 00 – Substitution Procedures

**1.6 DOCUMENTS**

- A. Online Procurement and Contracting Documents: Obtain access after 3/11/2026, by contacting:

Nicholas Monreal  
CORE Construction Services of Illinois, Inc.  
801 Warrenville Road, Suite 55 Lisle, IL 60532  
Phone: 708-404-1083  
Email: nicholasmonreal@coreconstruction.com

Online access to bid documents via BuildingConnected will be provided to any bidders or suppliers who request access.

**1.7 TIME OF COMPLETION**

- A. Successful bidder shall begin the Work upon receipt of a Notice to Proceed and shall complete the Work per the requirements in Specification Section 00 31 13 - Project Schedule.

**1.8 STIPULATIONS**

- A. Owner reserves the right to reject any and all Bids or portion(s) of bid, to waive any irregularities in the Bidding, and award contract in the Owner’s best interest.
- B. Selected bidder is required to provide a satisfactory performance bond and labor & material payment bond covering the full performance of the contract, irrevocable letter of credit or other security. The costs of the bonds are to be included in each Bidding Multiple Prime Contractor’s bid proposal.
- C. The successful bidder shall be required to comply with all provisions of the acts of the General Assembly of the State of Illinois related to Discrimination, Sexual Harassment, Alcohol Use, Preference to Illinois Workmen, Fair Employment Practices Commission, and Equal Employment Opportunity.
  - 1. Bidder will permit reasonable access for the Owner or Owner’s agent to all reports and records as are necessary for the purpose of ascertaining compliance with fair employment practices.
  - 2. In the event of the Contractor's or Vendor's noncompliance with the nondiscrimination clauses of this contract, or refusal to furnish information or permit his books, records, and accounts to be inspected, within twenty days from date requested, this contract may be cancelled, terminated, or suspended in whole or in part and contractor may be declared ineligible for further contracts until proof of compliance is approved.
  - 3. Contractor or Vendor further agrees that these clauses (A through E) on discrimination and equal opportunity practices in all matters of employment and training for employment will be incorporated by Contractor in all contracts or agreements entered into with suppliers of materials for services, contractors, and subcontractors, and all labor organizations, furnishing skilled, unskilled and craft union skilled labor, or who may perform any such labor or services in connection with this contract.
  - 4. To certify compliance with clauses A through E above, Contractor has completed and submits as a part of this Contract Employment Analysis and Certificate of Fair Employment Compliance.
- D. Compliance with AIS and BABA Requirements: All bidders must ensure full compliance with American Iron and Steel (AIS) and Build America, Buy America (BABA) provisions as required under the Master Agreement and ARPA funding guidelines. AIS mandates that all iron and steel products used in this project

be produced entirely in the United States, including all manufacturing processes from melting through coating. BABA expands these requirements to include iron, steel, manufactured products, and construction materials, with manufactured products meeting domestic content thresholds (currently 55% by cost). Contractors are responsible for verifying compliance, maintaining documentation, and certifying that all equipment, components, and materials supplied under this contract meet these standards. Failure to comply may result in bid rejection or loss of funding.

**1.9 NOTIFICATION**

- A. This Advertisement for Bids document is issued by CORE Construction Services of Illinois, Inc.

**END OF SECTION 00 11 13**

**SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS****1.1 DEFINITIONS**

- A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement 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 Construction Manager, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, and all Addenda issued prior to the execution of the Contract.
- B. Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contractor Documents are applicable to the Bidding Documents.
- C. The Subcontractor is a person or entity submitting a bid for a bid package, performing construction under contracts administered by the Construction Manager and shall be an assigned Subcontractor to the Construction Manager. Subcontractor shall be synonymous with "Bidder" and "Multiple Prime Contractor". The Construction Manager may reassign the Contracts to the Owner if required by law or may refuse assignment if a legal or contractual conflict prevents Construction manager from accepting assignment of any Contract. In such case, the Construction Manager shall manage said Contract in the same manner as Contracts assigned to the Construction Manager. By submitting a bid, Contractors agree they will either accept assignment to the Construction Manager or enter into a contract directly with the Owner (managed by the Construction Manager) using an AIA agreement written for this purpose.
- D. The Construction Manager (CM) is the entity holding the Bid Package agreements with the Bidding Subcontractors and is synonymous with "Contractor".
- E. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract, which modifies or interprets the Bidding Documents by additions, deletions, clarifications, or corrections.
- F. 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.
- G. 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.
- H. 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 changes in the Work, as described in the Bidding Documents.
- I. 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 and complying with the provisions of section 01 22 00 Unit Prices.
- J. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
- K. 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.
- L. A sub-tier contractor is a person or entity performing work under a Subcontractor.

- M. The term “responsible bidder” for construction contracts means a bidder who meets at least all of the following applicable criteria and submits evidence of such compliance:
- a. All applicable laws pre-requisite to doing business in Illinois.
  - b. Evidence of compliance with
    - i. Federal employer tax identification number or social security number (for individuals).
    - ii. Provisions of Section 2000(3) of Chapter 21, Title 42 of the United States Code and Federal Executive Order No. 11246 as amended by Executive Order No. 11375 (known as the Equal Opportunity Employer provisions.)
    - iii. Certificates of insurance indication the following coverage’s:
      1. Refer 00 50 00b Sample Subcontract Attachment E - Insurance Conditions for required coverage.
    - iv. Compliance with all provisions of the Illinois Prevailing Wage Act, including wages medical and hospitalization insurance, and retirement for those trades as covered in the “Act”.
    - v. Participation in apprenticeship and training programs approved and registered with the United States Department of Labor’s Bureau of Apprenticeship and Training.

## 1.2 BIDDER'S REPRESENTATIONS

- A. Submission of Bid represents that Bidder:
- a. 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.
  - b. The Bid is made in compliance with the Bidding Documents.
  - c. 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.
  - d. The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.
  - e. The bidder has included all Provisions contained in Sections 00 and 01 of the Project Manual.

## 1.3 BIDDING DOCUMENTS

- A. Copies of Bidding Documents will be issued to prospective bidders and will be available for examination at the Architect's office and other offices for the use of prospective sub-bidders, as set forth in 00 11 13 Advertisement to Bid

## 1.4 INTERPRETATIONS/CORRECTIONS

- A. 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.
- B. Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least 72 hours prior to the date for receipt of Bids.
- C. 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.

**1.5 SUBSTITUTIONS**

- A. Substitution requests shall be submitted in compliance with 00 11 13 Advertisement to Bid
- B. Substitution requests shall be submitted in compliance with Section 01 25 00 – Substitution Procedure

**1.6 ADDENDA**

- A. Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.
- B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- C. Addenda will be issued no later than 48 hours prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes the postponement of the date for receipt of Bids.
- D. 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.

**1.7 BIDDING PROCEDURE**

- A. All blanks on the bid form shall be legibly executed in a non-erasable medium.
- B. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- C. Interlineations, alterations, and erasures must be initialed by the signer of the Bid.
- D. All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."
- E. Each copy of the Bid shall state the legal name of the Bidder and the nature of the 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. Bid forms submitted without a signature shall be considered an incomplete bid.
- F. Bids shall be delivered by the specified time and at the specified location noted in section 00 11 13 Advertisement to Bid.

**1.8 BID SECURITY**

- A. Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in section 00 11 13 Advertisement to Bid. The Bidder pledges to enter into a Contract with the Contractor on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to enter into a contract.

- B. 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.
- C. The Owner will have the right to retain the bid security of 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.

## 1.9 BIDDER REQUIREMENTS

- A. This project is tax-exempt.
- B. Oracle Payment Management will be utilized by the Contractor for Subcontractor and Supplier billing. **Bidders are required to include applicable costs for Textura fees per section 00 22 00c Oracle-Textura.** Bidders acknowledges the use of the Textura Payment System for all billing and payment processes in accordance with information to be provided by the Contractor. The bidder is responsible for all fees associated with billing and payment applications submitted through the Textura Payment System. Training sessions will be made available upon the written request from the bidder.
- C. The Contractor will be utilizing PROCORE, a web-based software, on this project to maintain project documents including, Contract Documents, RFI's, Submittals, an electronic set of As-Built Documents and other project documents.
  - a. The Subcontractor shall electronically furnish all as-built documents, appropriate warranties and guarantee information, equipment manuals, operations, and maintenance manuals as a condition to and prior to final completion and final payment. A Project within Procore has been created for this project and access will be given to all Subcontractors. All construction documents will be accessible to Subcontractors through the Procore web-based application. It shall be the responsibility of the Subcontractor to electronically as-built the documents in the field in lieu of providing hard copies. It shall also be the responsibility of the Subcontractor to coordinate its work with all other trades, suppliers, and Subcontractors on the Project and to obtain any and all shop drawings, product data, or other documents necessary for the coordination of Subcontractor's work with that of other Subcontractor and suppliers working on the Project. The Contractor shall provide adequate training and support on the Procore web-based application to all Subcontractors.
- D. Bidders shall include all licenses, permits, fees, and inspections required for its Scope of Work unless explicitly stated otherwise. Subcontractor shall coordinate all required inspections associated with Subcontractor's Scope of Work. A 24-hour notice must be provided to the Contractor prior to scheduling any inspections. The Contractor may require a preconstruction quality assurance meeting with the Subcontractor prior to the Subcontractor commencing work on the project. Subcontractor shall work with the contractor to coordinate mock-ups, in-situ mock-ups, and inspections necessary to establish and verify adherence with Owner and designer quality standards and expectations. In the event that the Subcontractor believes the Contract Documents relating to the Subcontractor's Scope of Work are not in accordance with applicable laws, ordinances, codes, or similar regulations, Subcontractor shall promptly report the same to the Contractor and Design Professionals
- E. Refer to section 00 50 00b Sample Subcontract Attachment E - Insurance Conditions for insurance requirements. Subcontractors to include insurance costs as specified with bid.

- F. Refer to section 00 50 00b Sample Subcontract Attachment B - Insurance Conditions for additional subcontractor scope requirements. Subcontractors all costs associated with scope specified in attachment B.
- G. Bidders shall review the site logistics plan and comply with all requirements shown.
- H. Bidder shall review the schedule and provide all labor material and equipment as necessary to comply with the specified dates including acceleration by means of off-time or overtime labor.

**1.10 SUBMISSION OF BIDS**

- A. 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 bid packager 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.
- B. 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.
- C. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- D. Oral, telephonic, telegraphic, facsimile, or other electronically transmitted bids will not be considered.
- E. Bids received with letters of omission, clarification, or forms other than the bid form included with these bid documents shall not be considered. Refer to Section 00 24 00 Bid Packages for additional information.

**1.11 MODIFICATION OR WITHDRAWAL OF BID**

- A. A Bid may not be modified, withdrawn, or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.
- B. 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.
- C. 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.
- D. Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.
- E. Negligence on the part of the bidder in preparing a bid confers no right of withdrawal or modification of a bid after it has been opened.

**1.12 CONSIDERATION OF BIDS**

A. OPENING OF BIDS

1. 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.

B. REJECTION OF BIDS

1. 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. A Bid not accompanied by the 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.
2. Bids received after the due date and time specified shall be returned unopened to the bidder.

**1.13 ACCEPTANCE OF BID (AWARD)**

- A. 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.
- B. The Owner shall have the right to waive informalities and irregularities in a Bid received.
- C. The Owner shall have the right to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests and select the Contractor which is most appropriate to the job requirements.
- B. The Owner shall have the right to accept Alternates 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 and Alternates accepted.

**1.14 POST-BID INFORMATION**

A. SUBMITTALS

1. The Bidder shall, within 48 hours, or as stipulated in the Bidding Documents, after bid opening, furnish to the Owner through the Contractor in writing the following items:
  - a. Confirmation that the bidder has included all specified allowances in section 00 24 00 bid packages for their respective bid package in their base bid price. Failure to include specified allowances shall constitute an incomplete bid which is subject to rejection.
  - b. clarification of any unclear or irregular items on the bidders submitted bid form.
  - c. Lead times for long lead items provided by that bid package.
  - d. Cost breakouts for accounting or other purposes as requested by the Construction Manager
  - e. A designation of the Work to be performed with the Bidder's own forces.
  - f. A listing of any sub-tier subcontractors the bidder is utilizing under their bid package.
  - g. A listing of the names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
  - h. A listing of the 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.
  - i. The information above shall be furnished utilizing the form provided in 00 60 00 Trade Partner Disclosure and Confirmation Form

2. The Bidder will be required to establish to the satisfaction of the Contractor, Architect, and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
3. Prior to the execution of the Contract, the Contractor will notify the Bidder in writing if either the Contractor, Owner, or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Contractor, 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.
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.
5. **Failure to furnish requested items within time-frame specified may result in the bidders proposal being rejected/considered incomplete.**

#### **1.15 PERFORMANCE BOND AND PAYMENT BOND**

- A. The Subcontractor shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.
- B. The furnishing of such bonds is hereby stipulated in the Bidding Documents, and the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before the execution of the Subcontract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.
- C. If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.
- D. Bonds shall name the Contractor as the principal obligee and the Owner as an additional obligee. This may be accomplished through the use of a Dual Obligee Rider on the Payment and Performance bond.

#### **1.16 TIME OF DELIVERY AND FORM OF BONDS**

- A. The Bidder shall deliver the required bonds to the Construction Manager for review no later than three days following the date of execution of the Contract. Reviewed Bonds shall then be delivered to the Owner. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner and Construction Manager that such bonds will be furnished and delivered in accordance with this Section.
- B. Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond, and Payment Bond. Bonds shall be written in the amount of the Contract Sum.
- C. The bonds shall be dated on or after the date of the Contract.
- E. The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

#### **1.17 FORM OF AGREEMENT BETWEEN CONSTRUCTION MANAGER AND SUBCONTRACTOR**

- A. Upon receipt of bids and award of Bid Packages as described above, the Owner shall assign Bid Package work to the Construction Manager which will hold the contracts with the Bidding Subcontractor. The Agreement for the Work will be the Construction Manager's Subcontract Agreement, a sample copy of which is contained in the Bid Documents (refer to 00 22 00a and 00 22 00b).
- B. The Construction Manager may reassign the Contracts to the Owner if required by law or may refuse assignment if a legal or contractual conflict prevents Construction manager from accepting assignment of any Contract. In such case, the Construction Manager shall manage said Contract in the same manner as Contracts assigned to the Construction Manager. By submitting a bid, Contractors agree they will either accept assignment to the Construction Manager or enter into a contract directly with the Owner (managed by the Construction Manager) using an AIA agreement written for this purpose.
- B. Construction Manager's Subcontract Agreement for each awarded Bid Package shall be sent via email to the awarded bidder's authorized signer who has signed the bid form. Subcontract Agreements shall be sent and executed via DocuSign electronic signature software. DocuSign is a web-based digital transaction management service providing an electronic exchange of contract documents and digital signatures.

**1.18 AVAILABLE DOCUMENTS**

- A. The following documents shall be made available to bidders upon request and are incorporated into the bidding documents by reference:
  - a. CORE Construction Official Safety Manual
  - b. Sample Subcontract Agreement
    - i. Attachment C - Enumeration of Documents- blank form
    - ii. Attachment D - Baseline Project Schedule
    - iii. 000\_Additional Documents– Blank Forms
      - 1. Project Info Sheet – Blank Form
      - 2. Billing Process for major Vendors – Blank Form
      - 3. Subtier Info – Blank Form
      - 4. W-9 Form – Blank Form
      - 5. Sub Info Sheet – Blank Form

**END OF SECTION 00 21 13**

## SUBCONTRACT PERFORMANCE BOND

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**KNOW ALL BY THESE PRESENTS**, that \_\_\_\_\_ hereinafter called the "Principal", as Principal, and \_\_\_\_\_ a corporation organized and existing under the laws of the State of \_\_\_\_\_ (hereinafter called the "Surety"), as Surety, are held and firmly bound unto \_\_\_\_\_ with principal offices located at \_\_\_\_\_ (hereinafter called as "Obligee"), in the Penal Sum of \_\_\_\_\_ DOLLARS \$(\_\_\_\_\_), for the payment of which sum, well and truly to be made, the said Principal and Surety bind themselves, and their respective heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, Obligee has been awarded a contract (hereinafter called the "Prime Contract"), by \_\_\_\_\_ for \_\_\_\_\_ ("Project"); and

**WHEREAS**, the Principal has entered into a written Subcontract with Obligee, dated \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ ("Subcontract Price") to perform, as Subcontractor, certain portions of the work in connection with said Prime Contract, consisting generally of \_\_\_\_\_ ("Subcontractor Work"), which Subcontract is hereby referred to and made a part hereof.

**NOW THEREFORE**, Principal and Surety are held and firmly bound to Obligee for the payment of the Penal Sum and agree to bind themselves and their respective heirs, administrators, executors, successors and permitted assigns, jointly and severally, firmly as follows:

1. If Principal shall promptly and faithfully perform the Agreement within the time provided therein, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

2. Surety agrees that no change, extension of time, alteration, addition, deletion, amendment, or other modification of the Subcontract, or in the work to be performed, or in the specifications, or in the plans, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such changes, extensions of time, alterations, additions, omissions, and other modifications. In addition, the penal sum of this Bond shall automatically be adjusted to reflect the additive or deductive amounts of all change orders issued to the Subcontract.

3. Whenever Obligee has declared Principal to be in default of the Agreement, Surety shall, within fifteen (15) calendar days of receipt of Obligee's declaration of default (Investigation Period), respond as follows, failure of which shall be a material breach of this Bond:

- a. Determine the amount for which Surety may be liable and tender the amount to Obligee; or,
- b. Notify Obligee that Surety has elected to complete the Work itself or through its agents or contractors in accordance with the terms and conditions of the Agreement, in a manner acceptable to Obligee, and thereafter promptly begin the Work; or,
- c. Obtain bids or offers from contractors acceptable to Obligee for completing the remaining Subcontract Work in accordance with the terms and conditions of the Subcontract, and upon determination by Obligee and the Surety jointly of the lowest responsible bidder or offeror, arranging for a subcontract between such completion contractor and Obligee, and arranging for new performance and payment bonds for such completion contractor from a surety acceptable to Obligee. Upon acceptance of the completion contractor by Obligee, the Surety shall pay to Obligee the difference between the cost to complete the Subcontract Work and the Subcontract balance, including the cost of obtaining new performance and payment bonds; or
- d. Enter into a takeover agreement with Contractor to undertake Subcontract Work completion; or

- e. Arrange to provide financial and/or other assistance to the Principal (Financing) to assist the Principal with timely completion of the Agreement. This option is subject to Obligees' concurrence, which concurrence may be withheld in Obligees' sole discretion.
- f. Agreeing to pay, within twenty (20) days of receipt of invoice, amounts due Obligees under the terms of the Subcontract for correcting or completing the performance of the Subcontract Work or arranging for such correction or completion.

During the period of Surety's investigation allowed in this Paragraph, Obligees shall have the right, but not the obligation, to perform and correct Principal's Subcontract Work. Any costs incurred by Obligees shall be deducted from the balance of the Subcontract Price as defined in Paragraph 5. Except as provided in Paragraph 6 below, Surety's liability under this Bond shall not exceed, in the aggregate, the Penal Sum of this Bond, as adjusted pursuant to Paragraph 2 above.

4. If Surety remedies the default pursuant to Subparagraph 3(b) or 3(c), then Surety shall also be obligated to pay, within thirty (30) days of receipt of invoice, amounts due to Obligees under the Subcontract for correcting or performing the Subcontract Work after the declaration of default and prior to Surety remedying the default.

5. Upon commencement of the remedy of the default as set forth in Paragraph 3, Obligees shall make available as the Subcontract Work progresses and as amounts become due and owing under the terms of the Subcontract, the Balance of the Subcontract Price. The term "Balance of the Subcontract Price" as used in this Bond, shall mean the Subcontract Price, including any amendments thereto executed as of the date of termination, less the amount paid by Obligees to Principal in accordance with the terms of the Subcontract, and less any other amounts for which Principal or Surety is liable to Obligees under this Bond.

6. If Surety fails to remedy the Principal's default in accordance with Paragraph 3, then Surety shall pay Obligees all attorneys' fees and costs incurred by Obligees in enforcing Surety's obligations hereunder, and such obligation shall be in addition to and not subject to the Penal Sum of this Bond, notwithstanding the limitation set forth in Subparagraph 3.

7. In the event of a dispute between Surety and Obligees related to the Subcontract or to this Bond, the dispute shall be resolved by the dispute resolution procedures set forth in the Subcontract. Surety shall be bound by any decision or ruling issued in any proceedings relating to the Subcontract involving Obligees and Principal concerning the Principal's obligations under the Subcontract.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their several seals this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, the name and corporate seal of each corporate party being affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**SUBCONTRACTOR AS PRINCIPAL**

Company:

By:  
Its:

**SURETY**

Company:

By:  
Its: Attorney in Fact

Business Address:  
*(Impress Corporate Seal)*

Bond # \_\_\_\_\_

# SUBCONTRACT PAYMENT BOND

**KNOW ALL BY THESE PRESENTS**, that \_\_\_\_\_ hereinafter called the "Principal", as Principal, and \_\_\_\_\_ a corporation organized and existing under the laws of the State of \_\_\_\_\_ hereinafter called the "Surety", as Surety, are held and firmly bound unto \_\_\_\_\_ with principal offices located at \_\_\_\_\_ (hereinafter called "Obligee"), in the Penal Sum of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_), for the payment of which sum, well and truly to be made, the said Principal and Surety bind themselves, and their respective heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, Obligee has been awarded a contract (hereinafter called the "Prime Contract"), by \_\_\_\_\_ for \_\_\_\_\_ ("Project"); and

**WHEREAS**, the Principal has entered into a written Subcontract with Obligee, dated \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ ("Subcontract Price") to perform, as Subcontractor, certain portions of the work in connection with said Prime Contract, consisting generally of \_\_\_\_\_ ("Subcontractor Work"), which Subcontract is hereby referred to and made a part hereof.

**NOW, THEREFORE**, the condition of this obligation is such that, if Principal shall promptly make payment to all Claimants as hereinafter defined, for all labor, material and equipment used or reasonably required for use in the performance of the Subcontract, and any and all change orders or modifications issued to said Subcontract, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions:

1. The purpose of this Bond is, in part, to indemnify and defend Obligee and its surety (if any) for any claim to and/or for payments made by Obligee or its surety, whether due to a lien or payment bond claim or otherwise, to any Claimant, as defined herein, upon the failure of Principal or Surety to make such payment. Such defense and indemnification shall include all legal expenses necessarily incurred by Obligee or its surety in connection with such payments, which legal expenses shall be due and owing to Obligee in addition to, and not as a part of, the Penal Sum of this Bond.
2. Surety agrees that no change, extension of time, alteration, addition, omission, or other modification of the terms of either the said Subcontract or the said Prime Contract, or both, or in the said work to be performed, or in the specifications, or in the plans, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such changes, extensions of time, alterations, additions, omissions, and other modifications. In addition, the Penal Sum of this Bond shall automatically be adjusted to reflect the additive or deductive amounts of all change orders issued to the Subcontract.
3. A Claimant is defined as one supplying labor, material and/or equipment, used or reasonably required for use in the performance of the Subcontract, labor, material and equipment being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment directly applicable to the Subcontract. Although possessing the right to file a lien or statutory bond claim is not required to meet the definition of Claimant under this Bond, Claimant is further defined as anyone possessing a right to file a lien or statutory bond claim on the Project arising out of the Subcontractor's work.
4. The above-named Principal and Surety hereby jointly and severally agree that every Claimant as herein defined, who has not been paid amounts due for labor, material or equipment used or reasonably required for use in the performance of the Subcontract may recover such amounts from Surety under this Bond. Surety and not Obligee shall be liable for the payment of any costs or expenses that may be incurred by a Claimant in recovering amounts due under this Bond.
5. The Penal Sum of this bond shall be reduced by and to the extent of any permitted payment or payments made by Surety hereunder.
6. In the event of a dispute between Surety and Obligee related to the Subcontract or this Bond, the dispute shall be resolved by the dispute resolution procedures set forth in the Subcontract. Surety shall be bound by any decision or ruling issued in any proceedings relating to the Subcontract involving Obligee and Principal concerning the Principal's obligations under the Subcontract.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, the name and corporate seal of each corporate party being affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

\_\_\_\_\_  
(Principal) (Seal)

\_\_\_\_\_  
(Business Address)

Witness:

By \_\_\_\_\_  
Or Secretary's Attest

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Surety) (Seal)

\_\_\_\_\_  
(Business Address)

Witness:

By \_\_\_\_\_  
Or Secretary's Attest

\_\_\_\_\_  
(Signature and Title)

Bond # \_\_\_\_\_

Agent/Broker Name, Address, Phone & Email:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION 00 25 13 - PREBID MEETINGS****1.1 PREBID MEETING**

A. A Pre-bid Meeting will not be conducted by the Contractor or the Architect, as the site is available for review by bidders at any time during the bidding period.

**B. Attendance:**

1. A site visit is recommended but not required

**C. Separate Contracts:**

1. Work by Owner.
  - a. Not Applicable
2. Work of Other Contracts.
  - a. Procurement of generators

**D. Project Description:**

- a. CORE Construction is the Construction Manager for the above referenced project.
- b. We are requesting finalized pricing based on the final bid documents.
- c. Project includes Installation of Procured Generators
  - 1) Work to fencing, generator pads, security light, bollards, and power cabinet

**Contacts**

2. CORE Construction Contact:
  - a. Nicholas Monreal  
Cell: 708-404-1083  
Email: [nicholasmonreal@coreconstruction.com](mailto:nicholasmonreal@coreconstruction.com)

**E. Communication**

1. Project documents and correspondence will be sent through the Building Connected site.
2. All drawings, specifications, trade manuals and addenda will be released via the Building Connected site.
3. An account is required but is free to set up.  
Contact Nicholas Monreal ([nicholasmonreal@coreconstruction.com](mailto:nicholasmonreal@coreconstruction.com)) if there are any issues accessing files or information on Building Connected.
4. Send all RFIs and Substitution Request direct to CORE Construction
  - a. Email: [nicholasmonreal@coreconstruction.com](mailto:nicholasmonreal@coreconstruction.com)

**F. Scope**

1. Bid Packages scopes of work as defined in specification 00 24 13 – Scope of Bids
  - a. Each Bid Package will be turnkey submissions; furnish and install complete per the plans and specifications.
2. Also note 00 22 00 – Sample Subcontract Agreement, prime bidders should review as CORE's minimum insurance requirements are typically in excess of standard policies. Include all additional costs and premiums to provide for specified insurance coverage and general provisions in base bid.
3. Refer to 00 80 00 – Supplementary Conditions for additional contracting requirements and limits on change orders.

**G. Specific Cost Information**

1. Include in your bid the costs for the Oracle Textura Payment Management per specification section 01 29 00 Payment Procedures Textura. Cost of Textura is as follows: 0.0022 of your bid + \$100 for every sub-tier contractor with a max of \$5,000 Bidder
2. Project is not tax exempt.
3. Project requires a 100% payment and performance bond. Include the cost of bonding within your bid price. Refer to 00 21 13 – Instructions to Bidders for additional payment and performance bond requirements.
4. Permits and AHJs fees for your scope of work.
5. Prevailing wage is required.
6. All allowances for your bid package should be included in base bid.

**H. Bid Submission Requirements**

1. Bid due and opened at the following location:  
**Monday, April 6<sup>th</sup> at 2:00 PM EST**  
**Microsoft Teams meeting**
2. Prime bids should be submitted electronically via Building Connected. Bids will be sealed until the due date shown above
3. Prime Bidders need the following:
  - a. CORE Bid Form
  - b. Unit Price Form per 01 22 00a – Unit Prices
  - c. 10% bid bond/bid security
    - 1) 1 bid form/envelope/bond per bid package
4. Non-Prime Bidders:
  - a. If you are sub-tier bidder (not prime bidder) bids can be submitted by email to a prime bidder.
5. Do not modify the bid form in any manner or provide attachments
  - a. Attachments to or modification of the bid form in any manner will be considered ground for dismissal at the discretion of the Owner.
6. Please acknowledge any and all addenda
7. The bid opening will occur at the address and time listed above.

**I. Alternates**

1. Refer to 01 23 00 – Alternates

**J. Safety**

1. All contractors' personnel must go through CORE's safety orientation prior to starting work.
2. Please review safety requirements in all contracts.

**K. Schedule**

1. Refer to 00 31 13a – Bidding Schedule
  - a. RFIs due 3/24/2026
  - b. Target Date for Final Addendum 3/30/2026
  - c. Bids Due 4/6/2026
  - d. Scope Confirmation Meetings 4/7/2026 – 4/8/2026

**L. Temporary Facilities.**

- 1) Refer to site logistics plan 01 50 00a – to be issued via addendum
- 2) Contractor parking will be provided within the jobsite limits
- b. Work Restrictions.
  - 1) For bidding purposes, assume working hours are 7:00 AM – 3:30 PM

**M. Site/facility visit or walkthrough**

**N. Post-Meeting Addendum.**

1. Questions: Questions will be addressed at prebid, questions not submitted in writing and not clarified via addenda shall not be considered binding. Oral clarifications shall not be relied upon by bidders.
2. Minutes: Construction Manager will record and distribute meeting minutes to attendees and others known by the issuing office to have received a complete set of Procurement and Contracting Documents. Minutes of meeting are issued as Available Information and do not constitute a modification to the Procurement and Contracting Documents. Modifications to the Procurement and Contracting Documents are issued by written Addendum only.

**END OF SECTION 00 25 13**

**SECTION 00 31 13 – PROJECT SCHEDULE**

**1.1 PROJECT SCHEDULE**

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide the Owner’s information for Bidders’ convenience and are intended to supplement rather than to serve in lieu of Bidders’ own investigations. They are made available for Bidders’ convenience and information but do not affect Contract Time requirements. This document and its attachments are part of the Contract Documents.
- B. Available Project information includes the following:
  - 1. Project Schedule.
- C. The project schedule, including design and construction milestones, is included in the bid documents. The Contractor’s Project Schedule is attached to this Section.
- D. Bidders are to include the following within their proposal:
  - 1. All required multiple shifts, overtime, and crew changes as required to meet the project schedule. Bidder acknowledges that a one-day duration on the schedule is equal to as many hours within the workday required to maintain the project schedule.
  - 2. Inspections must be scheduled to take place during the municipalities’ standard working hours with 72 hours advanced notice. The Subcontractor is responsible for scheduling all inspections pertaining to their scope of work; schedule inspections to ensure that the Subcontract is maintaining the project schedule.
  - 3. The Subcontractor has 72 hours from issuance of Subcontract via DocuSign to execute and return to Construction Manager in order to maintain the project schedule.
- E. Related Requirements:
  - 1. Section 01 10 00 “Summary” for phased construction requirements.

**END OF SECTION 00 31 13**

**SECTION 00 41 23 - BID FORM**

**PART 1 - BID FORM**

**1.1 BID INFORMATION**

- A. Bidding Subcontractor: \_\_\_\_\_.
- B. Project Name: Installation of Bellwood Emergency Back-Up Generators
- C. Project Location: Railroad Stormwater Pump Station/ Hyde Park Sanitary Lift Station/Eastern and St. Charles Pump Station
- D. Owner: CIS
- E. Architect: Arcadis
- F. Construction Manager: CORE Construction Services of Illinois, Inc.

**1.2 BID PACKAGES**

- A. The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared Arcadis. and the Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment, and services for the following bid package (**check only the applicable bid package, limit 1 bid package per bid form**), **including all scheduled allowances**, necessary to complete the construction of above-named Project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

\_\_\_\_\_ Bid Package 01 GENERATOR INSTALL AND SITE WORK

**1.3 BASE BID AMOUNT**

\_\_\_\_\_ Dollars (\$\_\_\_\_\_).

- A. The above base bid amount may be modified by amounts indicated by Bidder for Alternates and Unit Prices.
- B. The above base bid shall include all allowances specified for the noted bid package per section 00 24 00 Bid Packages

**1.4 ALTERNATES**

**N/A**

**1.5 UNIT PRICES**

- A. The undersigned bidder has included a complete copy of the requested unit price form. Reference 01 22 00a – Unit Prices.

**1.6 BID GUARANTEE**

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within **10** days after a written Notice of Award, if offered within **60** days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, constituting 10% of the Base Bid amount above:
- B. In the event Owner does not offer a Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

**1.7 TIME OF COMPLETION**

- A. The undersigned Bidder proposes and agrees hereby to complete the Work of the Contract Documents as shown in the schedule in section 00 31 13 – Project Schedule.

**1.8 ACKNOWLEDGEMENT OF ADDENDA**

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
1. Addendum No. 1, dated \_\_\_\_\_.
  2. Addendum No. 2, dated \_\_\_\_\_.
  3. Addendum No. 3, dated \_\_\_\_\_.
  4. Addendum No. 4, dated \_\_\_\_\_.
- B. Note all addenda issued.

**1.9 CONTRACTOR'S LICENSE**

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

**1.10 SUBMISSION OF BID**

- A. Respectfully submitted this \_\_\_\_ day of \_\_\_\_\_, 2026.
- B. Submitted By: \_\_\_\_\_ (Name of bidding firm or corporation).
- C. Authorized Signature: \_\_\_\_\_ (Handwritten signature).
- D. Signed By: \_\_\_\_\_ (Type or print name).

- E. Title: \_\_\_\_\_ (Owner/Partner/President/Vice President).
- F. Street Address: \_\_\_\_\_.
- G. City, State, Zip: \_\_\_\_\_.
- H. Email: \_\_\_\_\_.
- I. Phone: \_\_\_\_\_.
- J. License No.: \_\_\_\_\_.
- K. Federal ID No.: \_\_\_\_\_ (Affix Corporate Seal Here).

**END OF SECTION 00 41 23**



# SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: \_\_\_\_\_ Substitution Request Number: \_\_\_\_\_

From: \_\_\_\_\_

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

A/E Project Number: \_\_\_\_\_

Re: \_\_\_\_\_ Contract For: \_\_\_\_\_

Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_

Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Trade Name: \_\_\_\_\_ Model No.: \_\_\_\_\_

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: \_\_\_\_\_

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

Firm: \_\_\_\_\_

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

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

### A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

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

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

Supporting Data Attached:  Drawings  Product Data  Samples  Tests  Reports  \_\_\_\_\_



# Virtual Construction BIM Coordination Standards

## Virtual Construction Coordination Scopes of Work

### **CMU Concrete:**

1. All concrete panels with detailed openings and penetrations
2. All rebar & dowel placements
3. Control Joints & Expansion joints

### **Concrete Tilt Up & Structural Masonry:**

1. All wall openings and clearance zones
2. Rebar around openings modeled as clearances.
  - Bond beam and lintel regions
  - Reinforcing and embed regions.
  - Jam regions

### **Structural Steel:**

1. All columns, baseplates, anchor bolts and accessories
2. Correct depth and location of all beams and joist (with joist spacing modeled to actual conditions).
3. All bracing, stiffeners, and connections necessary for fabrication and installation
4. Accurate embed size and location.

### **Metal Stud Framing:**

1. All Framing: King Studs, Corner Studs, Headers, Kickers & Openings.
2. All Critical stud clearances to be shown.

### **HVAC Ductwork:**

1. All HVAC Families & Systems will be modeled and named with the correct "System Names" per their properties/layers i.e. (VAV, SAV, FCU, AHU, Supply Air, Return Air etc.)
2. All ducts and related accessories, including but not limited to dampers, VAV boxes, and diffusers. Ducts should be modeled to outside diameter and when it exists, duct insulation around the outside of the ducts shall be modeled. Model all flanges, hangers, and bracing, etc.
3. Model all HVAC equipment. Each piece should be modeled to its overall height, width, and depth. In the event the detailed piece of equipment exists from the manufacture use that 3D item. All equipment should be modeled with a transparent red space for all the clearances needed for that piece of equipment.
4. All gas fired equipment vents, flu vents & intake combustion air, needs to be shown and modeled per the approved equipment manufacturer.
5. All access panels/hatches in hard lid ceilings need to be modeled and shown.

6. All units above ceilings should have a clearance zone shown at least 3" above and side of units and shown extended down to the floor.
7. All VaV's should have an access of 30"x30" or per AHJ requirements.
8. All SaV's should have an access of 24"x24" or per AHJ requirements.
9. All hangers, sleeves and penetrations will be modeled.

#### **HVAC Piping:**

1. All HVAC Families & Systems will be modeled and named with the correct "System Names" per their properties/layers.
2. All piping with an outside diameter of 3/4" or greater and related accessories will be modeled and shown. All piping shall be modeled to its outside diameter or, if it exists, to the outside of pipe insulation.
3. All equipment including, but not limited to chillers, cooling towers, condensers, and pumps. Each piece shall be modeled to its overall height, width, and depth. In the event the detailed piece of equipment exists from the manufacture use that 3D item
4. All access panels, including clearance zones above and shown extended down to the floor.
5. All drip pans/trays will be modeled if needed.
6. All hanger/supports, sleeves and penetrations will be modeled.

#### **Plumbing:**

1. All Plumbing Families & Systems will be modeled and named with the correct "System Names" per their properties/layers i.e. (Boiler, Pump, CHW, DCW, DHW, DHWR etc.)
2. All sloped pipe regardless of diameter will be modeled and shown. Pressure pipes with outside diameter of 3/4" or larger. All related accessories. Pipes should be modeled to outside diameter or outside of the insulation if it exists. Pipe slopes shall be modeled.
3. All plumbing equipment. Each piece shall be modeled to its overall height, width, and depth. In the event the detailed piece of equipment exists from the manufacturer use that 3D item
4. Model all valves, access zones for equipment, fixtures, and clean outs.
5. All plumbing valves will be modeled no greater than 24" above ceiling with a clearance zone shown extended down to the floor.
6. All hanger/supports, sleeves and penetrations will be modeled.

#### **Electrical:**

1. All Electrical Families & Systems will be modeled and named with the correct "System Names" per their properties/layers i.e. (PNL-X, MSB, SWBD-X, Disc. etc.)
2. All conduit and MC cabling 1" and larger or any two or more parallel conduits
3. All Electrical equipment including, but not limited to MSB's, MCC's, Panelboards, and junction/pull boxes. Each piece shall be modeled to its overall height, width, and depth. In the event the detailed piece of equipment exists from the manufacture use that 3D item
4. All Equipment: panels, junction boxes, pull stations, access panels and clearance zones per NEC requirements.

5. All light fixtures will be modeled with a top clearance of a min. of 3" and recommended clearances for canned lights per manufacturer.
6. All cable trays will be modeled with a min. Top Clearance of 6" and max 12", with a side clearance on either side of a min. of 18".
7. All hanger/supports, sleeves and penetrations will be modeled.

**Fire Protection:**

1. All Fire Protection Families & Systems will be modeled and named with the correct "System Names" per their properties/layers.
2. All Fire Protection equipment including, In the event the detailed piece of equipment exists from the manufacture use that 3D item.
3. All controllers, piping, valves, fire pumps, sprinkler heads.
4. All access zones/clearance zones for equipment fixtures, valves, and controllers
5. All hanger/supports, sleeves and penetrations will be modeled.

**BIM Coordination Requirements and Processes**

- Subcontractor shall provide BIM coordination for this Trade Scope of Work and shall participated in the BIM review process led by CORE.
- Virtual Schedule is tied to Site Superintendent's construction sequence schedule/ Master Schedule.
- Virtual Construction shall have a line item in Schedule of Values for billing of percentage complete. Each modeling trade shall attend all Virtual Construction Coordination meetings. Each trade modeling shall have a representative that can manipulate that trades' model, as well as the trade construction foreman.
- Each trade shall update its model a minimum of (4) hours before the coordination meeting. All clashes will be updated before the meeting. The meeting will be a time for resolution, not discovery, of the conflicts.
- Each trade shall agree to install their content based on the Virtual Construction model. Any conflict caused by a deviation from the model will be resolved at the expense of the trade that deviated from the model.
- Each area must be completely coordinated prior to shop drawings or material release for fabrication.
- All trades will export their shop/Installation drawings into Revizto for all trades to reference.
- All trades will sign off on the model at this point and provide installation drawings to their workers and all other trades for reference. The installation drawings shall include all information needed to accurately install all items and equipment based on the coordinated Virtual Construction model. Items shall include, at a minimum: Heights, lengths, and distances from a measurable point in the field that can be referred to by all.



601 SW Water St.  
Peoria, IL 61602

T 309.404.4700

## **Section 00 60 00 – Trade Partner Disclosure Form**

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- This form shall be submitted within 48 hours of bid opening in compliance with section 00 21 13 Instruction to bidders part 1.14 post-bid information
- Once submitted, any changes to this list must be approved in writing by CORE Construction

Subcontractor: \_\_\_\_\_

Bid Package Number/Name: \_\_\_\_\_

### **Work to Be performed By with Bidder's own forces:**

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### **Sub-tier subcontractors the bidder is utilizing under their bid package:**

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### **Suppliers of materials and equipment proposed for the Work:**

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**SECTION 00 80 00 - SUPPLEMENTARY CONDITIONS****1.1 DESCRIPTION**

- A. The following supplements modify, change, delete from, or add to the General Conditions as referenced. Modification of any Article, or modification or deletion of any paragraph, subparagraph, sentence, or clause thereof does not negate or change the full meaning and effect of unmodified and undeleted portions of such Articles, paragraphs, sub-paragraphs, sentences, and clauses.
- B. All provisions of the General Conditions not supplemented herein remain in full effect.

**1.2 SUPPLEMENTS**

- A. ARTICLE 3: CONTRACTOR
- a. 3.2 Review of Contract Documents and Field Conditions by Contractor - Add the following:
    - i. 3.2.5 No claims concerning the unsuitability of any material specified or inability to produce first-class work with the same will be considered unless such claim is made in writing to the Architect before work is begun.
  - b. 3.5 Warranty
    - i. 3.5.6 Add the following: The Contractor further warrants to the Owner and Architect that to the best of his knowledge, and in reliance upon the manufacturers' published specifications and product information, all materials furnished under this Contract will be free from asbestos or polychlorinated biphenyl (PCB).
  - c. 3.13 Use of Site - Add the following:
    - i. 3.13.1 If at any time it becomes necessary to move materials temporarily located, which are to enter into the final construction, the Contractor furnishing the materials shall, when so directed by the Architect, move them to another location at his own expense if the original location was not approved by the Owner or Architect.
- B. ARTICLE 7 – CHANGES IN THE WORK
- a. ADD Subparagraph 7.2.2 as follows:

“7.2.2 Agreed Overhead and Profit Rates. For any adjustments to the Subcontract Sum, the Subcontractor agrees to charge and accept payment for their overhead and profit at the following maximum percentages of the cost attributable to the change on the work.

- .1 for each subcontractor or sub subcontractor involved, for any Work performed by that Subcontractor’s own forces, **fifteen percent (15%) of the cost.**
- .2 for each subcontractor, for Work performed by his Sub subcontractors, **five percent (5%)** of the amount due the Sub subcontractor
- .3 in order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and Subcontracts. Labor and materials shall be itemized in the manner prescribed, above. Where major cost items are Subcontracts, they shall be itemized also. In no case will a change involved over \$200.00 be approved with such itemization.
- .4 for deleted work the credit shall be the net cost.

The overhead and profit charges referred to in the preceding subparagraphs 1-4 shall constitute full reimbursement for all costs of supervision, engineering, field and main office expense, premiums on insurance and bonds, small tools, incidental job burdens, etc.

If the amount of such Construction Change Directive exceeds \$10,000 (increase or decrease) or 30 days' time (increase or decrease), the Construction Change Directive must be accompanied by a Change Order Authorization form (available from the Owner) to be completed by the Contractor in accordance with Article 33E of the Illinois Criminal Code.

C. ARTICLE 11 – INSURANCE AND BONDS

- a. Add the following Clause 11.1.2.1 to 11.1.2:

“Subcontractors shall provide insurance as specified in section 00 22 00b Sample Subcontract Attachment E - Insurance Conditions”

**END OF SECTION 00 80 00**

**SECTION 00 81 00 – PROJECT SAFETY REQUIREMENTS**

**1.1 GENERAL**

- A. Subcontractors shall comply with all requirements of the Construction Manager’s Safety Policy
- B. Subcontractors shall comply with all Owner safety requirements and rules.
- C. Available Project information includes the following:
- D. CORE CONSTRUCTION GENERAL SAFETY RULES FOR SUBCONTRACTORS (Site Safety Orientation)
- E. Owner’s safety requirements and rules.
- F. The full Construction Managers Safety Policy shall be made available upon request.

**END OF SECTION 00 81 00**



## CORE CONSTRUCTION GENERAL SAFETY RULES FOR TRADE PARTNERS

The health, welfare and safety of workers are prime objectives for all CORE projects. The following rules and regulations have been selected as a minimum standard only, as they do not cover all hazards a contractor/employee may encounter in the course of their work. These work rules in no way relieve the contractor/employee from complying with rules and regulations set forth by the client, OSHA and/or any national or local governing authority. Work as carefully as possible with the knowledge that each contractor/employee are responsible for their own safety. CONTRACTORS ARE RESPONSIBLE FOR COSTS OF ALL PPE AND HIGH VISIBILITY SHIRTS/VESTS.

1. Prior to starting work on the project, the contractor shall provide CORE with a copy of its company safety program, site-specific safety plan, safety data sheet and shall attend a preconstruction safety meeting.
2. Each contractor will be required to complete a Daily Activity Hazard Analysis (DAHA) prior to starting work on the project each day. The DAHA will describe the contractor's tasks to be completed that day, the potential hazards and exposures associated with those tasks, and the safety measures the contractor will employ to mitigate the hazards. The DAHA will be reviewed with and signed by the contractor's Foreman and all members of the contractor's crew prior to starting work. A copy of the completed and signed DAHA shall be submitted to the CORE Project Superintendent each day.
3. Hardhats shall be worn at all times by all personnel on the project site and/or the client's property with the bill in the front and the ratchet in the rear.
4. Safety glasses shall be worn at all times by all personnel on the project site and/or the client's property. Prescription safety glasses are only acceptable with side shields attached. Dark glasses are not allowed in enclosed buildings. Face shields are required when sawing, chipping, grinding, etc.
5. All personnel on the project site and/or the client's property must wear a high visibility vest, shirt, or jacket (ANSI/ISEA 107-2004 class II or greater) as their outermost garment at all times with minimum 4" sleeves. (When performing hot work, no non-flame-retardant vests shall be worn.) All personnel shall wear appropriate clothing including safety shoes and gloves when needed. No loose clothing, dangling jewelry, or shorts are permitted.
6. All personnel shall wear suitable work boots. Tennis shoes or athletic shoes are not permitted.



7. Respirators of the approved type shall be worn when dust or toxic fumes are present.
8. Appropriate hearing protection shall be worn as required by the OSHA standard.
9. The use of radios, boom boxes, tape players, CD players, iPods, MP3 players or similar devices, whether employing speakers or headsets, is not permitted on CORE jobsites. (Radios for jobsite communication are acceptable.)
10. Cell phone usage is prohibited while working, except for foremen or supervisors.
11. All accidents, injuries, and near miss incidents, regardless of severity, shall be reported to the CORE superintendent immediately. An incident report must be completed and provided to the CORE superintendent within 24 hours following the incident, injury or near miss.
12. Contractors/employees shall report all unsafe site conditions to the CORE Project Superintendent regardless of whether the contractor has the responsibility or resources to implement an appropriate corrective action.
13. Possession or use of any substance (alcohol, non-prescribed drugs, illegal drugs, or prescription/non-prescription drugs which warn of user impairment) is strictly prohibited. Anyone reporting to the job-site under the influence will be dismissed from the site.
14. Requirements for scaffolding:
  - a. Work platform shall be fully planked
  - b. Guardrails at 42" and 21" required at 6' and greater heights
  - c. Base plates always required
  - d. Ladder access to working platform must be provided
  - e. Supported scaffolds with height to base ratio greater than 4:1 will be tied off
15. Excavation and trench requirements:
  - a. Excavated material shall be kept at least 2' from edge of excavation
  - b. Excavations 4' deep or greater must have ladder for every 25' of lateral travel
  - c. Excavations 5' deep or greater must be inspected by competent person
  - d. The competent person must determine soil type and precautions necessary to protect employees from trench collapse
16. Fall protection requirements:



- a. Body harness and lanyard must be used when working from an aerial lift. Proper training is required prior to using any Fall Arrest System
  - b. Mandatory fall protection when working at heights greater than 6'
17. Extension ladders must extend 3' past the landing area and be secured at top and bottom.
18. Riding of equipment is prohibited. No person shall ride any hook, ball, hoist or other material handling equipment.
19. Power tools – powder activated tools shall only be used by trained personnel. Guarding and ground plugs (if not double insulated) must be in place.
20. All electrical devices must utilize a Ground Fault Circuit Interrupter (GFCI). All generators must utilize a GFCI, either built-in or a “pig-tail.”
21. Proper certification is required to operate a forklift.
22. Pressurized Gas cylinders shall be upright when in use. During storage and transport, they must be capped and secured in an upright position.
23. Riggers and Signalers must be Qualified.
24. Good “housekeeping” shall be practiced. Avoid excess debris. All material shall be stored such that it does not pose a potential safety hazard to others working on the project.
25. No personnel shall bring dogs, cats or other animals to the project site.
26. Gambling, horseplay, wrestling, or fighting is STRICTLY PROHIBITED.
27. Damaging, mutilating, or willfully misusing equipment or tools is STRICTLY PROHIBITED.
28. Graffiti on Company/Client property is STRICTLY PROHIBITED.
29. Contractors shall promulgate and enforce all General and Site-Specific Safety Rules with all lower tier contractors and suppliers they employ.



30. CORE Construction utilizes drone technology to record video footage and aerial shots of projects. At any given point, you may be recorded, have photographs taken of you or have a drone flying over/near you while working on CORE's project site.
  
31. CORE **Strictly Prohibits** employees and contractors from possessing a prohibited weapon (as defined below) on jobsites, CORE's office(s), or other offices (e.g. Owner or Architect) when working on behalf of CORE; regardless of whether the person is licensed to carry the weapon or not. This policy does not restrict the rights of an employee or contractor who lawfully possesses a firearm or ammunition from transporting or storing the firearm or ammunition the employee is authorized by law to possess in a locked, privately owned motor vehicle in the parking lot, or other parking area provided for them. This policy also does not restrict the ability of police officers, security guards or other persons who have been given consent by CORE to lawfully carry a weapon on the premises.

In addition to firearms and ammunition as described above, other weapons prohibited by this policy include any form of weapon or explosive restricted under local, state or federal regulation; knives more than three inches in length; or other weapons covered by law. Legal, chemical dispensing devices, such as pepper spray, which are sold for personal protection, are excluded from this policy. CORE property covered by this policy includes, without limitation, all CORE owned or leased buildings and surrounding areas, such as sidewalks, walkways, driveways and parking lots under CORE's ownership or control. CORE jobsites covered by the policy include jobsites controlled by developers, owners, general contractors, or CORE itself.

CORE reserves the right to conduct searches of work areas and CORE owned property at its sole discretion. CORE further reserves the right to contact local authorities in the event CORE managerial or supervisory staff reasonably believe that an employee or a contractor's employee is in violation of this Policy or is a threat to the safety of him or herself or others. Searches of CORE owned property may be conducted by CORE management or local authorities.

Although Illinois state law allows an individual to keep a legally-owned and lawfully-possessed firearm locked inside their private vehicle, even when that vehicle is parked on CORE property or at a CORE jobsite, nothing else in this policy should be construed as permitting an employee or contractor employee to bring a firearm onto CORE premises or jobsite. Violations of this policy will result in disciplinary action. CORE enforces this policy consistent with applicable state law.

If an employee or contractor employee feels that their safety or the safety of others is threatened at any time, or if they witness or experience any prohibited behavior, they



have the responsibility to exercise good judgment and report such conduct immediately to CORE supervisory or management personnel.

32. CORE has a zero-tolerance policy for all behavior that is prohibited under CORE's EEO/AA, Sexual Harassment, and Workplace Violence policies. These policies apply to

CORE's employees as well as to contractors working at any of CORE's sites or properties. CORE will require the contractor to remove, from CORE's sites or properties, any of the contractor's employees found to have violated these policies. By issuing and enforcing these policies, it is the intent of CORE to ensure that, while working on CORE's sites or properties, employees, customers, vendors, and contractors never feel threatened, intimidated, or harassed by any individual's actions, presence, conduct or communication. The following are examples of behaviors and actions viewed by CORE as prohibited conduct. This list is not exhaustive, but instead should be used as general guidance. Other behaviors and actions not specifically set forth in this list may also be considered prohibited and will be dealt with accordingly.

Examples of prohibited conduct include:

- Physically assaulting another individual, including assaults of a sexual nature; • Threatening or intimidating another individual (both implied and explicit)
- Bringing unauthorized weapons onto CORE sites or properties.
- Tampering with supplies, tools, or equipment;
- Spitting on an individual;
- Urinating in an undesignated area;

Additionally, jokes, comments, references, or slurs of a sexual, racial, ethnic, religious or otherwise derogatory nature are prohibited. Furthermore, graffiti, specifically graffiti that is sexual, racial, or otherwise demeaning or derogatory to any group, and discriminatory or sexually inappropriate material or displays (e.g., stickers, clothing, or posters that depict offensive material; magazines, books, pictures or videos with sexual content) are also prohibited on CORE sites or property.

33. Progressive Discipline. Contractors/employees agree to comply with and to enforce disciplinary actions as a result of a violation of the rules contained in this section. The following is a general guideline of progressive discipline CORE /contractors shall utilize on jobsites. CORE reserves the right, in CORE's sole discretion, to determine the severity of safety violations and to accelerate discipline accordingly to maintain a safe project site.

**General Violations:**

First Offense: Employee receives verbal reprimand



Second Offense: Employee receives written warning. Contractor's home office is notified.  
Employee must receive training before resuming work.

Third Offense: Employee will be suspended from the project site.

Fourth Offense: Employee will be permanently removed from the project site or terminated from their position with CORE Construction.

**Violations Deemed Severe or Immediate Danger to Life and Health (IDLH):**

First Offense: Employee receives warning. Contractor's home office is notified.  
Employee must receive training before resuming work.

Second Offense: Employee may be temporarily or permanently removed from the project site.

Third Offense: Employee will be permanently removed from the project site or terminated from their position with CORE Construction.

I certify I have read the CORE General Safety Rules for Trade Partners, watched the CORE Safety Orientation video and will abide by these safety rules and regulations as well as all OSHA regulations as they pertain to my scope of work.

**Printed Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Company:** \_\_\_\_\_

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

**Hard Hat Sticker Number:** \_\_\_\_\_

## **REQUEST FOR SEALED BIDS**

### **Village of Bellwood – Installation of Bellwood Emergency Back-Up Generators**

CIS Solutions a body corporate and politic, will accept sealed bids from qualified vendors for the following work located in Bellwood, IL

«Bid\_Package\_01\_\_»Generator Installation and Site Work

The deadline for the receipt of all proposals is April 6<sup>th</sup>, 2026, 2PM EST. Proposals shall be accepted online at [app.buildingconnected.com](http://app.buildingconnected.com)

Bids shall be opened immediately after bid turn-in noted above and at same location. Instructions for submitting a sealed bid are contained in the bid documents.

Bid documents may be obtained via the following sources:

-Online at BuildingConnected, Obtain access by contacting [nicholasmonreal@coreconstruction.com](mailto:nicholasmonreal@coreconstruction.com), 708-404-1083

Bid security shall be submitted with each bid in the amount of (10%) percent of the bid amount. No bids may be withdrawn for a period of 60 days after opening of bids. Owner reserves the right to reject any and all bids and to waive informalities and irregularities.

All correspondence including but not limited to, questions regarding scope shall be directed to the office of CORE Construction Services of Illinois, Inc., Attention: Nicholas Monreal; Email: [nicholasmonreal@coreconstruction.com](mailto:nicholasmonreal@coreconstruction.com); Telephone: 708-404-1083

**SECTION 01 10 00 - SUMMARY**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section Includes:
  - 1. Project information.
  - 2. Type of Contract.
  - 3. Work covered by Contract Documents.
  - 4. Work under separate contracts.
  - 5. Access to the site.
  - 6. Coordination with occupants.
  - 7. Work restrictions.
  - 8. Specification and drawing conventions.
- B. Related Requirements:
  - 1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of the Owner's facilities.

**1.3 PROJECT INFORMATION**

- A. **Project Identification:** Installation of Bellwood Emergency Back-Up Generators
  - 1. Project Locations: Hyde Park Sanitary Lift Station/ Railroad Stormwater Pump Station/Eastern and St. Charles Pump Station
- B. **Owner:** CIS
  - 1. Owner's Representative: Joey Monheit  
3055 Plymouth Road Suite 205 Ann Arbor, MI 48105
- C. **Architect:** Arcadis
- D. **Architect's Consultants:** The Architect has retained the following design professionals who have
- E. **Construction Manager:** CORE Construction Services of Illinois, Inc., 81 Warrenville Road, Lisle, IL 60532.

**1.4 WORK COVERED BY CONTRACT DOCUMENTS**

- A. The Work of Project is defined by the Contract Documents and consists of the following:
1. Project Description: Project consists of Installation of (2) two Generators for (2) two different locatoions. Railroad Stormwater Pump Station includes: Generator Pad, Security Fence, Security Area Lighting, Power Cabinet, Removable Bollards and installation of previously procured Generator. Hyde Park Sanitary Lift Station includes extension of existing fence, Power Cabinet, and Portable Generator Anchorage Pier
- B. Type of Contract:
1. This project will be constructed under coordinated, concurrent multiple contracts.
  2. See Section 00 24 00 "Bid Packages" for a description of work included under each of the multiple contracts.
  3. Bid Packages shall be publicly bid and awarded to the lowest responsive and responsible bidder for each package.
  4. When the lowest responsive and responsible bid package bidders are identified, the Owner shall be deemed to have assigned those bid package contracts to the Owner's Construction Manager, which shall enter into Subcontract agreements with each respectively awarded Bid Package bidder using a form of subcontract agreement substantially similar to that contained in 00 21 13 "Instructions to Bidders". The Construction Manager may reassign the Contracts to the Owner if required by law or may refuse assignment if a legal or contractual conflict prevents Construction manager from accepting assignment of any Contract. In such case, the Construction Manager shall manage said Contract in the same manner as Contracts assigned to the Construction Manager. By submitting a bid, Contractors agree they will either accept assignment to the Construction Manager or enter into a contract directly with the Owner (managed by the Construction Manager) using an AIA agreement written for this purpose.
  5. By submitting its bid, the bidder shall be deemed to have consented to the aforesaid assignment and to have agreed to become an assigned Subcontractor to the Construction Manager.
  6. Upon assignment, the Subcontractor shall become a subcontractor of the Construction Manager pursuant to the Subcontract Agreement and, as provided by law, will no longer have any contractual rights against the Owner and shall have contractual privity only with the Construction Manager.

**1.5 WORK UNDER SEPARATE CONTRACTS**

- A. General: Cooperate fully with all separate Subcontractors so work on those Subcontracts may be carried out smoothly, without interfering with or delaying work under this Bid Package Subcontract or other Subcontracts. Coordinate the Work of this Bid Package Subcontract with work performed under separate Bid Package Subcontracts and other Owner Contracts.
- B. Preceding Work: The owner will award separate contract(s) for the following construction operations at the project site. Those operations are scheduled to be substantially complete before work under this Bid Package Subcontract begins.
1. Not applicable.

- C. Concurrent Work: The Owner will award separate contract(s) for the following construction operations at the project site. Those operations will be conducted simultaneously with work under this Bid Package Subcontract.

- 1. Not applicable.

#### **1.6 PROJECT SCHEDULE**

- A. The work shall be conducted in one Phase.

#### **1.7 STORAGE**

- A. Refer to site logistics plan
- B. Schedule deliveries with the Construction Manager to minimize the use of driveways and entrances by construction operations.
- C. Schedule deliveries with the Construction Manager to minimize space and time requirements for the storage of materials and equipment on-site.

#### **1.8 ACCESS TO SITE**

- A. General: The Construction Manager shall have phased use of the project site for construction operations during the construction period.
- B. Subcontractor shall comply with Construction Manger's site logistics plan and Schedule in order to achieve to the following requirements:
  - a. Keep all exits required by code unobstructed during construction period. Do not block exit signage
  - b. Driveways, Walkways, and Entrances: Keep driveways 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. Coordinate Activities with Construction Manager.
  - c. Keep paved driveways on Owner's property, full project site and public streets, alleys and walkways clear of earth and debris spillage from trucking and traffic involved in Subcontractor construction operations.
  - d. Condition of Existing Building: The Construction Manger intends to maintain portions of existing building affected by construction operations in a weather-tight condition throughout construction period until Substantial Completion of new building unless stated otherwise in the logistics plan and schedule. Subcontractor shall repair damage caused by their construction operations to maintain safe structure.
- C. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of the project site beyond areas in which the Work is indicated
- D. Protect existing site improvements and public access ways to remain: If pavements, curbs, and other site improvements to remain are damaged or defaced during Subcontractor's construction operations, the subcontractor shall repair and restore all to condition at start of construction or better.

**1.9 COORDINATION WITH OCCUPANTS**

- A. Partial Owner Occupancy: Cooperate with the Owner and Construction Manager during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with the Owner's operations. Maintain existing exits unless otherwise indicated.
1. 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 the Owner, Construction Manager, and authorities having jurisdiction.
  2. Provide not less than 72 hours' notice to the Owner of activities that will affect the Owner's operations.

**1.10 WORK RESTRICTIONS**

- A. Work Restrictions, General: Comply with restrictions on construction operations.
1. Comply with limitations on the use of public streets and with other requirements of authorities having jurisdiction.
  2. On-Site Work Hours: Limit work in the existing building to normal union working hours, Monday through Friday, except as otherwise indicated.
  3. Coordinate with Construction Manager regarding the scheduling of off shift working hours. Subcontractor shall provide all labor, equipment, and materials as necessary to achieve the Construction Manager's schedule.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
1. Notify Construction Manager not less than two days in advance of proposed utility interruptions.
  2. Obtain the Construction Manager's written permission before proceeding with utility interruptions.
- C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with the Owner.
1. Notify Construction Manager not less than two days in advance of proposed disruptive operations.
  2. Obtain the Construction Manager's written permission before proceeding with disruptive operations.
  3. Provide applicable information regarding expected noise, sound and odor expected during subcontractor's construction activities to the Construction Manager and the authority having jurisdiction. Subcontractors shall be responsible for attaining all village contractor licensing fees, bonds, etc. as it pertains to their work and scheduling of inspections. Where field measurements exceed allowable limits, the Subcontractor shall cease operating such equipment and repair or replace it with equipment that complies with requirements.
- D. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor-air intakes. Refer to Construction Manager's Safety Policy.

- E. Controlled Substances: Use of tobacco products, alcohol, and other controlled substances on the project site is not permitted. Refer to Construction Manager's Safety Policy.
- F. Employee Identification: The contractor will provide identification tags for Contractor personnel working on the Project site. Require personnel to use identification tags at all times.
  - 1. Badging Cost: Not applicable.

#### **1.11 PAYMENT AND RETAINAGE**

- A. Refer to section 01 29 00 Payment Procedures

#### **1.12 SPECIFICATION AND DRAWING CONVENTIONS**

- A. 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. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Specification requirements are to be performed by the Subcontractor to which the specification section has been assigned via the Bid package unless specifically stated otherwise.
- B. Division 00 and 01 General Requirements of Sections 00 and 01 apply to the Work of all Sections in Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
  - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

#### **PART 2 - PRODUCTS (Not Used)**

#### **PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 10 00**

**SECTION 01 21 00 - ALLOWANCES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements governing allowances.
  - 1. Certain Bid Packages may contain allowances for work which may not be reasonably quantified at the time of the bid. Each Subcontractor shall include such allowances in their total bid for the associated Bid Package. Failure to include the required allowances will result in rejection of the bid and may result in forfeiture of the bid security.
  - 2. All work performed against an allowance shall be documented on a Time and Material Ticket available from the Construction Manager. Tickets for such Time and Material Work shall be completed daily and shall be turned in to the Construction Manager by 9:00 AM of the day following the day on which the work was performed. Failure to submit Tickets in a timely manner may result in rejection of any costs for work performed. Each Subcontractor shall notify the Construction Manager prior to starting any Allowance or Time and Material Work and shall subsequently notify the Construction Manager when such work has been completed
  - 3. Each Subcontractor shall submit wage rates to be used for allowances upon award of Contract. Wage rates shall only include straight time scale wages, benefits, FICA, State Unemployment, Federal Unemployment, and Workers Compensation. No other costs or mark-ups will be allowed in determining the wages used for determining allowances. Examples of costs that are not allowed include, but are not limited to, vehicles, phones, fuel, tools, vacation, overhead, bonuses, incentive pay, safety bonuses, etc.
  - 4. Mark-up (i.e. overhead & profit) for allowances should be included in the base bid price and will not be added to individual allowance uses or T&M tickets associated with the allowance.
  - 5. Allowances which remain unused at the conclusion of the project shall be credited back to the owner by deductive change order.

**1.3 SELECTION AND PURCHASE**

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

- C. Purchase products and systems selected by Architect from the designated supplier.

#### **1.4 ACTION SUBMITTALS**

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

#### **1.5 INFORMATIONAL SUBMITTALS**

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

#### **1.6 COORDINATION**

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

#### **1.7 ALLOWANCES**

- A. Allowance shall include the cost to the Subcontractor of specific products and materials ordered by the Owner or selected by Architect under allowance and shall include freight and delivery to the project site.
- B. Unless otherwise indicated, Subcontractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Subcontract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after the installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to the Owner's storage space as directed.

#### **1.8 ADJUSTMENT OF ALLOWANCES**

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
  - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
  - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.

3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
  4. The Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
  2. No change to Contractor's indirect expense is permitted for the selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.
  3. All work performed against an allowance shall be documented on a Time and Material Ticket available from the Construction Manager. Tickets for such Time and Material Work shall be completed daily and shall be turned in to the Construction Manager by 9:00 AM of the day following the day on which the work was performed. Failure to submit Tickets in a timely manner may result in rejection of any costs for work performed. Each Contractor shall notify the Construction Manager prior to starting any Allowance or Time and Material Work and shall subsequently notify the Construction Manager when such work has been completed.
  4. Each Contractor shall submit wage rates to be used for allowances upon award of Contract. Wage rates shall only include straight time scale wages, benefits, FICA, State Unemployment, Federal Unemployment, and Workers Compensation. No other costs or mark-ups will be allowed in determining the wages used for determining allowances. Examples of costs which are not allowed include, but are not limited to, vehicles, phones, fuel, tools, vacation, overhead, bonuses, incentive pay, safety bonuses, etc.
  5. Allowances which remain unused at the conclusion of the project shall be credited back to the owner by deductive change order.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

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

### **3.2 PREPARATION**

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

### **3.3 SCHEDULE OF ALLOWANCES**

- A. Refer to section 00 24 00 – BID PACKAGES for allowances required in each bid package.

**END OF SECTION 01 21 00**

**SECTION 01 22 00 - UNIT PRICES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

**1.3 DEFINITIONS**

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

**1.4 UNIT PRICE ALLOWANCES**

- A. This project shall utilize unit price allowances. A base bid quantity has been noted on the bid form which shall be provided by the noted bid package bidder. Bidders shall be required to include the noted quantities for their bid package in their base bid price as an allowance. Adjustments to the subcontract Contract made by in-field measurements will be made via additive or deductive change order for the unit price listed on the bid form if the quantity of work is above or below the allowed amount.

**1.5 PROCEDURES**

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. The Owner and Construction Manager reserve the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to Contractor.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

3.1 SCHEDULE OF UNIT PRICES

- A. Provide unit prices as requested for your bid package within your sealed bid submittal. Complete, print this form and enclosure it in your sealed bid envelope prior to submission of bid.
- B. Unit Prices shall be used to adjust the cost of the Work due to changes. All Unit Prices submitted shall be complete in-place prices and include all costs for overhead, profit, bond costs, labor, materials, equipment, engineering, shop drawings and any other incidentals related to the completion of the Work and shall remain firm for the period of the contract.

**END OF SECTION 01 22 00**

**SECTION 01 23 00 - ALTERNATES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

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

**1.3 DEFINITIONS**

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

**1.4 PROCEDURES**

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

**1.5 ADDITIONAL NOTES**

- A. All previous listed bid packages allowances as noted by the 00 24 00 – Bid Package specification will remain unchanged by any alternates.
- B. The intent of each alternate is to still provide complete and operational systems and assemblies in any and all instances. Reconnection and interfacing with adjacent systems and assemblies has not been noted explicitly below in all instances (either for the sake of brevity or due to an inherent incidental nature) but is to be assumed in all instances. Examples may include connecting to adjacent ductwork that is existing to remain, reworking of circuitry if and as required for a specific circuit within a panelboard or provide transitions between newly installed flooring and any adjacent existing flooring to remain.
- C. The intent of each alternate is to describe its effect on the major elements of a system, assembly or bid package scope of work. All work should remain as it was coordinated within the 00 24 00 – Bid Packages specification (e.g., the General Contractor is still to provide final cleaning for all area of the project even though it was not noted within these alternates). Other items that are supportive of the alternative scope of work and outlined within the 00 24 00 – Bid Packages specification but not explicitly noted below are still to be included within our alternate bid price. Examples of this include any allowance previously specified, the costs of bonding, any costs associated with preparation of shop drawings, cutting and patching for your scope of work, daily cleaning for your scope of work, etc. If ambiguity exists or you are not sure if something is to be included in an alternate bid price, please reach out to the Construction Manager to obtain explicit clarity. This alternative specification may be amended accordingly.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.1 SCHEDULE OF ALTERNATES**

A. N/A

**SECTION 01 25 00 - SUBSTITUTION PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This section includes administrative and procedural requirements for substitution before the bidding/negotiation/procurement phase has been completed.
- B. This section includes administrative and procedural requirements for substitution after the bidding/negotiation/procurement phase has been completed

**1.3 RELATED REQUIREMENTS**

- 1. Section 00 11 13 Advertisement to Bid: Prebid substitution requirements
- 2. Section 00 21 13 Instruction to Bidders
- 3. Section 00 43 25 Substitution Request Form: Prebid substitution request form (during procurement)
- 4. Section 01 21 00 Allowances: Products selected under an allowance.
- 5. Section 01 22 00 Unit Prices: Products selected under a unit price and additional unit price requirements
- 6. Section 01 23 00 Alternates: Products selected under an alternate.
- 7. Section 01 60 00 Product Requirements: Requirements for submitting comparable product submittals for products by listed manufacturers.
- 8. Section 01 31 00 Project Management and Coordination: Submittal procedures, coordination
- 9. Section 01 60 00 Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

**1.4 DEFINITIONS**

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by the Subcontractor via the Contractor.
- B. Substitutions for Cause: Changes proposed by Contractor or Subcontractor that are required due to changed Project conditions, such as unavailability of products, regulatory changes, or unavailability of required warranty terms.
- C. Substitutions for Convenience: Changes proposed by Subcontractor, Contractor, or Owner that are not required in order to meet other Project requirements but may offer an advantage to Contractor, Subcontractor, or Owner.

**1.5 SUBSTITUTION REQUESTS DURING BIDDING & PROCUREMENT**

- A. Submittal Deadline and requirements: No substitution will be considered prior to receipt of Bids unless a written request for approval has been received by the Architect at least 10 business days prior to the date for receipt of Bids. Such requests shall include:
  - 1. The substitution request form (CSI/CSC Form 1.5C). Refer to 00 43 25 Substitution Request Form
  - 2. All supplementary documentation as requested in this section and the request form.
- B. Limit each request to a single proposed substitution item.
- C. 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.
- D. 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.
- E. No substitutions will be considered subsequent to receipt of bids.
- F. Substitutions shall be considered for both Substitutions for Cause and Substitutions for Convenience
- G. Subcontractors shall not rely upon the acceptance of a substitution request for the basis of their pricing

**1.6 SUBSTITUTION REQUESTS AFTER BIDDING & PROCUREMENT**

- A. Substitution Requests: Submit via PROCORE utilizing appropriate forms. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use CSI Form 13.1A.
  - 2. Limit each request to a single proposed substitution item
  - 3. Architect's Action: If necessary, the Architect will request additional information or documentation for evaluation within 3 days of receipt of a request for substitution. The Architect will notify Subcontractor through Construction Manager of acceptance or rejection of proposed substitution within 4 days of receipt of the request, or seven days of receipt of additional information or documentation, whichever is later.
    - a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
    - b. Use product specified if the Architect does not issue a decision on the use of a proposed substitution within the time allocated.
- B. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.
- C. Substitutions shall be considered for both Substitutions for Cause and Substitutions for Convenience

**1.7 QUALITY ASSURANCE**

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers if requested.

**1.8 SUBSTITUTION REQUIREMENTS**

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of the need for change, but not later than 2 days prior to the time required for preparation and review of related submittals.
  - 1. Conditions: The Architect will consider a request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record non-compliance with these requirements:
    - a. The requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. The substitution request is fully documented and properly submitted.
    - c. The requested substitution will not adversely affect the Contractor's construction schedule.
    - d. The requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. The requested substitution is compatible with other portions of the Work.
    - f. The requested substitution has been coordinated with other portions of the Work.
    - g. The Requested substitution provides the specified warranty.
    - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all (sub)contractors involved.
- B. Substitutions for Convenience: The Architect will consider requests for substitution if received within 60 days after the Notice of Award. Requests received after that time may be considered or rejected at the discretion of the Architect.
  - 1. Conditions: The architect shall consider Subcontractor's request for substitution submitted via the Contractor when the following conditions are satisfied. If the following conditions are not satisfied, the Architect shall return requests without action, except to record non-compliance with these requirements:
    - a. The requested substitution complies with the same conditions listed under part A of this section "Substitutions for Cause".
    - b. The requested substitution offers the Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - c. The requested substitution does not require extensive revisions to the Contract Documents.

**1.9 SUPPLEMENTARY MATERIALS REQUIRED WITH REQUEST:**

- A. All documents requested on CSI/CSC Form 1.5C and Use CSI Form 13.1A respectively
- B. SUBSTITUTION REQUESTS DURING BIDDING & PROCUREMENT
  - 1. A complete description of the proposed substitution including drawings, performance, and test data, and other information necessary for an evaluation.
  - 2. A description of changes to the Contract Documents that the proposed substitution will require for its proper installation
  - 3. A statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
  - 4. 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.
  - 5. A statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
  - 6. A statement indicating proposed substitution is expected to affect the Construction Manager's Schedule
  - 7. Note explicitly any non-compliant characteristics and deviations from contract documents.
- C. SUBSTITUTION REQUESTS AFTER BIDDING & PROCUREMENT
  - 1. A complete description of the proposed substitution including drawings, performance, and test data, and other information necessary for an evaluation.
  - 2. A description of changes to the Contract Documents that the proposed substitution will require for its proper installation
  - 3. A statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
  - 4. 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.
  - 5. Note explicitly any non-compliant characteristics and deviations from contract documents.
  - 6. A statement indicating why specified product or fabrication, or installation cannot be provided, if applicable
  - 7. Certificates and qualification data, where applicable or requested.
  - 8. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by the Owner and separate (sub)contractors, that will be necessary to accommodate proposed substitution.
  - 9. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include an annotated copy of the applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - 10. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - 11. Samples, where applicable or requested.
  - 12. Certificates and qualification data, where applicable or requested.
  - 13. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners
  - 14. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated
  - 15. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.

16. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including the effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include a letter from the manufacturer, on the manufacturer's letterhead, stating the date of receipt of the purchase order, lack of availability, or delivery delays.
17. Cost information, including a proposal of change, if any, in the Contract Sum.
18. Subcontractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.

**1.10 BURDEN OF PROOF**

- A. By submitting a substitution request, the subcontractor shall accept the burden of proof of the merit of the proposed substitution and shall certify the following as an assigned Contractor:
  1. The Subcontractor waives additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results or additional required work that may become apparent as a result of the substitution proposal.
  2. The Subcontractor shall coordinate installation and make changes to other work that may be required for the work to be complete. The proposing subcontractor shall be responsible for costs to other trades associated with this substitution request should they fail to adequately disclose changes required 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.
  3. The Subcontractor agrees to reimburse the Owner and the Architect for review or redesign services associated with re-approval by authorities.
  4. Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
  5. The proposed substitution has been fully investigated and determined to be equal or superior in all respects to the specified product.
  6. The same warranty will be furnished for the proposed substitution as for the specified product.
  7. Same maintenance service and source of replacement parts, as applicable, is available.
  8. The proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
  9. The proposed substitution does not affect dimensions and functional clearances.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 25 00**

**SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

**1.3 MINOR CHANGES IN THE WORK**

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

**1.4 PROPOSAL REQUESTS**

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within 24 hours after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
    - e. Quotation Form: Use forms acceptable to Architect.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect within 24 hours.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  4. Include costs of labor and supervision directly attributable to the change.
  5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  6. Comply with requirements in Section 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
  7. Proposal Request Form: Use form acceptable to Architect.

#### **1.5 ADMINISTRATIVE CHANGE ORDERS**

- A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

#### **1.6 CHANGE ORDER PROCEDURES**

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

#### **1.7 CONSTRUCTION CHANGE DIRECTIVE**

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

#### **PART 2 - PRODUCTS (Not Used)**

#### **PART 3 - EXECUTION (Not Used)**

#### **END OF SECTION 01 26 00**

**SECTION 01 29 00 - PAYMENT PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 01 22 00 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 3. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

**1.3 SCHEDULE OF VALUES**

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with continuation sheets.
    - b. Submittal schedule.
    - c. Items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than thirty days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the schedule of values:
    - a. Project name and location.
    - b. Name of Architect.
    - c. Architect's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
  - a. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.

#### **1.4 APPLICATIONS FOR PAYMENT**

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702/CMA and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit four signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. When an application shows completion of an item, submit conditional final or full waivers.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final).

- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
  - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  - 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
  
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  - 1. Evidence of completion of Project closeout requirements.
  - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  - 3. Updated final statement, accounting for final changes to the Contract Sum.
  - 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  - 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  - 6. AIA Document G707, "Consent of Surety to Final Payment."
  - 7. Evidence that claims have been settled.

1.5 SUPPLIER PAYMENT

- A. Refer to section 00 22 00 Sample Subcontract Agreement.

1.6 SUBCONTRACTOR PAYMENT

- A. Refer to section 00 22 00 Sample Subcontract Agreement.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 29 00**

**SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Project meetings.
- B. Related Requirements:
  - 1. Section 01 73 00 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 2. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.
  - 3. Section 01 91 13 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

**1.3 DEFINITIONS**

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form
  - 1. Name, address, and telephone number of entities performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 3 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room in temporary field office. Keep list current at all times.

#### **1.5 GENERAL COORDINATION PROCEDURES**

- A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
  1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of Contractor's construction schedule.
  2. Preparation of the schedule of values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.
  6. Preinstallation conferences.
  7. Project closeout activities.
  8. Startup and adjustment of systems.

#### **1.6 COORDINATION DRAWINGS**

- A. Coordination Drawings, General: Prepare, within 14 days of contract award, coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.

- c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
  - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
  - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
  - f. Indicate required installation sequences.
  - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
  2. File Preparation Format: DWG, Version, operating in Microsoft Windows operating system.
  3. File Submittal Format: Submit or post coordination drawing files using .dwg or .rvt format (or a similar, alternate and compatible format agreed upon with the Contractor prior to starting the coordination process) and Portable Data File (PDF) format.
  4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
    - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
- C. 3-D Coordination Drawing & Meeting Process
1. From Notice of Award, the Coordinating Contractor (**Mechanical Subcontractor**) shall immediately begin Work and prepare a 3-D model of their own Scope in Navisworks, Revit or Revizto format (or a similar, alternate and compatible format agreed upon with the Contractor and all 3-D Coordination Subcontractors prior to starting the coordination process). The Coordinating Contractor shall overlay their layout with the architectural and structural backgrounds for each floor of the building, indicate bottom of structure elevations and establish an origin point. Within ten (10) working days from date of Notice of Award, the origin point file and mechanical model are to be complete in 3-D formats for distribution to Steel, Plumbing, Fire Protection and Electrical/Technology Subcontractors.
  2. Each Subcontractor is responsible for the layout of their own Work in compatible 3-D format. Within ten (10) working days of receiving the mechanical model, the Steel, Plumbing, Fire Protection and Electrical/Technology Subcontractors shall have completed their layout drawings and shall forward the compatible 3D file of their layout to the Coordinating Contractor.
  3. Within five (5) working days, the Coordinating Contractor shall composite all other Steel and MEP/FP related trade's model files as collected and review all trades for conflicts. The Coordinating Contractor shall identify all conflicts on the coordination drawings.
  4. Thirty (30) working days from date of Notice of Award, all Subcontractors (Steel, Mechanical, Electrical, Technology, Plumbing and Fire Protection) will attend the first coordination meeting.
    - a. Two (2) working days prior to ALL coordination meetings, the Coordinating Contractor shall

- forward the complete coordinating drawings (pdf format and 3-D format) with conflicts identified to the Construction Manager and Steel, Mechanical, Plumbing, Fire Protection and Electrical/Technology Subcontractors.
- b. The Steel, Mechanical, Plumbing, Fire Protection and Electrical/Technology Subcontractors are required to attend ALL coordination meetings. The representative(s) from each Subcontractor is required to be familiar with the Work and have the expertise and authority to answer questions and make decisions and changes to its systems at these meetings.
  - c. Subcontractors, at the meeting, will work to review and overlay the different trades to identify and resolve interferences and coordination problems.
  - d. Following the meeting, Subcontractors shall revise their 3-D layout drawings, if necessary, based upon the agreed changes and be prepared to forward revised layout drawing to the Coordinating Contractor for review within five (5) working days.
  - e. All Subcontractors will meet again within ten (10) working days of the first coordination meeting as scheduled by the Construction Manager.
5. When the 3-D coordination drawings have been fully revised with no exceptions taken by respective Subcontractors, including the Construction Manager, the Subcontractors shall sign them, indicating their awareness of, and agreement with the indicated routings, elevations, layouts, and their inter-relationship with the adjoining or continuous Work of all Project contracts. Thereafter, no unauthorized deviations from the information provided will be permitted, and if made without the knowledge or agreement of the Architect and the Construction Manager, this unauthorized Work will be subject to removal and correction at no additional cost to the Owner, Architect, Engineer, or Construction Manager.
- a. Within three (3) working Days of the signing of the 3-D coordination drawings, each Subcontractor shall provide the Construction Manager with a digital copy, in both 3-D format (.dwg, .rvt or otherwise) and Portable Data File (PDF) format, of their portion of the coordinated shop drawings for the submittal to the Architect/Engineer/Owner.
6. Information for specific trades is required but not limited to the following:
- a. Mechanical – Size, layout and routing of all metal and flex ductwork, re-heat coils, terminal units, filters, and major hangers and supports; location and sizes of all registers, grilles, diffusers, and similar features; locations of all valves, dampers, and note any items requiring access for service and maintenance as well as access doors in inaccessible ceilings. Subcontractor shall provide notation for diffuser boot sizes and heights and any other special features. Subcontractor shall provide cross sections and additional details through areas where clearances are tight and further detail as appropriate and/or required. Where piping or ductwork has external insulation, Subcontractor shall note or show locations and thickness. Subcontractor shall indicate bottom elevation of duct, pipes and equipment and elevation changes, to be measured to the lowest point including insulation and hangers where applicable. Steel – Size, location and bottom of structure elevations of all new steel and exposed existing steel in all areas with HVAC work.
  - b. Plumbing – Size, layout and routing of piping, valves, boxes, sleeve locations, supports, etc., for all utilities regardless of material size. Show or note all pipe sizes and working clearances around valves, etc. For pitched piping, identify bottom elevations at key points and at least every column line. Note thickness and location of all external insulation. Bottom elevations shall be measured to the lowest point including hangers and insulation where applicable.
  - c. Sprinkler Piping – Size, layout, and routing of mains and branch piping, sleeve locations, hanger and supports, valves, working clearances, and bottom of pipe and

bottom of hanger support elevations. Sprinkler head locations shall be shown. For pitched piping, identify bottom elevation at key points and at least every column line.

- e. Electrical – Size, sleeve locations, layout and routing and size of conduit and wire 1-1/2" or larger for normal power distribution systems, 1-1/2" or larger for communication systems telephone, security, etc., boxes larger than 4"x4"x4", hangers, supports, and electrical fixtures including lights, speakers, detectors, sensors, cable trays, raceways, etc. Size and clearance of ceiling and above ceiling mounted items shall be noted as a depth from finished ceiling to top of fixture or top of clear area required. Provide bottom elevations of conduits and equipment. Bottom elevation shall be measure from the lowest point, including hangers.
  - 1) Within four (4) feet of all panels, or areas where more than 4 conduits, regardless of size, are routed or grouped together, identify an easement or right-of-way for the groups of conduit.
  - 2) Also show all wall mounted items located within 12" of the ceiling plane, and show all access panels required.

#### 1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
  3. Combine RFI and its attachments into a single electronic file
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  1. Project name.
  2. Project number.
  3. Date.
  4. Name of Contractor.
  5. Name of Architect.
  6. RFI number, numbered sequentially.
  7. RFI subject.
  8. Specification Section number and title and related paragraphs, as appropriate.
  9. Drawing number and detail references, as appropriate.
  10. Field dimensions and conditions, as appropriate.
  11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  12. Contractor's signature.
  13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

- C. RFI Forms: AIA Document G716.
  - 1. Attachments shall be electronic files in Adobe Acrobat PDF format.
  - 2. RFI's shall be submitted via PROCORE
  
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow five working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
  - 1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  - 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
  - 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 26 00 "Contract Modification Procedures."
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 2 days of receipt of the RFI response.
  
- E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
  - 1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

## **1.8 PROJECT MEETINGS**

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
  - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
  - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  - 3. Minutes: Contractor is responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
  
- B. Preconstruction Conference: Preconstruction conference shall be scheduled prior to work commencing
  - 1. Conduct the conference to review responsibilities and personnel assignments.

2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:
  - a. Execution of Owner-Contractor Agreement (if applicable).
  - b. Submission of executed bonds and insurance certificates. (if applicable)
  - c. Construction schedule.
  - d. Critical work sequencing and long-lead items.
  - e. Designation of key personnel and their duties.
  - f. Lines of communications.
  - g. Procedures for processing field decisions and Change Orders.
  - h. Procedures for RFIs.
  - i. Procedures for testing and inspecting.
  - j. Procedures for processing Applications for Payment.
  - k. Distribution of the Contract Documents.
  - l. Submittal procedures.
  - m. Background checks and badging (if applicable)
  - n. Preparation of record documents.
  - o. Use of the premises and existing building.
  - p. Work restrictions.
  - q. Working hours.
  - r. Owner's occupancy requirements.
  - s. Responsibility for temporary facilities and controls.
  - t. Procedures for disruptions and shutdowns.
  - u. Construction waste management and recycling.
  - v. Parking availability.
  - w. Office, work, and storage areas.
  - x. Equipment deliveries and priorities.
  - y. First aid.
  - z. Security.
  - aa. Progress cleaning.
4. Minutes: Contractor is responsible for conducting meeting will record and distribute meeting minutes.

C. Progress Meetings: Conduct progress meetings at weekly intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, Owner's Commissioning Authority and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
  - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be

expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

- 1) Interface requirements.
- 2) Sequence of operations.
- 3) Status of submittals.
- 4) Access.
- 5) Site utilization.
- 6) Temporary facilities and controls.
- 7) Progress cleaning.
- 8) Quality and work standards.
- 9) Status of correction of deficient items.
- 10) Field observations.
- 11) Status of RFIs.
- 12) Status of proposal requests.
- 13) Pending changes.
- 14) Status of Change Orders.
- 15) Pending claims and disputes.
- 16) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

D. Coordination Meetings: Conduct Project coordination meetings at weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.

c. Review present and future needs of each contractor present, including the following:

- 1) Interface requirements.
- 2) Sequence of operations.
- 3) Status of submittals.
- 4) Deliveries.
- 5) Site utilization.
- 6) Temporary facilities and controls.
- 7) Work hours.
- 8) Hazards and risks.
- 9) Progress cleaning.
- 10) Quality and work standards.
- 11) Change Orders.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 31 00**

**SECTION 01 33 00 - SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
  - 1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
  - 2. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 3. Section 01 79 00 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

**1.3 DEFINITIONS**

- A. Action Submittals: Written and graphic information and physical samples that require Architect's and Construction Manager's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

**1.4 ACTION SUBMITTALS**

- A. Submittal Schedule: See submittal section of project schedule in 01 33 00 for submittal requirements. Submit a schedule of submittals, arranged in chronological order by dates required by construction

schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections. Contractor to provide timeframes within 3 days of contract award.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
  - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
3. Format: Arrange the following information in a tabular format:
  - a. Scheduled date for first submittal.
  - b. Specification Section number and title.
  - c. Submittal category: Action; informational.
  - d. Name of subcontractor.
  - e. Description of the Work covered.
  - f. Scheduled date for Architect's and Construction Manager's final release or approval.
  - g. Scheduled date of fabrication.

#### **1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect and Construction Manager reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  1. Initial Review: Allow 7 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Construction Manager will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 7 days for review of each resubmittal.

4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 7 days for review of each submittal. Submittal will be returned to Construction Manager, through Architect, before being returned to Contractor.
- C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
    - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
  3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect and Construction Manager.
  4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name of Construction Manager.
    - e. Name of Contractor.
    - f. Name of firm or entity that prepared submittal.
    - g. Names of subcontractor, manufacturer, and supplier.
    - h. Category and type of submittal.
    - i. Submittal purpose and description.
    - j. Specification Section number and title.
    - k. Specification paragraph number or drawing designation and generic name for each of multiple items.
    - l. Drawing number and detail references, as appropriate.
    - m. Location(s) where product is to be installed, as appropriate.
    - n. Related physical samples submitted directly.
    - o. Indication of full or partial submittal.
    - p. Transmittal number, numbered consecutively.
    - q. Submittal and transmittal distribution record.
    - r. Other necessary identification.
    - s. Remarks.
- D. Options: Identify options requiring selection by Architect.
- E. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect and Construction Manager on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- F. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.

2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked with approval notation from Architect's and Construction Manager's action stamp.
- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- H. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's and Construction Manager's action stamp.

## **PART 2 - PRODUCTS**

### **2.1 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Post electronic submittals as PDF electronic files to the Construction Manager's site as specified in the contract documents.
    - a. Architect, through Construction Manager, will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
  2. Action Submittals: Submit three paper copies of each submittal unless otherwise indicated. Architect, through Construction Manager, will return two copies.
  3. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Architect and Construction Manager will not return copies.
  4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
    - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Standard color charts.
    - c. Statement of compliance with specified referenced standards.
    - d. Notation of coordination requirements.
    - e. Availability and delivery time information.
  4. For equipment, include the following in addition to the above, as applicable:

- a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before or concurrent with Samples.
  6. Submit Product Data in the following format:
    - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
  2. Submit Shop Drawings in the following format:
    - a. PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of applicable Specification Section.
    - e. Specification paragraph number and generic name of each item.
  3. Provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
  4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

- a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, through Construction Manager, will return submittal with options selected.
- 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - a. Number of Samples: Submit two sets of Samples. Architect and Construction Manager will retain two Sample sets.
    - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
    - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
  - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
  - 2. Manufacturer and product name, and model number if applicable.
  - 3. Number and name of room or space.
  - 4. Location within room or space.
  - 5. Submit product schedule in the following format:
    - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 01 31 00 "Project Management and Coordination."
- G. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 29 00 "Payment Procedures."
- H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 40 00 "Quality Requirements."
- I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 "Closeout Procedures."
- J. Maintenance Data: Comply with requirements specified in Section 01 78 23 "Operation and Maintenance Data."
- K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

- L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- R. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

## **2.2 DELEGATED-DESIGN SERVICES**

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## **PART 3 - EXECUTION**

### **3.1 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect and Construction Manager.

- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

**3.2 ARCHITECT'S AND CONSTRUCTION MANAGER'S ACTION**

- A. Action Submittals: Architect and Construction Manager will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect and Construction Manager will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
- B. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect and Construction Manager.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

**END OF SECTION 01 33 00**

**SECTION 01 40 00 - QUALITY REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for testing and inspecting allowances.

**1.3 DEFINITIONS**

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Construction Manager.
- C. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

#### **1.4 CONFLICTING REQUIREMENTS**

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

#### **1.5 REPORTS AND DOCUMENTS**

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.

13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical representative making report.
  2. Statement on condition of substrates and their acceptability for installation of product.
  3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.

## 1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

- F. **Manufacturer's Technical Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- G. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. **Mockups:** Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect or Construction Manager.
  - 2. Notify Architect and Construction Manager seven days in advance of dates and times when mockups will be constructed.
  - 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at Project.
  - 4. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 5. Obtain Architect's and Construction Manager's approval of mockups before starting work, fabrication, or construction.
    - a. Allow seven days for initial review and each re-review of each mockup.
  - 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.

## 1.7 QUALITY CONTROL

- A. **Contractor Responsibilities:** Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
  - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  - 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
  - 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  - 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 "Submittal Procedures."

- C. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect, Construction Manager, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - 1. Notify Architect, Construction Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  - 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  - 4. Facilities for storage and field curing of test samples.
  - 5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  - 6. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## **1.8 SPECIAL TESTS AND INSPECTIONS**

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.1 TEST AND INSPECTION LOG**

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and Construction Manager's reference during normal working hours.

**3.2 REPAIR AND PROTECTION**

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 73 00 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION 01 40 00**

**SECTION 01 42 00 - REFERENCES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 DEFINITIONS**

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

**1.3 INDUSTRY STANDARDS**

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

#### 1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; [www.aabc.com](http://www.aabc.com).
2. AAMA - American Architectural Manufacturers Association; [www.aamanet.org](http://www.aamanet.org).
3. AASHTO - American Association of State Highway and Transportation Officials; [www.transportation.org](http://www.transportation.org).
4. ACI - American Concrete Institute; (Formerly: ACI International); [www.concrete.org](http://www.concrete.org).
5. AEIC - Association of Edison Illuminating Companies, Inc. (The); [www.aeic.org](http://www.aeic.org).
6. AF&PA - American Forest & Paper Association; [www.afandpa.org](http://www.afandpa.org).
7. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); [www.ahrinet.org](http://www.ahrinet.org).
8. AIA - American Institute of Architects (The); [www.aia.org](http://www.aia.org).
9. AISC - American Institute of Steel Construction; [www.aisc.org](http://www.aisc.org).
10. AMCA - Air Movement and Control Association International, Inc.; [www.amca.org](http://www.amca.org).
11. ANSI - American National Standards Institute; [www.ansi.org](http://www.ansi.org).
12. APA - APA - The Engineered Wood Association; [www.apawood.org](http://www.apawood.org).
13. APA - Architectural Precast Association; [www.archprecast.org](http://www.archprecast.org).
14. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
15. ARI - American Refrigeration Institute; (See AHRI).
16. ASCE - American Society of Civil Engineers; [www.asce.org](http://www.asce.org).
17. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
18. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; [www.ashrae.org](http://www.ashrae.org).
19. ASME - ASME International; (American Society of Mechanical Engineers); [www.asme.org](http://www.asme.org).
20. ASTM - ASTM International; (American Society for Testing and Materials International); [www.astm.org](http://www.astm.org).
21. AWI - Architectural Woodwork Institute; [www.awinet.org](http://www.awinet.org).
22. AWMAC - Architectural Woodwork Manufacturers Association of Canada; [www.awmac.com](http://www.awmac.com).
23. AWPA - American Wood Protection Association; (Formerly: American Wood-Preservers' Association); [www.awpa.com](http://www.awpa.com).
24. AWS - American Welding Society; [www.aws.org](http://www.aws.org).
25. AWWA - American Water Works Association; [www.awwa.org](http://www.awwa.org).
26. BHMA - Builders Hardware Manufacturers Association; [www.buildershardware.com](http://www.buildershardware.com).
27. BIA - Brick Industry Association (The); [www.gobrick.com](http://www.gobrick.com).
28. BICSI - BICSI, Inc.; [www.bicsi.org](http://www.bicsi.org).
29. BOCA - BOCA; (Building Officials and Code Administrators International Inc.); (See ICC).
30. CDA - Copper Development Association; [www.copper.org](http://www.copper.org).
31. CEA - Consumer Electronics Association; [www.ce.org](http://www.ce.org).
32. CFSEI - Cold-Formed Steel Engineers Institute; [www.cfsei.org](http://www.cfsei.org).
33. CIMA - Cellulose Insulation Manufacturers Association; [www.cellulose.org](http://www.cellulose.org).
34. CISCA - Ceilings & Interior Systems Construction Association; [www.cisca.org](http://www.cisca.org).
35. CISPI - Cast Iron Soil Pipe Institute; [www.cispi.org](http://www.cispi.org).
36. CPA - Composite Panel Association; [www.pbmdf.com](http://www.pbmdf.com).
37. CRI - Carpet and Rug Institute (The); [www.carpet-rug.org](http://www.carpet-rug.org).
38. CRSI - Concrete Reinforcing Steel Institute; [www.crsi.org](http://www.crsi.org).

39. CSA - CSA International; (Formerly: IAS - International Approval Services); [www.csa-international.org](http://www.csa-international.org).
40. CSI - Construction Specifications Institute (The); [www.csinet.org](http://www.csinet.org).
41. CWC - Composite Wood Council; (See CPA).
42. DASMA - Door and Access Systems Manufacturers Association; [www.dasma.com](http://www.dasma.com).
43. DHI - Door and Hardware Institute; [www.dhi.org](http://www.dhi.org).
44. ECA - Electronic Components Association; [www.ec-central.org](http://www.ec-central.org).
45. ECAMA - Electronic Components Assemblies & Materials Association; (See ECA).
46. EIA - Electronic Industries Alliance; (See TIA).
47. FM Approvals - FM Approvals LLC; [www.fmglobal.com](http://www.fmglobal.com).
48. FM Global - FM Global; (Formerly: FMG - FM Global); [www.fmglobal.com](http://www.fmglobal.com).
49. GA - Gypsum Association; [www.gypsum.org](http://www.gypsum.org).
50. GANA - Glass Association of North America; [www.glasswebsite.com](http://www.glasswebsite.com).
51. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
52. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
53. HPVA - Hardwood Plywood & Veneer Association; [www.hpva.org](http://www.hpva.org).
54. IAS - International Approval Services; (See CSA).
55. ICC - International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
56. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); [www.ieee.org](http://www.ieee.org).
57. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); [www.ies.org](http://www.ies.org).
58. IESNA - Illuminating Engineering Society of North America; (See IES).
59. IEST - Institute of Environmental Sciences and Technology; [www.iest.org](http://www.iest.org).
60. IGMA - Insulating Glass Manufacturers Alliance; [www.igmaonline.org](http://www.igmaonline.org).
61. MMPA - Moulding & Millwork Producers Association; (Formerly: Wood Moulding & Millwork Producers Association); [www.wmmpa.com](http://www.wmmpa.com).
62. MPI - Master Painters Institute; [www.paintinfo.com](http://www.paintinfo.com).
63. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; [www.mss-hq.org](http://www.mss-hq.org).
64. NACE - NACE International; (National Association of Corrosion Engineers International); [www.nace.org](http://www.nace.org).
65. NAIMA - North American Insulation Manufacturers Association; [www.naima.org](http://www.naima.org).
66. NCMA - National Concrete Masonry Association; [www.ncma.org](http://www.ncma.org).
67. NEMA - National Electrical Manufacturers Association; [www.nema.org](http://www.nema.org).
68. NETA - InterNational Electrical Testing Association; [www.netaworld.org](http://www.netaworld.org).
69. NFPA - NFPA; (National Fire Protection Association); [www.nfpa.org](http://www.nfpa.org).
70. NFPA - NFPA International; (See NFPA).
71. NFRC - National Fenestration Rating Council; [www.nfrc.org](http://www.nfrc.org).
72. NRCA - National Roofing Contractors Association; [www.nrca.net](http://www.nrca.net).
73. NSPE - National Society of Professional Engineers; [www.nspe.org](http://www.nspe.org).
74. PDI - Plumbing & Drainage Institute; [www.pdionline.org](http://www.pdionline.org).
75. RCSC - Research Council on Structural Connections; [www.boltcouncil.org](http://www.boltcouncil.org).
76. RFCI - Resilient Floor Covering Institute; [www.rfci.com](http://www.rfci.com).
77. SDI - Steel Door Institute; [www.steeldoor.org](http://www.steeldoor.org).
78. SEFA - Scientific Equipment and Furniture Association; [www.sefalabs.com](http://www.sefalabs.com).
79. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
80. SJI - Steel Joist Institute; [www.steeljoist.org](http://www.steeljoist.org).
81. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; [www.smacna.org](http://www.smacna.org).
82. TCNA - Tile Council of North America, Inc.; (Formerly: Tile Council of America); [www.tileusa.com](http://www.tileusa.com).
83. TMS - The Masonry Society; [www.masonrysociety.org](http://www.masonrysociety.org).
84. UBC - Uniform Building Code; (See ICC).
85. UL - Underwriters Laboratories Inc.; [www.ul.com](http://www.ul.com).
86. USGBC - U.S. Green Building Council; [www.usgbc.org](http://www.usgbc.org).

- 87. WDMA - Window & Door Manufacturers Association; [www.wdma.com](http://www.wdma.com).
- 88. WI - Woodwork Institute; (Formerly: WIC - Woodwork Institute of California); [www.wicnet.org](http://www.wicnet.org).
- 89. WMMPA - Wood Moulding & Millwork Producers Association; (See MMPA).

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

- 1. ICC - International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
- 2. ICC-ES - ICC Evaluation Service, LLC; [www.icc-es.org](http://www.icc-es.org).

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 42 00**

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

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.
  - 2. 00 24 00 BID PACKAGES for use charge responsibility.

**1.3 USE CHARGES**

- A. General: Installation and removal of temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, occupants of Project, testing agencies, and authorities having jurisdiction. Use Charges by owner.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- C. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste handling procedures.
  - 5. Other dust-control measures.

**1.5 QUALITY ASSURANCE**

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- A. Regulations: Comply with industry standards and applicable laws and regulations

**1.6 PROJECT CONDITIONS**

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches (914 by 1624 mm).
- B. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

**2.2 EQUIPMENT**

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutdown. Configure to run continuously.

**PART 3 - EXECUTION****3.1 INSTALLATION, GENERAL**

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

**3.2 TEMPORARY UTILITY INSTALLATION**

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- C. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
  - 2. Install lighting for Project identification sign.

**3.3 OPERATION, TERMINATION, AND REMOVAL**

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
  
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

**END OF SECTION 01 50 00**

**SECTION 01 60 00 - PRODUCT REQUIREMENTS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for products selected under an allowance.
  - 2. Section 01 23 00 "Alternates" for products selected under an alternate.
  - 3. Section 01 25 00 "Substitution Procedures" for requests for substitutions.
  - 4. Section 01 42 00 "References" for applicable industry standards for products specified.

**1.3 DEFINITIONS**

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

**1.4 ACTION SUBMITTALS**

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
  2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor through Construction Manager of approval or rejection of proposed comparable product request within 5 days of receipt of request, or two days of receipt of additional information or documentation, whichever is later.
    - a. Form of Approval: As specified in Section 01 33 00 "Submittal Procedures."
    - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.

### 1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

### 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.
  2. Store materials in a manner that will not endanger Project structure.
  3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  6. Protect stored products from damage and liquids from freezing.

**1.7 PRODUCT WARRANTIES**

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
  2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  2. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."

**PART 2 - PRODUCTS****2.1 COMPARABLE PRODUCTS**

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
  5. Samples, if requested.

**PART 3 - EXECUTION (Not Used)****END OF SECTION 01 60 00**

**SECTION 01 73 00 - EXECUTION****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. Installation of the Work.
  - 4. Cutting and patching.
  - 5. Coordination of Owner-installed products.
  - 6. Progress cleaning.
  - 7. Starting and adjusting.
  - 8. Protection of installed construction.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for limits on use of Project site.
  - 2. Section 01 33 00 "Submittal Procedures" for submitting surveys.
  - 3. Section 02 41 19 "Selective Demolition" for demolition and removal of selected portions of the building.
  - 4. Section 07 84 13 "Penetration Firestopping" for patching penetrations in fire-rated construction.

**1.3 DEFINITIONS**

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

**1.4 QUALITY ASSURANCE**

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.

2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
  3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
  4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
  2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

- C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### **3.2 PREPARATION**

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 01 31 00 "Project Management and Coordination."

### **3.3 CONSTRUCTION LAYOUT**

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Construction Manager promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

### **3.4 INSTALLATION**

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### **3.5 CUTTING AND PATCHING**

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 10 00 "Summary."

- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  5. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

**3.6 PROGRESS CLEANING**

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
    - a. Use containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 19 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

**3.7 STARTING AND ADJUSTING**

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 01 91 13 "General Commissioning Requirements."

- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Section 01 40 00 "Quality Requirements."

**3.8 PROTECTION OF INSTALLED CONSTRUCTION**

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

**END OF SECTION 01 73 00**

**SECTION 01 73 10 - CUTTING AND PATCHING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes procedural requirements for cutting and patching.
- B. See individual Sections for requirements that affect maintaining existing warranties or quality control limitations.

**1.2 DEFINITIONS**

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

**1.3 QUALITY ASSURANCE**

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety. Operating elements include the following:
  - 1. Primary operational systems and equipment.
  - 2. Fire-suppression systems.
  - 3. Mechanical systems piping and ducts.
  - 4. Control systems.
  - 5. Communication systems.
  - 6. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity that results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
  - 1. Water, moisture, or vapor barriers.
  - 2. Membranes and flashings.
  - 3. Exterior curtain-wall construction.
  - 4. Equipment supports.
  - 5. Piping, ductwork, vessels, and equipment.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in

a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
  - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
  - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

### **3.3 PERFORMANCE**

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.

If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
  5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  6. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
  2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

**END OF SECTION 01 73 10**

**SECTION 01 77 00 - CLOSEOUT PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.
- B. Related Requirements:
  - 1. Section 01 73 00 "Execution" for progress cleaning of Project site.
  - 2. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 3. Section 01 79 00 "Demonstration and Training" for requirements for instructing Owner's personnel.

**1.3 ACTION SUBMITTALS**

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

**1.4 CLOSEOUT SUBMITTALS**

- A. Certificate of Insurance: For continuing coverage.

**1.5 MAINTENANCE MATERIAL SUBMITTALS**

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

**1.6 SUBSTANTIAL COMPLETION PROCEDURES**

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for final completion.

**1.7 FINAL COMPLETION PROCEDURES**

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
  - 1. Submit a final Application for Payment according to Section 01 29 00 "Payment Procedures."
  - 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

**1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)**

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.

- b. Date.
- c. Name of Architect and Construction Manager.
- d. Name of Contractor.
- e. Page number.

### **1.9 SUBMITTAL OF PROJECT WARRANTIES**

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
  - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
  - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## **PART 3 - EXECUTION**

### **3.1 FINAL CLEANING**

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

- b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
- c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- d. Remove tools, construction equipment, machinery, and surplus material from Project site.
- e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- g. Sweep concrete floors broom clean in unoccupied spaces.
- h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
- i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
- j. Remove labels that are not permanent.
- k. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- l. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- m. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
- n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
- o. Leave Project clean and ready for occupancy.

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
  - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

**END OF SECTION 01 77 00**

**SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory.
  - 2. Operation manuals for systems, subsystems, and equipment.
  - 3. Product maintenance manuals.
  - 4. Systems and equipment maintenance manuals.
- B. Related Requirements:
  - 1. Section 01 33 00 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  - 2. Section 01 91 13 "General Commissioning Requirements" for verification and compilation of data into operation and maintenance manuals.

**1.3 DEFINITIONS**

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

**1.4 CLOSEOUT SUBMITTALS**

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
  - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
  - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.

- a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
  - b. Enable inserted reviewer Comments on draft submittals.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

## **PART 2 - PRODUCTS**

### **2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY**

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
1. List of documents.
  2. List of systems.
  3. List of equipment.
  4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

### **2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS**

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
1. Title page.
  2. Table of contents.
  3. Manual contents.
- B. Title Page: Include the following information:
1. Subject matter included in manual.
  2. Name and address of Project.

3. Name and address of Owner.
  4. Date of submittal.
  5. Name and contact information for Contractor.
  6. Name and contact information for Construction Manager.
  7. Name and contact information for Architect.
  8. Name and contact information for Commissioning Authority.
  9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
  2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
    - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.

**2.3 OPERATION MANUALS**

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  2. Performance and design criteria if Contractor has delegated design responsibility.
  3. Operating standards.
  4. Operating procedures.
  5. Operating logs.
  6. Wiring diagrams.
  7. Control diagrams.
  8. Piped system diagrams.
  9. Precautions against improper use.
  10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
  2. Manufacturer's name.
  3. Equipment identification with serial number of each component.
  4. Equipment function.
  5. Operating characteristics.
  6. Limiting conditions.
  7. Performance curves.
  8. Engineering data and tests.
  9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
  2. Equipment or system break-in procedures.
  3. Routine and normal operating instructions.
  4. Regulation and control procedures.
  5. Instructions on stopping.
  6. Normal shutdown instructions.
  7. Seasonal and weekend operating instructions.
  8. Required sequences for electric or electronic systems.
  9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

**2.4 PRODUCT MAINTENANCE MANUALS**

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

## **2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS**

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
- C. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
  - 1. Test and inspection instructions.
  - 2. Troubleshooting guide.
  - 3. Precautions against improper maintenance.
  - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - 5. Aligning, adjusting, and checking instructions.
  - 6. Demonstration and training video recording, if available.

- D. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
  - 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  - 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- E. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

### **PART 3 - EXECUTION**

#### **3.1 MANUAL PREPARATION**

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
  - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
  - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
  - 1. Do not use original project record documents as part of operation and maintenance manuals.
  - 2. Comply with requirements of newly prepared record Drawings in Section 01 78 39 "Project Record Documents."

#### **END OF SECTION 01 78 23**

**SECTION 01 78 39 - PROJECT RECORD DOCUMENTS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for project record documents, including the following:
  - 1. Record Drawings.
  - 2. Miscellaneous record submittals.
- B. Related Requirements:
  - 1. Section 01 73 00 "Execution" for final property survey.
  - 2. Section 01 77 00 "Closeout Procedures" for general closeout procedures.
  - 3. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.

**1.3 CLOSEOUT SUBMITTALS**

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of record Drawings as follows:
    - a. Initial Submittal:
      - 1) Submit one paper-copy set(s) of marked-up record prints.
      - 2) Submit PDF electronic files of scanned record prints.
      - 3) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
    - b. Final Submittal:
      - 1) Submit PDF electronic files of scanned record prints and three set(s) of prints.
      - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit one paper copy of Project's Specifications, including addenda and contract modifications.
- C. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy of each submittal.

- D. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

## PART 2 - PRODUCTS

### 2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding archive photographic documentation.
  2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Depths of foundations below first floor.
    - d. Locations and depths of underground utilities.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Changes made by Change Order or Construction Change Directive.
    - k. Details not on the original Contract Drawings.
    - l. Field records for variable and concealed conditions.
    - m. Record information on the Work that is shown only schematically.
  3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect and Construction Manager. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.

2. Architect will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.
  - a. See Section 01 33 00 "Submittal Procedures" for requirements related to use of Architect's digital data files.
  - b. Architect will provide data file layer information. Record markups in separate layers.
- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  3. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect and Construction Manager.
    - e. Name of Contractor.

## **2.2 MISCELLANEOUS RECORD SUBMITTALS**

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as paper copy.
  1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

## **PART 3 - EXECUTION**

### **3.1 RECORDING AND MAINTENANCE**

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's and Construction Manager's reference during normal working hours.

**END OF SECTION 01 78 39**

**SECTION 01 79 00 - DEMONSTRATION AND TRAINING**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Demonstration of operation of systems, subsystems, and equipment.
  - 2. Training in operation and maintenance of systems, subsystems, and equipment.
  - 3. Demonstration and training video recordings.

**1.3 INFORMATIONAL SUBMITTALS**

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
  - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Attendance Record: For each training module, submit list of participants and length of instruction time.
- C. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

**1.4 CLOSEOUT SUBMITTALS**

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
  - 1. Identification: On each copy, provide an applied label with the following information:
    - a. Name of Project.
    - b. Name and address of videographer.
    - c. Name of Architect.
    - d. Name of Construction Manager.
    - e. Name of Contractor.
    - f. Date of video recording.

2. Transcript: Prepared and bound in format matching operation and maintenance manuals. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of Project and date of video recording on each page.
3. At completion of training, submit complete training manual(s) for Owner's use in PDF electronic file format on compact disc.

#### **1.5 QUALITY ASSURANCE**

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 01 40 00 "Quality Requirements," experienced in operation and maintenance procedures and training.
- C. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.

#### **1.6 COORDINATION**

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

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

### **PART 3 - EXECUTION**

#### **3.1 PREPARATION**

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 01 78 23 "Operation and Maintenance Data."
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - 1. Owner will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  - 1. Schedule training with Owner, through Construction Manager, with at least seven days' advance notice.
- D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. Video: Provide minimum 1080p (1920x 1080), or higher, video resolution converted to format file type acceptable to Owner, on electronic media.

END OF SECTION 01 79 00