

ISSUE FOR DOB: APRIL 22, 2022

PROJECT MANUAL

VOLUME 1 OF 1: DIVISIONS 00 – 33

TOWN/VILLAGE of MOUNT KISCO Village Hall & Old Post Office Exterior Work

CONTRACT 2022.07

The design of this project conforms to applicable provisions of the New York State Uniform Fire Prevention and Building.



DOCUMENT 000101 - PROJECT TITLE PAGE

1.1 PROJECT MANUAL VOLUME 1

- A. Project Name: Village Hall & Old Post Office Exterior Work
- B. Owner:
 - 1. The Village/Town of Mount Kisco.
 - 2. Mount Kisco NY 10549.
- C. Owner Project No. 2022-07
- D. Architect Project No. 18-09.02
- E. Architect:
 - 1. Bar Down Studio, Inc.
 - 2. PO Box 721.
 - 3. Beacon NY 12508.
 - 4. Phone: 845-559-3187.
 - 5. Web Site: www.bardownstudio.com.
- F. Issued: April 19, 2022
- G. Copyright 2022, Bar Down Studio. All rights reserved.

END OF DOCUMENT 000101

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DOCUMENT 000107 - SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect:

1. Dana Hochberg, R.A.
2. 037172.
3. Responsible for Divisions 01-33 Sections except where indicated as prepared by other design professionals of record.

END OF DOCUMENT 000107



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END OF SECTION 000110

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1.1 LIST OF DRAWINGS

- A. Drawings: Drawings consist of the Contract Drawings listed on the Table of Contents page of the separately bound drawing set titled 'DPW Garage Addition & Renovation, Construction Documents, dated April 22, 2022, as modified by subsequent Addenda and Contract modifications.

END OF SECTION 000115

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**NOTICE TO BIDDERS
VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
MOUNT KISCO, NEW YORK 10549
Telephone: (914) 864-0001; Fax: (914) 241-9018**

Sealed proposals for performing the work herein described will be received by the Village/Town of Mount Kisco, NY, at the Office of the Village Manager, Village Hall, 104 E Main Street, Mount Kisco, NY 10549, until **May 17, 2022 at 10:00 A.M.** and immediately thereafter the bids will be opened and read aloud. Bidders are invited to view the opening in person and via Zoom Meeting teleconference, Meeting ID: 889 0003 5963.

The work consists of furnishing all labor, materials and equipment necessary for exterior improvements at Village Hall and the Old Post Office in accordance with the plans and specifications. The project is located at 104 E Main Street and 120 E Main Street, Mount Kisco, NY 10549 and must be completed by **September 30, 2022.**

Complete digital sets of Bidding Documents, drawings and specifications, may be obtained online as a download for a non-refundable fee of (\$49), or viewed at no charge, at www.usinglesspaper.com under 'Public Projects.'

Bids shall be made on the Proposal Forms furnished with the Specifications and must be accompanied by a Bid Bond acceptable to the Village or a certified cashier's check drawn on a solvent bank in the amount of not less than 5% of the total amount of the Bid. Checks shall be made payable to the Village/Town of Mount Kisco, NY, and are to be held by the Village as a guarantee for the proper execution and delivery of the Contract and bonds to secure the faithful performance thereof. In default of such execution and delivery of Contract and Bonds, the amount of the deposit represented by the check shall be forfeited to and retained by the Village/Town of Mount Kisco as liquidated damages.

Proposals may be submitted via hard copy by mail only, and shall be enclosed in a sealed envelope bearing the name and address of the Bidder, addressed to the Village/Town of Mount Kisco, Village Hall, 104 E Main Street, Mount Kisco, NY and endorsed "VILLAGE HALL/OLD POST OFFICE EXTERIOR WORK."

The Village Manger reserves the right to reject any and all Bids, to waive any informality in any Bid, and to award the Contract to other than the lowest Bidder if deemed in the best interest of the Village to do so.

Edward W. Brancati, Village Manger
Mount Kisco, NY

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SECTION 002113 - INSTRUCTIONS TO BIDDERS

PART 1 - DEFINITIONS

- A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement to Bid, Instruction to Bidders, the Bid Form, Supplementary Bid Forms and other sample bid and contract forms.
- B. The Contract Documents include the executed Contract Forms between the Owner and Contractor and that Agreement's Exhibits, Contractor's executed Bid Form, executed Supplementary Bid Forms, Conditions of the Contract (General and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.
- C. Definitions set forth in the General Conditions of the Contract of Construction, or in other Contract Documents are applicable to the Bidding Documents.
- D. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- E. A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
 - 1. Wherever the word "Bid" occurs in the documents, it refers to Bidders Proposal.
- F. The Base Bid is an amount stated on the Bid for which the Bidder offers to perform the Work described in the Bidding Documents.
- G. An Alternate is an amount stated on the Bid Form to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted by the Owner.
- H. A Unit Price is an amount stated on the Bid Form as a price per unit of measurement for materials, equipment or services for a portion of the Work as described in the Bidding Documents.
- I. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
- J. 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.

PART 2 - BIDDER'S REPRESENTATIONS

- A. The Bidder by making a Bid represents that:
 - 1. The Bidder has read and understands the Bidding Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being Bid concurrently or presently under construction.
 - 2. The Bid is made in compliance with the Bidding Documents.
 - 3. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
 - 4. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

- B. Each Bidder is required to form an individual opinion of the quantities and character of construction work by personal examination of the site and all existing facilities where the project work is to be done, and of the plans and specifications relating to it by such means as is preferred. Each Bidder shall inspect accessible concealed areas of existing construction, provided no significant permanent damage is inflicted upon the property. Lack of knowledge about conditions in accessible concealed areas shall not be the basis for additional cost claims at a later time.

PART 3 - BIDDING DOCUMENTS

3.1 COPIES

- A. Bidding Documents are available as detailed in the Advertisement for Bids.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 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. All reports shall be in writing.
- B. No interpretation of the meaning of the Bidding Documents, existing conditions, or of the scope of Work will be made verbally. Provide every request for such interpretation in writing, addressed to the Architect and to be given consideration must be received at least eight (8) working days prior to the date of the Bid Opening.
- 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 are not required to rely upon them.
- D. The Bidding Documents for this project have been prepared using certain existing construction documents furnished by the Owner, which pertain to the construction of the existing conditions, and limited observations obtained by the Architect at the project site.
 - 1. More extensive investigations of existing conditions, including disassembly or testing of existing building components, was not undertaken by the Architect.
 - 2. Portrayal of such existing conditions obscured or concealed from the Owner or Architect's view prior to the start of this Project's construction activities, is based on reasonable implications and assumptions. The Owner and Architect do not imply or guarantee to the Bidders, in any way, that such portrayals are accurate or true existing conditions.
- E. If there is any inconsistency in the Drawings or between the Drawings and the Specifications or between or within any of the Contract Documents, unless otherwise ordered in writing by the Owner, the Contractor shall provide or abide by the better quality of, or the greater quantity of, Work, materials or services for the benefit of the Owner.

3.3 EQUIVALENTS

- A. Each Bidder shall base his Bid upon the materials and equipment described in the Bidding Documents to the fullest extent possible.
- B. In the specifications, two or more kinds, types, brands, or manufacturers or materials may be named. They shall be regarded as the required standard of quality, and overall, are judged to be equivalent by the Architect. The Bidder may select one of these named items as the basis for his Bid or, if the Bidder desires to use any other kind, type, brand, or manufacturer or material other than those named in the specification,

he shall indicate in writing, when requested, and prior to the award of the Contract, what kind, type, brand, or manufacturer he proposes in lieu of the named specified item(s).

3.4 ADDENDA

- A. All bid addenda will be transmitted to plan holders via email to registered Plan Holders.
- B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on File for that purpose.
- C. Addenda will not be issued later than five (5) working days prior to the time specified for receipt of Bids, except any Addendum withdrawing the request for Bids or one which includes postponement of the time for receipt of Bids.
- D. Each Bidder shall ascertain upon submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt on the Bid Form.

3.5 TAX LIABILITY

- A. Bidders are exempt from payment of manufacturer's excise taxes for materials purchased for the exclusive use of the Owner, provided that manufacturer has complied with rules and regulation of the Commissioner of Internal Revenue Service.
- B. New York State Sales Tax does not apply to this project. Contractors are exempt from payment on purchase of materials for the execution of this Contract and such taxes shall not be included in Bids. Exemption Certificates will be provided upon request.
- C. All other taxes shall be included in the Bid.

3.6 PRE-BID CONFERENCE

- A. There will be a Pre-bid Conference as detailed in the Preliminary Schedules. A lack of representation at the Pre-bid Conference will not be justification for additional costs due to unforeseen conditions during the construction phases of the Contract.

PART 4 - BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- A. Bids shall be submitted on forms identical to the Bid Forms contained in this Project Manual, or submitted using unaltered and legible copies thereof.
- B. All blanks on the Bid Form shall be legible executed in a non-erasable medium.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in word shall govern.
- D. Interlineations, alterations and erasures must be initialed by the signer of the Bid.
- E. Bid all requested alternates. If no change in the Base Bid is required, enter "No Change."
- F. Each copy of the Bid Form shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each Bid Form copy shall be signed by the person or persons legally authorized to bind the Bidder to a Contract. A

Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

4.2 BID SECURITY

- A. Each Bid must be accompanied by a certified bank check of the Bidder, or a Bid Bond prepared by a surety company licensed in New York State.
 - 1. Bid Security shall be provided in the amount of five (5) percent of the dollar amount of the Base Bid.
 - 2. Bid security shall be payable to The Village of Mt. Kisco.
 - 3. If certified check is utilized, the Bidder shall provide written confirmation from a licensed New York State Surety company that Performance and Payment Bonds will be available to said Bidder for this project.
 - 4. The apparent successful Bidder, upon failure or refusal to furnish the required Performance and Payment Bonds and execute a Contract within forty-five (45) calendar days after receipt of notice of the acceptance of Bid, shall forfeit the Bid Security as liquidated damages for such failure to refusal, and not as a penalty.
 - 5. The successful Bidder shall have the Bid Security returned upon execution of an Owner/Contractor Agreement.
 - 6. Unsuccessful Bidders shall have their Bid Security returned following the execution of the Owner/Contractor Agreement or the 45 day period following the Bid Opening, whichever occurs first.
 - 7. The Bid Security shall not be forfeited to the Owner in the event the Owner fails to comply with subparagraph 6.2.
- B. Surety Bond shall be written on AIA Document A310, Bid Bond, and the attorney-in-fact that executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.
- C. Owner will have the right to retain the Bid Security of Bidders to whom an award is being considered until either:
 - 1. The Contract has been executed and bonds, when required, have been furnished;
 - 2. The specified time has elapsed so that Bids may be withdrawn or;
 - 3. All Bids have been rejected.

4.3 SUBMISSION OF BIDS

- A. All copies of the Bid, the Bid Security, 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 Contract 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.
 - 1. If Bidder submits for different Contracts, each shall be submitted individually and so labeled for that Contract.
- B. Bids shall be deposited at the designated location prior to the time and date indicated in the Invitation to Bidders for receipt of Bids. Bids received after the time and date for receipt of Bids will be rejected and returned unopened.
 - 1. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
 - 2. Oral, telephonic, telegraphic, facsimile or other electronically transmitted Bids will not be considered.
- C. Bids not exhibiting original signatures or seals will not be accepted as a responsive Bid.

D. Bids shall be submitted in duplicate. Executed forms required for each submitted Bid are as follows:

1. Bid Form and Supplements
2. Resolution
3. Iran Divestment Act Certification
4. Bid Security
5. Certification of Bidder Responsibility

4.4 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. No Bidder may withdraw a Bid within the forty-five (45) day period following the time of the Bid Opening.
- 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.

PART 5 - CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

- A. At the discretion of the Owner, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

5.2 REJECTION OF BIDS

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

5.3 AWARD OF BID

- 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. 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 interest.
- 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 lowest Bid on the basis of the sum of the Base Bid and Alternates accepted.

PART 6 - SUPPLEMENTARY BID INFORMATION

6.1 CONTRACTOR'S QUALIFICATION STATEMENT

- A. Bidders to whom award of a Contract is under consideration shall submit to the Architect, within three (3) calendar days, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

6.2 OWNERS FINANCIAL CAPABILITY

- A. The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven (7) days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

6.3 SUBMITTALS

- A. Within three (3) calendar days following the Bid Opening time, the apparent lowest Bidder, shall furnish to the Owner through the Architect the following information:
 - 1. Subcontractor list.
 - 2. Itemized identification of Work to be self-performed.
 - 3. Substitution list.
 - 4. Material and Equipment List.
 - 5. Schedule of Values.
 - 6. Cost breakdown.
- B. The Bidder will be required to establish to the satisfaction of the Owner and Architect the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
- C. Upon request only, the apparent second and third low Bidders shall be prepared to submit the information of paragraphs 6.1 and 6.3.A.
- D. Prior to the execution of the Contract, the Bidder will be notified in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity. In the event of withdrawal or disqualification, Bid Security will not be forfeited.
- E. 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 whom they were proposed and shall not be changed except with the written consent of the Owner and Architect.
- F. Any Bidder, upon failure to submit the information required in subparagraphs 6.1.A, 6.3.A, and 6.3.B in the allowed time, may have the Bid rejected. In that event, the Bidder shall forfeit the Bid Security to the Owner as liquidated damages for such failure or refusal, and not as penalty.

6.4 BOND REQUIREMENTS

- A. The Owner requires the apparent successful Bidder to furnish and deliver bonds, covering the faithful performance of the Contract Work and payment of all obligations arising thereunder duly executed by the Bidder and a surety company licensed to do business in New York State.
- B. The premiums shall be included in the Bid and paid by the Contractor. The Bidder shall proportionally distribute the costs of such bonds between the Base Bid and any Alternates.

6.5 TIME OF DELIVERY AND FORM OF BONDS

- A. The Bidder shall deliver the required bonds to the Owner through the Architect on or before the time of execution of the Owner/Contractor Agreement. Bonds shall be payable to The Village of Mt. Kisco.
- B. Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.
- C. The bonds shall be dated the same as the Owner/Contractor Agreement.
- D. 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.

PART 7 - FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A. The form of agreement between Owner and Contractor shall be based on the Owner-Contractor Agreement included herein.

END OF SECTION 002113

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SECTION 002600 - PROCUREMENT SUBSTITUTION PROCEDURES

1.1 DEFINITIONS

- A. Procurement Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Procurement and Contracting Documents, submitted prior to receipt of bids.
- B. Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Contract Documents, submitted following Contract award. See Section 012500 "Substitution Procedures" for conditions under which Substitution requests will be considered following Contract award.

1.2 QUALITY ASSURANCE

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

1.3 PROCUREMENT SUBSTITUTIONS

- A. Procurement Substitutions, General: By submitting a bid, the Bidder represents that its bid is based on materials and equipment described in the Procurement and Contracting Documents, including Addenda. Bidders are encouraged to request approval of qualifying substitute materials and equipment when the Specifications Sections list materials and equipment by product or manufacturer name.
- B. Procurement Substitution Requests will be received and considered by Owner when the following conditions are satisfied, as determined by Architect; otherwise requests will be returned without action:
 - 1. Extensive revisions to the Contract Documents are not required.
 - 2. Proposed changes are in keeping with the general intent of the Contract Documents, including the level of quality of the Work represented by the requirements therein.
 - 3. The request is fully documented and properly submitted.

1.4 SUBMITTALS

- A. Procurement Substitution Request: Submit to Architect. Procurement Substitution Request must be made in writing by prime contract Bidder only in compliance with the following requirements:
 - 1. Requests for substitution of materials and equipment will be considered if received no later than 10 days prior to date of bid opening.
 - 2. Submittal Format: Submit three copies of each written Procurement Substitution Request, using CSI Substitution Request Form 1.5C.
 - 3. Submittal Format: Submit Procurement Substitution Request, using format provided on Project Web site.
 - a. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specifications Sections and drawing numbers.
 - b. Provide complete documentation on both the product specified and the proposed substitute, including the following information as appropriate:

- 1) Point-by-point comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
 - 2) Copies of current, independent third-party test data of salient product or system characteristics.
 - 3) Samples where applicable or when requested by Architect.
 - 4) Detailed comparison of significant qualities of the proposed substitute with those of the Work specified. 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.
 - 5) Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - 6) Research reports, where applicable, evidencing compliance with building code in effect for Project, from ICC-ES.
 - 7) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will become necessary to accommodate the proposed substitute.
- c. Provide certification by manufacturer that the substitute proposed is equal to or superior to that required by the Procurement and Contracting Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the application indicated.
 - d. Bidder, in submitting the Procurement Substitution Request, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the Procurement Substitution Request.
- B. Architect's Action:
1. Architect may request additional information or documentation necessary for evaluation of the Procurement Substitution Request. Architect will notify all bidders of acceptance of the proposed substitute by means of an Addendum to the Procurement and Contracting Documents.
- C. Architect's approval of a substitute during bidding does not relieve Contractor of the responsibility to submit required shop drawings and to comply with all other requirements of the Contract Documents.

END OF SECTION 002600

SUBSTITUTION REQUEST FORM (DURING BID)

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 013300.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 013300.
☐ 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 ☐ _____

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SECTION 003113 - PRELIMINARY SCHEDULES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Project Milestone Schedule for project duration.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration.
- C. Event: The starting or ending point of an activity.
- D. Major Area: A story of construction, a separate building, or a similar significant construction element.
- E. Milestone: A key or critical point in time for reference or measurement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Preparation of Prime Contractor Construction Schedule: Refer to Division 01 Sections "Submittals" and "Construction Progress Documentation" for administrative requirements governing preparation and submittal thereof.
- B. Contractors' own preliminary detailed schedule is due at, or prior to the Pre-Construction Conference.
- C. The approved Project Master Schedule shall supersede all previous schedules. Project Master Schedule shall be reviewed bi-weekly and updated as required, with each revision taking precedence over previously issued.

PART 4 - MILESTONE SCHEDULE

4.1 In order to meet the Substantial Completion dates, all overtime costs for extended work hours, Saturdays (and Sundays when required) must be included in the contractor's bid; no special consideration will be given to any contractor that fails to include said costs in his/her bid. Extended work days and/or hours will be required to make up lost time due to weather and other unforeseen occurrences.

A.	Issue for Bid	22 April 2020
B.	Pre-Bid Meeting	27 April 2020 @ 10 a.m.
C.	Bids Due	17 May 2022 @ 10 a.m.
D.	Contract Award/Notice to Proceed	20 May 2022
E.	Mobilization	13 June 2022
F.	Substantial Completion	30 September 2022
G.	Final Completion	28 October 2022

END OF SECTION 013113

DOCUMENT 004116.01 GENERAL CONSTRUCTION BID FORM - STIPULATED SUM (SINGLE CONTRACT)

1.1 BID INFORMATION

- A. Bidder: _____
- B. Project Name: Village Hall & Old Post Office Exterior Work
- C. Project Location: 104 E Main Street & 118 E Main Street, Mount Kisco NY 10549
- D. Owner: The Village/Town of Mount Kisco
- E. Architect: Bar Down Studio, Inc.

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Multiple-Prime (Single-Trade) Contract for General Construction Work: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Bar Down Studio, 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, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____
(Words)
_____ (\$ _____)
(Figures)

2. The above amount may be modified by amounts indicated by the Bidder on the attached Document "Unit Prices Form" and "Alternates Form."

1.3 ALTERNATES

- A. **DELETE/ADD** (Circle one) Alternate GC-1: IGU at Skylight

1. _____
(Words)
_____ (\$ _____)
(Figures)

- B. **DELETE/ADD** (Circle one) Alternate GC-2: Re-solder Dormer Roofs

1. _____
(Words)
_____ (\$ _____)
(Figures)

1.4 UNIT COSTS

DESCRIPTION	UNIT	COST PER UNIT
Masonry repointing	9 sq. ft.	
Wood repair	1 sq. ft.	

1.5 ALLOWANCES: The Bidder affirms that all allowances listed in the Bidding Documents have been included in the Base Bid and include the overhead and profit for said Allowance

1.6 BID GUARANTEE: The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within (10) five days after a written Notice of Award, if offered within (60) sixty 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, in the following amount constituting five percent (5%) of the Base Bid amount above:

1. _____
(Words)

(\$ _____)
(Figures)

In the event Owner does not offer 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: The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Owner, and shall fully complete the Work by October 28, 2022.

1.8 ACKNOWLEDGEMENT OF ADDENDA: 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 _____

1.9 BID SUPPLEMENTS: The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Bond Form (AIA Document A310)
2. Contractor's Qualification Statement (AIA Document A305)
3. Non-Collusion Affidavit
4. Iran Divestment Act

1.10 CONTRACTOR'S LICENSE: The undersigned further states that it is a duly licensed contractor, for the type of work proposed, All required license(s) as necessary to complete work have been applied and paid for.

1.11 SUBMISSION OF BID

A. Respectfully submitted this day of _____, 2022.

- B. Submitted By: _____
(Name of firm or corporation)
- C. Authorized Signature: _____
(Handwritten signature)
- D. Signed By: _____
(Type or print name)
- E. Title: _____
- F. Street Address: _____
- G. City, State Zip: _____
- H. Phone: _____
- I. License No.: _____
- J. Federal ID No: _____

END OF SECTION 004116.01

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DOCUMENT 004116.02 PAINTING CONTRACT BID FORM - STIPULATED SUM (SINGLE CONTRACT)

1.1 BID INFORMATION

- A. Bidder: _____
- B. Project Name: Village Hall & Old Post Office Exterior Work
- C. Project Location: 104 E Main Street & 118 E Main Street, Mount Kisco NY 10549
- D. Owner: The Village/Town of Mount Kisco
- E. Architect: Bar Down Studio, Inc.

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Multiple-Prime (Single-Trade) Contract for General Construction Work: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Bar Down Studio, 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, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____
(Words)
_____ (\$ _____)
(Figures)

2. The above amount may be modified by amounts indicated by the Bidder on the attached Document "Unit Prices Form" and "Alternates Form."

1.3 BID GUARANTEE: The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within (10) five days after a written Notice of Award, if offered within (60) sixty 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, in the following amount constituting five percent (5%) of the Base Bid amount above:

1. _____
(Words)
_____ (\$ _____)
(Figures)

In the event Owner does not offer 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.

1.4 TIME OF COMPLETION: The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Owner, and shall fully complete the Work by October 28, 2022.

1.5 ACKNOWLEDGEMENT OF ADDENDA: 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 _____

1.6 BID SUPPLEMENTS: The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Bond Form (AIA Document A310)
2. Contractor's Qualification Statement (AIA Document A305)
3. Non-Collusion Affidavit
4. Iran Divestment Act

1.7 CONTRACTOR'S LICENSE: The undersigned further states that it is a duly licensed contractor, for the type of work proposed, All required license(s) as necessary to complete work have been applied and paid for.

1.8 SUBMISSION OF BID

A. Respectfully submitted this day of _____, 2022.

B. Submitted By: _____
(Name of firm or corporation)

C. Authorized Signature: _____
(Handwritten signature)

D. Signed By: _____
(Type or print name)

E. Title: _____

F. Street Address: _____

G. City, State Zip: _____

H. Phone: _____

I. License No.: _____

J. Federal ID No: _____

END OF SECTION 004116.01

DOCUMENT 004116.03 ELECTRICAL CONSTRUCTION BID FORM - STIPULATED SUM (SINGLE CONTRACT)

1.1 BID INFORMATION

- A. Bidder: _____
- B. Project Name: Village Hall & Old Post Office Exterior Work
- C. Project Location: 104 E Main Street & 118 E Main Street, Mount Kisco NY 10549
- D. Owner: The Village/Town of Mount Kisco
- E. Architect: Bar Down Studio, Inc.

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Multiple-Prime (Single-Trade) Contract for General Construction Work: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Bar Down Studio, 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, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____
(Words)
_____ (\$ _____)
(Figures)

2. The above amount may be modified by amounts indicated by the Bidder on the attached Document "Unit Prices Form" and "Alternates Form."

1.3 BID GUARANTEE: The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within (10) five days after a written Notice of Award, if offered within (60) sixty 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, in the following amount constituting five percent (5%) of the Base Bid amount above:

1. _____
(Words)
_____ (\$ _____)
(Figures)

In the event Owner does not offer 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.

1.4 TIME OF COMPLETION: The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Owner, and shall fully complete the Work by October 28, 2022.

1.5 ACKNOWLEDGEMENT OF ADDENDA: 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 _____

1.6 BID SUPPLEMENTS: The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Bond Form (AIA Document A310)
2. Contractor's Qualification Statement (AIA Document A305)
3. Non-Collusion Affidavit
4. Iran Divestment Act

1.7 CONTRACTOR'S LICENSE: The undersigned further states that it is a duly licensed contractor, for the type of work proposed, All required license(s) as necessary to complete work have been applied and paid for.

1.8 SUBMISSION OF BID

A. Respectfully submitted this day of _____, 2022.

B. Submitted By: _____
(Name of firm or corporation)

C. Authorized Signature: _____
(Handwritten signature)

D. Signed By: _____
(Type or print name)

E. Title: _____

F. Street Address: _____

G. City, State Zip: _____

H. Phone: _____

I. License No.: _____

J. Federal ID No: _____

END OF SECTION 004116.01



AIA Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

The Village/Town of Mt. Kisco
104 Main Street
Mount Kisco NY 10549

BOND AMOUNT:

PROJECT:

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

Village Hall & Old Post Office Exterior Work

Project Number, if any:

Contract #2022-07

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

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

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

Signed and sealed this _____ day of _____

(Witness)

(Principal)

(Seal)

(Title)

(Surety)

(Seal)

(Witness)

(Title)

Init.

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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DOCUMENT 004393 - BID SUBMITTAL CHECKLIST

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Village Hall & Old Post Office Exterior Work
- C. Project Location: 104 E Main Street & 120 East Main Street, Mount Kisco NY 10549
- D. Owner: The Village/Town of Mount Kisco
- E. Architect: Bar Down Studio

1.2 BIDDER'S CHECKLIST

- A. In an effort to assist the Bidder in properly completing all documentation required, the following checklist is provided for the Bidder's convenience. The Bidder is solely responsible for verifying compliance with bid submittal requirements.
- B. Attach this completed checklist to the outside of the Submittal envelope.
- ☐ Used the Bid Form provided in the Project Manual.
 - ☐ Prepared the Bid Form as required by the Instructions to Bidders.
 - ☐ Indicated on the Bid Form the Addenda received.
 - ☐ Attached to the Bid Form: Performance Bond OR a certified check for the amount required.
 - ☐ Attached to the Bid Form: Maintenance Bond.
 - ☐ Attached to the Bid Form: Certification of Bidder Responsibility.
 - ☐ Attached to the Bid Form: Non-Collusion Affidavit.
 - ☐ Attached to the Bid Form: Iran Divestment Act Affidavit.
 - ☐ Attached to the Bid Form: Corporate Resolutions.
 - ☐ Attached to the Bid Form: Special Conditions Forms.
 - ☐ Bid envelope shows name and address of the Bidder.
 - ☐ Bid envelope shows name of Project being bid.
 - ☐ Bid envelope shows time and day of Bid Opening.
 - ☐ Verified that the Bidder can provide executed Performance Bond and Labor and Material Bond.
 - ☐ Verified that the Bidder can provide Certificates of Insurance in the amounts indicated.

END OF DOCUMENT 004393

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AIA[®] Document A305[™] – 1986

Contractor's Qualification Statement

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED TO:

ADDRESS:

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

- ☐ Corporation
- ☐ Partnership
- ☐ Individual
- ☐ Joint Venture
- ☐ Other

NAME OF PROJECT: *(If applicable)*

TYPE OF WORK: *(File a separate form for each Classification of Work.)*

- ☐ General Construction
- ☐ HVAC
- ☐ Electrical
- ☐ Plumbing
- ☐ Other: *(Specify)*

§ 1.0 ORGANIZATION

§ 1.1 How many years has your organization been in business as a Contractor?

This form is approved and recommended by the American Institute of Architects (AIA) and The Associated General Contractors of America (AGC) for use in evaluating the qualifications of contractors. No endorsement of the submitting party or verification of the information is made by AIA or AGC.

§ 1.2 How many years has your organization been in business under its present business name?

§ 1.2.1 Under what other or former names has your organization operated?

§ 1.3 If your organization is a corporation, answer the following:

§ 1.3.1 Date of incorporation:

§ 1.3.2 State of incorporation:

§ 1.3.3 President's name:

§ 1.3.4 Vice-president's name(s):

§ 1.3.5 Secretary's name:

§ 1.3.6 Treasurer's name:

§ 1.4 If your organization is a partnership, answer the following:

§ 1.4.1 Date of organization:

§ 1.4.2 Type of partnership, if applicable:

§ 1.4.3 Name(s) of general partner(s):

§ 1.5 If your organization is individually owned, answer the following:

§ 1.5.1 Date of organization:

§ 1.5.2 Name of owner:

§ 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

§ 2.0 LICENSING

§ 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

§ 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

§ 3.0 EXPERIENCE

§ 3.1 List the categories of work that your organization normally performs with its own forces.

§ 3.2 Claims and Suits

(If the answer to any of the questions below is yes, attach details.)

§ 3.2.1 Has your organization ever failed to complete any work awarded to it?

§ 3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

§ 3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

§ 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract?

(If the answer is yes, attach details.)

§ 3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

§ 3.4.1 State total worth of work in progress and under contract:

§ 3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

§ 3.5.1 State average annual amount of construction work performed during the past five years:

§ 3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

§ 4.0 REFERENCES

§ 4.1 Trade references:

§ 4.2 Bank references:

§ 4.3 Surety

§ 4.3.1 Name of bonding company:

§ 4.3.2 Name and address of agent:

§ 5.0 FINANCING

§ 5.1 Financial Statement

§ 5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

- .1 Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);
- .2 Net Fixed Assets;
- .3 Other Assets;
- .4 Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes); and
- .5 Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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SECTION 004513.1 - CERTIFICATION OF BIDDER RESPONSIBILITY

CONTRACT: _____

BID OPENING DATE: _____

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

By submission of this certification, the bidder, and each person signing on behalf of the bidder, certifies under the penalty of perjury that, at the time of execution and to the best of his/her knowledge and belief:

A] the bidder has not been terminated for cause under any contract;

B] neither the bidder, nor any officer or director of the bidder, nor any holder of five percent (5%) or more of the bidder's stock or equity, has been convicted of criminal conduct in connection with government contracts, Women's or Minority Business Enterprises (W/MBE), or business activities;

C] the bidder has attached to this form a complete and accurate record (listing the project, date, number and dollar value of fine(s), if any) of violations of O.S.H.A. requirements by the bidder within the past two calendar years;

D] the bidder has not been determined by the NYS Department of Labor to have been in willful noncompliance with the requirements of the Labor Law, including the prevailing wage and supplements payment requirements;

E] neither the bidder, nor any officer or director of the bidder, nor any holder of five percent (5%) or more of the bidder's stock or equity, have been convicted of criminal conduct involving violations of the Environmental Conservation Law, or of other State or federal environmental statutes;

F] the bidder has not been assessed civil penalties for violations of the Environmental Conservation Law, or of other State or federal environmental statutes;

G] the person signing this document certifies that he/she has fully informed her/himself regarding the accuracy of the statements contained in this certification, and, under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as to the person signing in its behalf; and,

H] attached hereto (if a corporate bidder) is a certified copy of the resolution authorizing the execution of this certificate by the signatory, on behalf of the corporate bidder.

If in any case the bidder cannot make the foregoing certification, the bidder shall so state, and shall furnish to the Village a signed statement which sets forth in detail the reasons therefore.

Signature: _____

[SEAL OF CORPORATION]

Name (printed): _____

(Name of Corporation)

Title: _____

Sworn to me this _____ day of _____, 2022.

Notary Public

END OF SECTION 004513

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SECTION 004519 – NON-COLLUSION AFFIDAVIT

The following provisions of the New York State General Municipal Law form a part of the Bidding Requirements:

NON-COLLUSIVE BIDDING CERTIFICATE

- 1) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, under penalty of perjury, that, to the best of his or her knowledge and belief:
 - a) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.
 - b) Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
 - c) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
- 2) A Bid shall not be considered for award nor shall any award be made where (a) (1), (2) and (3) above have not been complied with; provided, however, that if in any case the Bidder cannot make the foregoing certification, the Bidder shall so state and shall so furnish with the Bid, a signed statement which sets forth in detail the reasons therefore. Where (a) (1), (2) and (3) above have not been complied with, the Bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the Bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.
 - a) The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph (a).
- 3) Any bid hereafter made to any political subdivision of the State or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.
- 4) The person signing this Bid or Proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the Bidder as well to the person signing in his behalf.

Signature_____Date_____Title_____

Business Address_____

Telephone_____Facsimile_____Federal ID No._____

END OF SECTION 004519

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SECTION 004520 - IRAN DIVESTMENT ACT AFFIDAVIT

The following provisions of the New York State General Municipal Law form a part of the Bidding Requirements:

- 1) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, under penalty of perjury, that, to the best of his or her knowledge and belief:
- 2) That the Bidder is not on the list created pursuant to Paragraph (b) of Subdivision 3 of Section 165-a of the New York State finance law.
 - a) By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, Bidder / Contractor (or any assignee) certifies that once the prohibited entities list is posted on the Office of General Services (OGS) website, it will not utilize on such Contract any subcontractor that is identified on the prohibited entities list; and
 - b) Additionally, Bidder / Contractor is advised that once the list is posted on the OGS website, any Contractor seeking to renew or extend a Contract or assume the responsibility of a contract awarded in response to the solicitation, must certify at the time the Contract is renewed, extended or assigned that it is not included on the prohibited entities list.
- 3) A bid shall not be considered for award nor shall any award be made where the condition set forth in paragraph a of this subdivision has not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. A political subdivision may award a bid to a bidder who cannot make the certification pursuant to paragraph a of this subdivision on a case-by-case basis if:
 - a) The investment activities in Iran were made before the effective date of this section, the investment activities in Iran have not been expanded or renewed after the effective date of this section, and the person has adopted, publicized, and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
 - b) The political subdivision makes a determination that the goods or services are necessary for the political subdivision to perform its functions and that, absent such an exemption, the political subdivision would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.
- 4) Any bid hereafter made to any political subdivision of the State or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-engagement in investment activities in Iran as the act and deed of the corporation.
- 5) The person signing this Bid or Proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the Bidder as well to the person signing in his behalf.

Signature_____Date_____Title_____

Business Address_____

Telephone_____Facsimile_____Federal ID No._____

END OF SECTION 004520

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SECTION 004543 - CORPORATE RESOLUTIONS

BE IT RESOLVED THAT _____
(Name)

of _____
(Name of Corporation)

be authorized to sign and submit the bid or proposal of this corporation for the following project:

(Project Name)

and to include in such bid or proposal the certificate as to non-collusion required by Section 103 of the General Municipal Law of the State of New York as the act and deed of such corporation. The foregoing is a true and correct copy of the resolution adopted by:

(Name of Corporation)

at a meeting of its Board of Directors held on the _____ day of _____, 2022.

The undersigned agrees and acknowledges that this corporate bidder shall be liable under the penalties of perjury for any inaccuracies or misstatement in such certificate.

(SEAL OF CORPORATION) _____
(Officer)

END OF SECTION 004543

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DRAFT AIA® Document A101® – 2017

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

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

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

The Village/Town of Mount Kisco
104 Main Street
Mount Kisco NY 10549

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

« »
« »
« »
« »

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

Village Hall & Old Post Office Exterior Work
104 E Main Street & 120 E Main Street
Mount Kisco NY 10459

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

Bar Down Studio, Inc.
PO Box 721
Beacon NY 12508

The Owner and Contractor agree as follows.

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

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

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

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

TABLE OF ARTICLES

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

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

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

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

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

(Check one of the following boxes.)

- ☐ [« »] The date of this Agreement.
- ☐ [« »] A date set forth in a notice to proceed issued by the Owner.
- ☒ [X] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

The date of the Agreement or as set forth in notice to proceed issued by the Owner, whichever is earliest.

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

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

§ 3.3 Substantial Completion

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

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

[X] Not later than 109 (one-hundred nine) calendar days from the date of commencement of the Work.

[« »] By the following date: « »

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

ARTICLE 4 CONTRACT SUM

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

§ 4.2 Alternates

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

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

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

Item	Price

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

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

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

Per Article 116, General Conditions of the Contract for Construction.

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

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

« »

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

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

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

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

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

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

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

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

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

§ 5.1.7 Retainage

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

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

5%

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

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

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 116 of the General Conditions of the Contract for Construction.

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

§ 5.2 Final Payment

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

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 133 of the General Conditions of the Contract for Construction, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

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

No later than 30 (thirty) days after receipt of Certified Final Application for Payment.

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« » % « »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Owner will serve as the Initial Decision Maker pursuant to Article 143 of the General Conditions of the Contract for Construction, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

Edward Brancati, Village Manager
The Village/Town of Mount Kisco

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201-2017, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

☒ Arbitration pursuant to Article 107 of the General Conditions of the Contract for Construction

☐ Litigation in a court of competent jurisdiction

☐ Other (Specify)

« »

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

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 116 of the General Conditions of the Contract for Construction.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of the General Conditions of the Contract for Construction or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

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

Edward Brancati, Village Manager
The Village/Town of Mount Kisco
Village Hall
Mount Kisco NY 10549
ebrancati@mountkisco.ny.gov
(914) 864-0001

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

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

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in Specification Section 007316 'Contractors Insurance Requirements'.

§ 8.5.2 The Contractor shall provide bonds as set forth in the Contract Documents.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- .2 General Conditions of the Contract for Construction, bound in Project Manual
- .5 Drawings

Number	Title	Date

- .6 Specifications

Section	Title	Date	Pages

- .7 Addenda, if any:

Number	Date	Pages

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

- .8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

☒ Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
007300	Special Conditions		25

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

« »

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

OWNER (Signature)

« »« »

(Printed name and title)

CONTRACTOR (Signature)

« »« »

(Printed name and title)



AIA[®] Document A312[™] – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

VILLAGE/TOWN OF MT. KISCO

104 MAIN STREET

MOUNT KISCO, NY 10549

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

(Name and location)

VILLAGE HALL & OLD POST OFFICE

EXTERIOR WORK

MOUNT KISCO, NY 10549

BOND

Date:

(Not earlier than Construction Contract

Date)

Amount: \$

Modifications to this Bond: ☐ None ☐ See Section 16

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)

SURETY

Company: (Corporate Seal)

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Performance Bond.)

Signature: _____

Name and

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:
OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

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

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

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

§ 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____
(Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

SURETY

Company: _____
(Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

Init.

/

Additions and Deletions Report for

AIA[®] Document A312[™] – 2010

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 15:25:48 on 01/10/2013.

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, , hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 15:25:48 on 01/10/2013 under Order No. 6871475021_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A312™ – 2010, Performance Bond, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

(Signed)

(Title)

(Dated)

DOCUMENT 006114 – MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That We, _____

(hereinafter called the Principal)

as Principal and the _____, a _____ Corporation with an
office and place of business for the State of New York at _____ New York,
(hereinafter called the Surety) as Surety, are held and firmly bound unto the _____

_____ (hereinafter called the Obligee) as Obligee in the sum of _____
_____ (\$ _____) DOLLARS,

lawful money of the United States of America, for the payment whereof the Principal and Surety bind themselves, their
successors and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this _____ day of _____, 2022.

WHEREAS, the Principal heretofore entered into a written contract with the Obligee for

_____ WHEREAS, said Contract provides that the Principal shall guarantee _____

NOW, THEREFORE, the condition of this obligation is such, that if the above Principal shall indemnify the Obligee
against loss by reason of his failure to make good at his own expense any defects or deficiencies in materials or
workmanship which may appear in the work under said contract with the period of 2 year(s) from the date of
acceptance of the work, then this obligation shall be void; otherwise to remain in full force and effect.

Principal

By: _____

By: _____



STATE OF)

COUNTY OF)

On this _____ day of _____ 20 _____ before me personally appeared the within named
_____ to me known, and known to me to be _____
_____ the individual described in and who executed the within bond, and _____
_____ acknowledged to me that he _____
executed the same.

NOTARY PUBLIC

SUBMITTAL TRANSMITTAL FORM

Project	Village Hall. Old Post Office Exterior Work 104 E Main Street & 120 E Main Street Mount Kisco, NY 10549			Submittal Number	
				Contract For	
				Contract #	
				Contractor	
				Subcontractor	
1st Submission Date		1st Resubmittal Date		2nd Resubmittal Date	
Specification Section		Paragraph		Drawing(s)	
Description					
Contents	<input type="checkbox"/> Product Data <input type="checkbox"/> Sample(s) <input type="checkbox"/> Test(s) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Other				
Manufacturer's Name					
CONTRACTOR'S APPROVAL				BDS REMARKS	
Date: _____ By: _____ <input type="checkbox"/> Submitted Product has been reviewed for release to A/E. <input type="checkbox"/> Submitted Product is as specified. <input type="checkbox"/> Submitted Product is equal to specified Product.					
ARCHITECT'S APPROVAL					
Date: _____ By: _____ <input type="checkbox"/> No Exception Taken <input type="checkbox"/> Make Corrections Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise & Resubmit Reviewing is only for conformance with the Project's design concept and compliance with the information in the Contract Documents. The Contractor is responsible for quantities and dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences & procedures of construction, and for coordination of the Work of all trades. Any corrections on the submittal shall not be deemed an order for extra work.					

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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TO OWNER:		PROJECT:		APPLICATION NO:		Distribution to:	
The Village/Town of Mount Kisco		Village Hall & Old Post Office		PERIOD TO:		OWNER <input type="checkbox"/>	
104 Main Street		Exterior Work		CONTRACT FOR:		ARCHITECT <input type="checkbox"/>	
Mount Kisco NY 10549		VIA ARCHITECT:		CONTRACT DATE:		CONTRACTOR <input type="checkbox"/>	
FROM CONTRACTOR:		Bar Down Studio		PROJECT NOS:		FIELD <input type="checkbox"/>	
		PO Box 721		/		OTHER <input type="checkbox"/>	
		Beacon NY 12508					

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

CONTRACTOR: _____
By: _____ Date: _____

Notary Public:
My commission expires:

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

ARCHITECT:
By:
Date:

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

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

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VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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Continuation Sheet

AIA Document G702™-1992, Application and Certificate for Payment, or G732™-2009, Application and Certificate for Payment, Construction Manager as Adviser Edition, containing Contractor's signed certification is attached.

In tabulations below, amounts are in US dollars.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:

APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO: 18-09.02

A	B	C	D	E		F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (Not in D or E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)	BALANCE TO FINISH (C – G)	RETAINAGE (If variable rate)	
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD						
	GRAND TOTAL									

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VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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REQUEST FOR INTERPRETATION FORM

Product, Item, or System:			
Request Date:		RFI No.:	
Specification Section:		Paragraph Ref.:	
Contract Dwg. Reference(s):			
Describe Request:			
Signed:	<input type="checkbox"/> See Contractor's Attachments for Additional Description for Information		
Owner/Engineer/Architect Response:			
Engineer/Architect (Printed):	<input type="checkbox"/> See Engineer/Architect's Attachments for Additional Information		
<i>Engineer/Architect's Signature & Date</i>		<i>Response Accepted By Contractor Contractor's Signature & Date</i>	
The Work shall be carried out in accordance with these supplemental instructions without change in Contract amount or Contract time for completion. Prior to proceeding with these instructions, indicate your acceptance of these instructions by signing where indicated and returning this form to the Engineer/Architect.			

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AIA[®] Document G706[™] – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: *(Name and address)*

VILLAGE HALL & OLD POST
OFFICE, EXTEIOR WORK
AND RENOVATION
104 & 118 E MAIN STREET

TO OWNER: *(Name and address)*

VILLAGE/TOWN OF MT. KISCO
104 MAIN STREET
MOUNT KISCO, NY 10549

ARCHITECT'S PROJECT NUMBER: 18-09.02

CONTRACT FOR:

CONTRACT DATED:

OWNER: ☐

ARCHITECT: ☐

CONTRACTOR: ☐

SURETY: ☐

OTHER: ☐

STATE OF:

COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment ☒ Yes ☐ No

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Liens (AIA Document G706A).

CONTRACTOR: *(Name and address)*

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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AIA[®] Document G706A[™] – 1994

Contractor's Affidavit of Release of Liens

PROJECT: *(Name and address)*

VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
104 & 118 E MAIN STREET

ARCHITECT'S PROJECT

NUMBER: 18-09.02

CONTRACT FOR:

CONTRACT DATED:

OWNER: ☐

ARCHITECT: ☐

CONTRACTOR: ☐

SURETY: ☐

OTHER: ☐

TO OWNER: *(Name and address)*

THE VILLAGE/TOWN OF MOUNT KISCO
104 MAIN STREET
MOUNT KISCO NY 10549

STATE OF:
COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: *(Name and address)*

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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AIA[®] Document G707[™] – 1994

Consent Of Surety to Final Payment

OWNER	<input type="checkbox"/>
ARCHITECT	<input type="checkbox"/>
CONTRACTOR	<input type="checkbox"/>
SURETY	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

PROJECT : (Name and address)

VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK

ARCHITECTS PROJECT NUMBER: 18-09.02

CONTRACT FOR:

TO OWNER : (Name and address)

VILLAGE/TOWN MT. KISCO
104 MAIN STREET, MOUNT KISCO 10549

CONTRACT DATED:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of
(Insert name and address of Contractor)

, SURETY,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of
any of its obligations to
(Insert name and address of Owner)

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

(Printed name and title)

Attest:
(Seal):

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



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**GENERAL CONDITIONS OF THE
CONTRACT FOR CONSTRUCTION**

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101. DEFINITIONS

- a. Whenever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:
 1. The term "Contract" means the Contract executed by the Owner and the Contractor.
 2. The term "Owner" means the Village of Mt. Kisco, which is authorized to undertake this Contract.
 3. The term "Contractor" means the person, firm or corporation entering into the Contract with the Owner to perform and complete the work involved in this Contract.
 4. The term "Subcontractor" means a person, firm or corporation supplying labor for work at the site of the project for and under separate contract or agreement with the Contractor.
 5. The term "Project Area" means the area shown on the drawing in the immediate vicinity of the work, unless otherwise defined in the Special Conditions.
 6. The term "Architect" means the Architect of the Project, or such of his subordinates or assistants as have Project Architect status; or if a Consulting Architect is employed to perform construction management and inspection, then this term shall apply to said Consulting Architect and those subordinates and assistants that have Project Architect status. A list of authorized Project Architects will be furnished to the Contractor on request.
 7. The term "Village" means the Village of Mt. Kisco within which the Project Area is situated.
 8. The term "Contract Documents" means and shall include the Documents listed in Article 3 of the Agreement.
 9. The term "Drawings" or "Contract Drawings" means the drawings listed in the Schedule of Drawings.
 10. The term "Technical Specifications" or "Supplemental Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates, the quality of materials to be furnished; the quality of workmanship required; measurement and payment.
 11. The term "Addendum" or "Addenda" means any changes, revisions or clarifications of the Contract Documents which have been duly issued by the Owner to prospective Bidders prior to the time of receiving Bids.

102. SUPERINTENDENCE BY CONTRACTOR

- a. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the Owner, for the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work. Should, in the opinion of the Owner, any language barrier exists between the superintendent and the Owner, the Contractor shall furnish a qualified interpreter.
- b. The Contractor shall lay out his work including all survey required and he shall be responsible for all work executed by him under the Contract. He shall verify all figures, elevations, etc. before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

103. SUBCONTRACTS

- a. The Contractor shall not execute an agreement with any Subcontractor or permit any

Subcontractor to perform any work included in this Contract until he has received written approval of such Subcontractor from the Owner.

- b. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. All subcontractors must have adequate superintendence on the work site when they are performing work.
- c. The Contractor shall cause appropriate provision to be inserted in all Subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of the Contract for the work embraced in this Contract.
- d. Nothing contained in the Contract shall create any contractual relation between any Subcontractor and the Owner.
- e. The Contractor shall not subcontract more than 50% of the total work of this contract. Any material purchased by the Contractor and not used by him in his work shall be considered a Subcontract.

104. OTHER CONTRACTS

- a. The Owner reserves the right to let other Contracts in connection with this work or to perform work related to this project with his own forces. The Contractor shall offer other Contractors and the Owner reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and/or coordinate his work with theirs. The Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the Owner. The Contractor shall not permit or commit any act, which will interfere with the performance of work by any other Contractor as scheduled.
- b. Wherever work being done by the Owner or its forces, or other Contractors, is contiguous to work covered by this contract, the respective rights of the various interests involved shall be established by the Owner, to secure the completion of the various portions of the work in general harmony.
- c. If any part of the Contractor's work depends for proper execution or results upon the work of others, the Contractor shall inspect and promptly report to the Architect in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results.

105. RESPONSIBILITIES OF CONTRACTOR

- a. Except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools equipment, water light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to complete this Contract in every respect within the specified time.

106. FITTING AND COORDINATION OF THE WORK

- a. The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors or Suppliers engaged upon this Contract. He shall be prepared to guarantee to each of the Subcontractors, the locations and measurements that they may require for the fitting of their work to all surrounding work. The Contractor shall, at his own expense, effect all cutting, fitting, or patching of his work required to make the same conform to the Contract Drawings and specifications and except with the consent of the Owner, not to cut or otherwise alter the work of any other Contractor.

107. MUTUAL RESPONSIBILITY OF CONTRACTOR

- a. If, through acts or neglect on the part of the Contractor, any other Contractor or Subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner will notify the Contractor, who shall defend at his own expense any suit based upon such claim, and, in any judgment or claims against the owner shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and will in all other respects, including, but not limited to attorney's fees and court costs, hold harmless the Owner and Engineer.

108. ASSIGNMENT OR NOVATION

- a. The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Owner; provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the Owner.
- b. No assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools or equipment.

109. PROGRESS SCHEDULE

- a. The Contractor shall submit within seven (7) calendar days after award a carefully prepared realistic Progress Schedule showing the proposed dates of starting and completing of each and every item of work on each and every section of work in accordance with these Specifications if applicable to this specific Contract. The Progress Schedule shall include as a minimum:
- b. The project name, number and geographic location.
- c. The contract time, contract beginning date, and ending date.
- d. The time of beginning and completion of each significant phase of this contract.
- e. The initial requisition will not be approved for payment until said schedule is submitted. Said schedule will be revised or updated monthly unless otherwise permitted by the Owner. No monthly payments will be approved without a revised/updated monthly Progress Schedule approved by the Owner.
- f. The Progress Schedule shall show the plan of construction and the proposed method of carrying out this work including a full statement of the equipment to be used.

110. COMMUNICATIONS

- a. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.
- b. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- c. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Village of Mt. Kisco Village Hall, and any notice to or demand upon Owner shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage- prepaid envelope or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representatives of the Owner or to such other address as the may subsequently specify in writing to the Contractor for such

purpose.

- d. Any such notice shall be deemed to have been given as of the time of actual delivery or (in case of mailing), when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

111. PAYMENTS TO CONTRACTOR

a. Partial Payments

1. The Architect shall prepare an estimate of the work performed for partial payment as of a mutually agreed upon date at least 30 days after the beginning of work, and approximately every 30 days thereafter. The amount of the payment due the Contractor shall be determined by adding the total value of work completed to date and deducting five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices, if any, contained in the Agreement.
2. There will be no payments or partial payments to the Contractor for materials purchased and stored/stockpiled on the project site.
3. Monthly or partial payments made by the Owner to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and completed work covered by such monthly or partial payments shall remain the property of the Contractor, and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Owner in all details.

b. Final Payment

1. After final inspection and acceptance by the Owner of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this Contract shall be the amount computed without retainage less all previous payments. Final payment to the Contractor shall be made subject to his furnishing the Owner with a release in satisfactory form of all claims against the Owner, arising under and by virtue of his Contract, other than such claims, if any as may be specifically excepted by the Contractor from the operation of the release as provided elsewhere herein.
2. The Owner, before paying the final estimate, may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts of any payment so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
3. If it was necessary for the Owner to expend money for labor, materials or equipment on this project because the Contractor failed to perform satisfactorily or promptly, and a bill for such sum remains unpaid, the Owner may deduct this sum from partial payments or the final payment. Furthermore, if the specifications provide for certain work to be done by the Owner with the fee or cost to be borne by the Contractor, and a bill for such services remains unpaid, the Owner may deduct this sum from the partial or the final payment.
4. Withholding of any amount due the Owner under the section entitled "LIQUIDATED DAMAGES" shall be deducted from the final payment due the Contractor. At the Owner's option, liquidated damages may be deducted from any partial payment.

c. Withholding Payments

1. Notwithstanding the above, the Owner may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Owner and if it so elects may also withhold any amounts due from the Contractor to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

d. Payments Subject to Submission of Certificates

1. Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his Sub-contractors by the Section entitled, CONTRACTOR'S CERTIFICATES under the GENERAL CONDITIONS.

112. CHANGES IN THE WORK

- a. The Owner may make changes in the work required to be performed by the Contractor under the Contract by making additions thereto, or by omitting work there from, without invalidating the Contract.
- b. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used or in the specified manner of construction and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner, authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract price will be valid unless so ordered.
- c. The Contractor agrees to perform any of the aforementioned changed work, along with all other required work found under the Contract, without delay and in accordance with good construction practices.
- d. These changes outlined above may be made without relieving or releasing the Contractor from any of his obligations under the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is provided otherwise.
- e. All adjustments to the Contract payment provisions will be made in accordance with the following paragraphs.
- f. If applicable unit prices are contained in the Agreement (established as a result of either a Unit Price Bid or a Supplemental Schedule of Unit Prices), the Owner may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved in the applicable unit prices specified in the Contract.
- g. If applicable unit prices are not contained in the Agreement, the Owner shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:
 1. If the change in the work involves additional work, the procedure shall be as follows:
 - (a) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
 - (b) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Owner may order the Contractor to proceed with the work on

a Cost-Plus Basis. A Cost-Plus Basis is defined as the net cost of the work to the Contractor plus an allowance to cover overhead and profit as stipulated below:

- (c) "Net cost of the work" is defined as (1) gross cost of labor plus (2) net cost of materials plus (3) gross cost of equipment.
 - (d) "Gross cost of labor" is defined as the cost of labor plus fringe benefits.
 - (e) "Cost of labor" is defined as the cost of required labor based on the prevailing rates established by the New York State Department of Labor and stated in the Contract Document. No part of any salary for employees above the grade of foreman, and having general supervision of this work, will be included in this item.
 - (f) "Fringe benefits" are defined as all insurance's, taxes and other benefits for the employee required by law or by union contract. The actual value of such fringe benefits shall be as listed in the New York State Department of Labor for each individual employee used in the work.
 - (g) "Net cost of materials" shall be defined as the cost of all materials incorporated in the work, including delivery charges, less any allowable cash discounts, as shown by receipted bills.
 - (h) "Gross cost of equipment" is defined as the "net cost of equipment" plus an escalation allowance from date of signing of the contract for increase in established cost of fuel and lubricants in the work area.
 - (i) "Net cost of equipment" shall be defined as a rental rate, which is reasonable and based on rental rates prevailing in the area where the work is to be done. Such rental rate shall be based on the rates published in the "Rental Rate Blue Book" and shall be agreed upon in writing before the work is begun.
 - (j) The cost of furnishing small tools and accessories and materials used for construction but not incorporated in the work shall be considered as part of the Contractor's overhead, and shall not be included in the "net cost of the work".
 - (k) The Contractor must provide a certified copy of payroll on a monthly basis.
 - (l) An allowance of 20% will be added for overhead and profit to "gross cost of labor" and "Net Cost of Materials" and is hereby stipulated to be in lieu of an actual determination of overhead and profit. The Contractor in submitting his bid agrees that this allowance shall be used, regardless of whether actual overhead and profit is more or less than this amount.
 - (m) No percentage for overhead and profit shall be added to the amounts of equipment rental prices agreed upon, but the price agreed upon shall be the total compensation allows for use of such equipment.
2. If the change in the work requires a reduction in the work involved, the procedure shall be as follows:
- (a) If the proposal is acceptable, the Owner will prepare the Change Order in accordance therewith for acceptance by the Contractor; or
 - (b) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Architect shall fix the cost value of the credit. The Owner may then order the Contractor to proceed with the work. Should the Contractor disagree with the cost value of the credit as fixed by the Architect, he may appeal the same in accordance with the procedures outlined in the GENERAL CONDITIONS.

- h. Each Change Order shall include in its final form:
 - 1. A detailed description of the change in the work.
 - 2. The Contractor's proposal (if any) or a confirmed copy thereof.
 - 3. Definite statements as to the resulting change in the Contract price and/or time.
 - 4. The statement that the Change Order is subject to the approval of the Owner.
- i. Any error or discrepancy in or between any of the Contract Documents shall be immediately reported to the Architect who shall make such corrections and interpretations as may be deemed necessary for the completion of the work in a satisfactory and acceptable manner.
- j. Change Orders shall in general be in writing. If a Contractor claims that a change order was given to him orally, his claim shall be invalid unless such oral change order was given by an authorized Architect as defined in Section 101.f of this Contract, and further unless such oral change order was confirmed in writing within 24 hours of the giving of the alleged oral change order.
- k. When change orders, or claims involve a subcontractor, no surcharge will be allowed the Contractor for handling, processing, supervision, or coordination.

113. CLAIMS FOR EXTRA COST

- a. All claims between parties, including all claims for additional compensation and/or additional time, arising out of, or in any way related to this Contract and/or the performance of the same, or its interpretation shall within ten (10) days of the event or action giving rise to the claim be presented to the Architect. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days prior to the receipt by the Architect of notice thereof. The Contractor shall in no case allow any claim or dispute to delay the work.
- b. As soon as practicable after the final submission of all information the Owner shall make a determination of any claim. Said decision of the Owner shall be a condition precedent to any further action on the claim. However, upon certification in writing by the claimant the Owner shall be obliged to render a decision on said claim within sixty (60) days of the date of said certification. Should the Owner fail to render its decision within the aforementioned sixty (60) day period, its decision will not be a condition precedent to any further action on the part of the claimant.
- c. There shall be no added compensation paid for delay to the Contractor unless the Owner causes said delay by a material breach of this Contract, and compliance with the foregoing notice provisions shall be a condition precedent to the prosecution of any such claim. In any claim for delay except for "Excusable Delays and Extensions of Time" as defined in the GENERAL CONDITIONS SECTION "TERMINATION"; "DELAYS AND EXTENSIONS"; "LIQUIDATED DAMAGES" wherein it is alleged that the Contractor's equipment was caused to remain idle, only one half of the prevailing rental rates for use of said equipment will be considered as damages for idled equipment in order to allow for the absence of fair wear and tear, which is allowed for in prevailing rental rates for equipment usage.
- d. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be considered unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.

- e. If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall be as provided in Sections - "CHANGES IN THE WORK" or "TERMINATIONS; DELAYS AND EXTENSIONS; LIQUIDATED DAMAGES" of the GENERAL CONDITIONS.
- f. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of this Contract.

114. NO OPTIONS PAID

- a. It shall be clearly understood that there will be no payment for materials incorporated into the work (other than that shown on the Contract Drawings or specified) unless ordered by the Architect.

115. TIME AND MATERIALS WORK NOTIFICATION

- a. Should the Contractor perform work in accordance with the General Conditions, "CHANGES IN THE WORK", he shall give a minimum of 24 hours advance written notice prior to his anticipated beginning any work on a Cost-Plus Basis, to the Owner.

116. TERMINATION; DELAYS AND EXTENSIONS; LIQUIDATED DAMAGES

- a. Termination of Contract for Convenience: For its own convenience the Owner may, at any time prior to the issuance of a Notice to Proceed, void the Contract by giving unequivocal and unconditional written notice of such avoidance to the Contractor and in the event of such avoidance the Owner will not be liable to the Contractor for any claims or losses, including anticipation of performance under the Contract.
 - 1. At any time subsequent to the Notice to Proceed the Owner, may at its own convenience, terminate the Contract by giving unequivocal and unconditional written notice of such termination to the Contractor. In the event of such termination by the Owner, the Owner shall be responsible to the Contractor for the following monies only, which monies shall be subject to legitimate changes of the Owner against the Contractor:
 - 2. All reasonable costs incurred by the Contractor in performance of or in anticipation of performance of the Contract provided the Contractor shall take all reasonable steps to mitigate such damages including the return and/or resale of materials ordered; and
 - 3. On Lump Sum projects, a mark-up of 10% for profit and 10% for overhead on the reasonable cost of the work that is completed and in place in accordance with the Contract Drawings and Specifications will be allowed. On unit price contracts, allowances for profit and overhead shall be considered to have been included in each of the Contractor's original unit prices bid. The Contractor shall remain responsible for the work completed, in accordance with the Contract provisions.
 - 4. Should any work under this contract be subject to, or terminated by the action of any third party, governmental unit or court due to any ecological or other reason the rights of the Contractor to recover from the Owner shall be determined as set forth above.
- b. Termination of Contract for Cause: In addition, the Owner may give notice in writing to the Contractor and his Surety of any material breach of the Contract by the Contractor to include but not be limited to any of the following:
 - 1. Failure to begin the work under the Contract within the time specified.
 - 2. Failure to perform the work with sufficient workmen, equipment or materials to ensure the prompt completion of said work.
 - 3. Unsuitable performance of the work or failure to perform anew such work as shall be rejected as defective and unsuitable.
 - 4. Neglecting or refusing to remove material rejected as defective and unsuitable.
 - 5. Discontinuing the suitable prosecution of the work for a period of 72 hours, excluding Sundays and holidays without written authorization of the Architect.
 - 6. Failure to commence discontinued work within 48 hours after notice to resume (excluding

Sundays and holidays).

7. Becoming insolvent or declared bankrupt, or commits any act of bankruptcy or insolvency.
 8. Allowing any final judgment to stand against him unsatisfied for a period of ten (10) calendar days.
 9. Making any assignment for the benefit of creditors.
 10. Violating any covenants contained in the Contract Documents.
 11. Failure to eliminate unsafe conditions within 12 hours.
 - (a) The Contractor or Surety within a period often (10) calendar days after such notice shall take all practical action to correct said material breach. Should said action fail to meet with the approval of the Owner, the Owner, may at its discretion, order the Surety to complete the work or, without violating the Contract, take the prosecution of the work out of the hands of said Contractor and Surety.
 - (b) The Owner may appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable and may enter into an agreement, either by negotiation or public letting, for the completion of said Contract according to the terms and provisions thereof, or use such other methods or combinations thereof, as in its opinion shall be required or desirable for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Owner together with the cost of completing the work under Contract shall be deducted from monies due or which may become due said Contractor. In case such expense shall exceed the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Owner the amount of said excess.
- c. Excusable Delays and Extensions of Time. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:
1. To any acts of the Government, including controls or requisitioning of materials, equipment, tools, or by labor by reason of war, National Defense, or any other national emergency.
 2. To any acts of the Owner caused by an injunction or litigation against said Owner, by a third party.
 3. To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in performance of some other Contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and
 4. To any delay of any Subcontractor occasioned by any of the causes specified in subparagraphs 1, 2 and 3 of this paragraph "c".
 - (a) Provided, however, that the Contractor promptly notify the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and the extent of delay. If, upon the basis of the facts and the terms of this Contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.
 - (b) No claim for damages or any claim other than for an extension of time as herein provided shall be made or asserted against the Owner by reason of any delay.

- d. Liquidated Damages for Delay. If the work is not completed within the time stipulated in Section 003113 'Preliminary Schedules', including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner as fixed agreed, and as liquidated damages (it being impossible to determine the actual damages occasioned by the delay) for each calendar day of delay, until the work is completed, the amount as set forth below and the Contractor and his sureties shall be liable to the Owner for the amount thereof. Neither permission given by the Owner for the Contractor to continue the work after the time fixed for completion, nor the inspection and acceptance of such work, shall be deemed a waiver on the part of the Owner of any of his rights under this Contract.
- 1. The Contractor and his Sureties shall be liable for and shall pay to the Owner the sum of \$800.00 (Eight Hundred Dollars) as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated completion, or as modified in accordance with the GENERAL CONDITIONS, until such work is satisfactorily completed and accepted.

117. ARCHITECT'S AUTHORITY

- a. The Architect will decide all questions, which may arise in the relation to the work and the construction thereof. The Architect's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract, the determination or decision of the Architect shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

118. TECHNICAL SPECIFICATIONS AND CONTRACT DRAWINGS

- a. Anything mentioned in the Technical Specifications and not shown on the Contract Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between the Contract Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy within the Contract Drawings or within the Technical specifications, the matter shall be immediately submitted to the Owner without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

119. REQUESTS FOR SUPPLEMENTARY INFORMATION

- a. It shall be the responsibility of the Contractor to make timely request of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and latest date by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Architect may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

120. SHOP DRAWINGS

- a. Shop drawings are required for all manufactured items. In the case of reinforced concrete, details of reinforcing bars and form construction and materials shall be submitted in the same manner as shop drawings.
- b. All required shop drawings, machinery details, layout drawings, working drawings, material and equipment descriptions, etc., shall be submitted to the Architect in three (3) copies for review sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. THE CONTRACTOR SHALL SIGN AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ARCHITECT. Two (2)

weeks should be allowed for checking from the date of receipt by the Architect. The Contractor, with the approval of the Architect, may submit manufacturer's literature as a substitute for, or supplement to, the shop drawings, etc. The minimum size for any submission shall be 8 1/2" x 11 and the maximum size shall be 24" x 36".

- c. No construction, purchases, delivery, installation or work shall be done or made on any part or feature of this Contract which is dependent upon shop drawing review, until such review has been received from the Architect. If the Contractor proceeds without reviewed shop drawings, it shall be at his own risk. No claim by the Contractor, for extension of the Contract time will be granted by reason of his failure in this respect.
- d. Shop drawings, etc., or printed matter shall give all dimensions, sizes, etc., to enable the Architect to determine suitability of the construction, installation, material or layout for the purposes intended. Where needed for clarity, the drawings shall include outline, sectional views and detailed working dimensions and designations of the kind of material, machine work, finish, etc., required. The drawings to be submitted shall be coordinated by the Contractor with any other drawings previously reviewed, with the design and function of any equipment or structure and the Contract Drawings.
- e. By submitting shop drawings, etc., the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so and that he has checked and coordinated each shop drawing, etc., with the requirements of the work and of the Contract Documents.
- f. If any drawings show variations from the requirements of the Contract because of standard shop practice and or other reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of the contract price and/or time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been reviewed.
- g. After review, the submittals will be stamped "Approved", "Approved as Noted", "Resubmit" or "Disapproved". Two (2) prints of "Approved" or "Approved as Noted" drawings will be returned to the Contractor for his use and distribution to his suppliers and/or Subcontractors. In the case of those stamped "Resubmit" or "Disapproved" two (2) prints will be returned to the Contractor who shall make all indicated corrections and resubmit (3) prints.
- h. In any submission that is noted as "Approved" or "Approved as Noted", the review shall not extend to details or dimensions and shall not relieve the Contractor from his responsibility for compliance with the Contract Drawings and specifications.
- i. When the Contractor proposes a revision to a previously submitted shop drawing, etc., three (3) copies shall be resubmitted for review. This re-submittal shall clearly indicate, in a revision block, the date, description and location of the revision. The letter of transmittal shall state the reasons for the revision.
- j. The contractor shall furnish as many copies of the submittals as is necessary for the proper coordination of the work, and shall maintain a complete set of the reviewed submissions at the site of the work at all times.
- k. Upon the final acceptance of the project, the Contractor shall, on request, furnish the Owner with a complete set of shop drawing tracings or reproducible cloth reproductions of the shop drawing tracings.
- l. There will be no direct payment made for any of the above submittals, or reproducible drawings if required, but the cost thereof shall be considered as included in the general cost of the work.

121. SAMPLES, CERTIFICATES AND TESTS

- a. The Contractor shall submit all samples, materials, certified test reports, materials certificates, certificates of compliance, affidavits, etc., as called for in the Contract Documents or required by the Architect, promptly after award of the Contract and acceptance of the Contractor's bonds. No such materials and/or equipment, etc., shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples/certificates/tests/etc., have been approved in writing by the Owner. Any delay in the work caused by late or improper submission of the above for approval shall not be considered just cause for an extension of the Contract time.
- b. Samples. Unless otherwise specified, the Contractor shall furnish the required samples without charge, and shall provide every facility for the securing of material samples. He shall provide means and assist in the verification of all scales, measures and other devices, which he operates. Samples to be submitted shall be taken by the Architect or a laboratory approved by the Owner, unless otherwise specified. All materials being used shall be subject to re- sampling and testing at any time during their preparation and/or use.
- c. All samples submitted by the Contractor shall be properly identified to include, but not be limited to, the project name, project number, item number and description of material, name of the producer, place of origin, and other detailed information which will assist the Architect passing upon the acceptability of the sample. Certified test reports, materials certificates and/or certificates of compliance required to be submitted with the samples or if permitted in lieu of samples, shall conform to the requirements stated hereafter.
- d. Certified Test Report. A certified test report shall be a document containing a list of the dimensional, chemical, metallurgical, electrical and physical results obtained from an actual test of the materials involved, and shall certify that the materials meet the requirements of the Contract drawings and specifications, and shall also include the following information:
 1. Item number and description of material;
 2. Date of manufacture;
 3. Date of testing;
 4. Name or organization to whom the material is consigned.
 5. Quantity of material represented, such as batch, lot, group, etc.;
 6. Means of identifying the consignment, such as label, marking, lot number, etc.;
 7. Date and method of shipment;
 8. Name of organization performing tests.
 - (a) The certified test report shall be signed by an authorized and responsible agent for the organization manufacturing the material, and it shall be notarized.
- e. Materials Certificate. A materials certificate shall be a document certifying that the materials, components and equipment furnished, conform to all requirements of the Contract Drawings and specifications. The document shall also include the following information:
 1. Project to which the material is consigned.
- f. Name of Contractor to whom material is supplied.
- g. Item number and description of material.
- h. Quantity of material represented by the certificate.

- i. Means of identifying the consignment, such as label, marking, lot numbers, etc.
- j. Date and method of shipment. The materials certificate shall be signed by an authorized and responsible agent for the organization supplying the material, and it shall be notarized.
- k. Certificate of Compliance. A certificate of compliance shall be a document certifying that the materials, components and equipment covered by the previously submitted certified test report and materials certificate, have been installed in the work and that conform to all the requirements of the Contract Drawings and specifications. The following information shall also be required on the document:
 - 1. Project number;
 - 2. Item number and description of material;
 - 3. Quantity represented by the certificate;
 - 4. Name of manufacturer.
 - 5. The certificate of compliance shall be signed by an authorized responsible agent for the prime Contractor, and shall be notarized.
- l. Tests. Tests as required by the Specifications will be made in accordance with the latest revision to the standard method in effect at the time of bidding of the American Society of Testing Materials, the New York State Dept. of Transportation, the American Water Works Association, the American Association of State Highway and Transportation Officials or any other organization that is recognized as an authority on a particular material unless otherwise specified on the Contract Drawings or Special Conditions. Representative preliminary samples of the material proposed for use shall be submitted, without charge, by the Contractor or producer for examination and tested in accordance with specified methods. All materials being used are subject to test or rejection at any time during their preparation and use.
- m. The Architect will reject materials whenever, in his judgment, they fail to meet the requirements of the specifications.
- n. The Owner reserves the right to re-test all materials, which have been tested and accepted at the source of supply. After the same have been delivered, and to reject all materials which, when re-tested, do not meet the requirements of the specifications.
- o. Approval/Acceptance. Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract Requirements. After actual deliveries, the Architect will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Architect will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- p. The Architect may accept a material or combination of materials and, therefore, waive non-complying test results provided that all of the following conditions are met:
 - 1. Results of prior and subsequent series of tests of the material or material from the same sources are found satisfactory. The incidence and degree of nonconformance with the specification requirements are, in the Architect's judgment within reasonable and practical limits.
 - 2. The Contractor has diligently exercised material controls consistent with good practices in the Architect's judgment.

3. No adverse effect on the value or serviceability of the completed work could result.
 4. The Architect may at his discretion waive testing of extremely minor quantities of material when such material is obtained from sources that are prevalently on test.
- q. Costs. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
1. The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, including those samples taken on the project by the Architect. The Owner shall pay all other testing costs of said samples.
 2. The Contractor shall assume all costs of re-testing materials, which fail to meet Contract requirements.
 3. The Contractor shall assume all costs of testing materials offered in substitution for those found deficient or for those specified.

122. MATERIALS AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as "equal to" any particular standard, the Architect shall decide the question of equality.
- b. All work performed and all materials furnished shall be, in conformity with the lines, grades, cross sections, dimensions and material requirements, including tolerances shown on the Contract Drawings or indicated in the Specifications.
- c. The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work. See Section - SAMPLES, CERTIFICATES AND TESTS.
- d. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- e. Materials specified by reference to the number or symbol of a specific standard, such as an ASTM Standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in such reference. The standards referred to, except as modified in the Technical Specifications, shall have full force and effect as though printed therein.
- f. The Contractor shall employ only competent and skillful men to do the work and whenever the Architect shall notify the Contractor, in writing, that any man on the work is, in his opinion, incompetent or disorderly, the Contractor shall forthwith remove such person and shall not again employ him on any part of the work without the written consent of the Architect.
- g. The Owner may stop any worker, any part of the work under the Contract if the methods or conditions are such that unsatisfactory work might result, if improper materials or workmanship is being used, or unsafe conditions exist. Any action by the Owner under this provision shall not be deemed a cause of delay and no extensions of permitted time will be granted because of such action.
- h. In the event the materials furnished or the work performed deviates from the requirements of the

Contract Drawings and Specifications, but, in the opinion of the Owner, constitutes substantial performance, the Owner may accept the same. Should the deviation in question result in a savings to the Contractor the Owner will be entitled to a credit in the full amount of said savings. Should the deviation in question result in an additional cost to the Contractor, the Owner will not be liable to the Contractor for such additional cost.

- i. If the materials or the finished product in which the materials are used or the work performed are not in conformity with the Contract Drawings and Specifications and have resulted in an inferior or unsatisfactory product, the work and materials shall be removed and replaced or otherwise connected by and at the expense of the Contractor.

123. PERMITS AND CODES

- a. The Contractor shall give all notices required by and shall observe and comply with all Federal and State laws and Local by-laws, ordinances and regulations in any manner affecting the conduct of the work, and all such orders or decrees as may exist at present and those which may be enacted later, of bodies or tribunals having any jurisdiction or authority over the work. The Contractor shall indemnify and save harmless the Owner and Architect and all of its officers, agents and servants against any claim or liability arising from or based on the violation of any such law, bylaw, ordinance, regulation, order or decree, whether by himself or his employees. All construction, work and/or utility installations shall comply with all applicable ordinances and/or codes including any and all written waivers thereto.
- b. Before commencing any work, the Contractor shall examine the Contract Drawings and Specifications for compliance with applicable ordinances, codes, etc. and shall immediately report any discrepancy to the Owner. Where the requirements of the Contract Drawings and Specifications fail to comply with such applicable ordinances, codes, etc., the Owner will adjust the Contract by Change Order to conform to such ordinances, codes, etc., (unless waivers in writing covering the differences have been granted by the governing body or department) and make appropriate adjustment in the Contract Price.
- c. Should the Contractor fail to observe the foregoing provisions and proceed with the construction or work and/or install any utility at variance with any applicable ordinance, code, etc., including any written waivers (notwithstanding the fact that such installation is in compliance with the Contract Drawings and Specifications), the Contractor shall remove such work without cost to the Owner, but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.
- d. Unless otherwise specified, the Contractor shall at his own expense, secure and pay to the appropriate department of the Local/State/Federal Government the fees or charges for all permits including but not limited to those required for the making of water taps and the supplying of any equipment required by the regulations of the water district or company, Electrical Underwriters permits, and any other permits required by the regulatory body or any of its agencies.
- e. The Contractor shall comply with applicable Local/State/Federal laws, ordinances, codes, etc., governing noise, the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the work under this Contract.

124. CARE OF WORK

- a. The Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.
- b. Materials shall be stored so as to insure the preservation of their quality and fitness for the work and shall be located so as to facilitate prompt inspection. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground, and when directed, shall be placed in weatherproof buildings.

- c. Stored materials, even though approved before storage, shall be inspected prior to their use in the work and shall meet the requirements of the specifications at the time it is proposed to use them.
- d. The Contractor shall at his sole expense and without any additional cost to the Owner provide watchmen and/or other security measures as may be reasonably required to properly protect and care for materials and work completed, and to otherwise prevent property damage and/or personal injury.
- e. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner. Any compensation claimed by the Contractor on account of such emergency work will be reviewed by the Owner to determine its validity. If compensation is determined to be valid, then it will be determined by the Owner as provided in the Section - CHANGES IN THE WORK under GENERAL CONDITIONS.
- f. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations. If any damage is not repaired or acceptable arrangements for repair are not made within a reasonable period of time, the Owner may act to repair such damage by utilizing its own forces or using another contractor employed for that purpose, and the costs of such repair shall be deducted from any payments due the Contractor. If a damage claim has been referred by the Contractor to his insurance company, such referral shall in no way relieve the Contractor of his responsibilities.
- g. The Contractor shall shore-up, brace, underpin, secure and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner and the Architect from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner and the Architect may become liable in consequence of such injury or damage to the work or adjoining and adjacent structures and/or their premises.

125. ACCIDENT PREVENTION

- a. The Contractor shall exercise proper precautions and safety measures at all times for the protection of persons and/or property and shall be responsible for all injuries and/or damages to all persons and/or property, either on or off the site, which occur as a result of his prosecution of the work under this Contract. The safety provisions of all applicable Local/State/Federal laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner may determine to be reasonably necessary.
- b. Machinery, equipment and trucks shall be properly guarded, and operational hazards shall be eliminated in accordance with the provisions and intent of the latest rules and regulations of OSHA, to the extent that such provisions are not in contravention of applicable law. The Contractor's attention is also called to the Section - SAFETY PROVISIONS of the GENERAL CONDITIONS.
- c. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment of the work under this Contract in accordance with the requirements of the applicable State/Local/Federal regulations. The Contractor shall promptly furnish the Owner with reports concerning these matters.
- d. The Contractor shall indemnify and save harmless the Owner, Bar Down Studio (the Architect)

and their consultants from any and all claims for damages resulting from personal injury, death and/or property damage, suffered or alleged to have been suffered, by any person as a result of any work conducted under this Contract. See also the Section INDEMNITY CLAUSE of the GENERAL CONDITIONS.

126. USE OF PREMISES

- a. The Contractor shall confine his equipment, storage of materials, and construction operations to the Contract Limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- b. The Contractor shall comply with all instructions of the Owner, Architect and the ordinances, codes, etc., of the Local/State/Federal Government, regarding signs, advertising, traffic, fires, explosives, danger signals, barricades, etc.

127. REMOVAL OF DEBRIS, CLEANING, ETC.

- a. The Contractor shall, periodically or as directed during the progress of the work, keep the Project Area and public rights of way reasonably clear. Upon completion of the work, prior to final inspection, he shall remove all temporary construction facilities, debris and unused material provided for the work, and restore the whole site of the work to a condition satisfactory to the Architect. The cost of all required clean-up shall be included in the various prices bid under this Contract.

128. LAYOUT OF WORK

- a. The Contractor shall perform all layout work necessary for the satisfactory execution of the construction as shown on the Contract Drawings and all costs in connection therewith shall be included in the contract price.
- b. The Contractor shall employ competent personnel and all work shall be subject to the approval of the Architect.
- c. The Contractor shall be held responsible for the protecting and safeguarding of all control points and bench marks set by the Architect and his own forces. Any replacement or re-establishment of control points or benchmarks by the Architect shall be at the expense of the Contractor.
- d. The required horizontal and vertical control necessary to perform this work is furnished on the Contract Drawings.

129. INSPECTION/ACCEPTANCE OF THE WORK

- a. All materials and workmanship shall be subject to inspection, examination or test by the Owner and the Architect to determine the acceptability of the work at any and all times during manufacture or construction and at any and all places where such manufacture or construction is carried on and the Contractor shall provide proper facilities for such access and inspection. The Owner or Architect shall have the right to reject defective material and workmanship or require its correction. The Owner or Architect shall have the right to reject materials, which have not been approved prior to incorporation in the work, and the right to reject work that has been performed without inspection. Rejected materials shall be removed and replaced without charge. Rejected workmanship shall be corrected if possible to the Architect's satisfaction without additional charge. If in the opinion of the Architect correction is not feasible, or if correction has been attempted but is not satisfactory to the Architect, the work must be removed and replaced without additional charge. If the Contractor fails to proceed at once with the correction or replacement of rejected workmanship or defective material, the Owner may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any monies which are due or may become due the Contractor, without prejudice to any rights or remedies of the Owner.

- b. Neither inspection, testing, approval nor acceptance of the work in whole or in part by the Owner or its agents shall relieve the Contractor or his sureties of the full responsibility for materials furnished or work performed not in strict accordance with the Contract.
- c. The assignment of a part-time or full-time inspector to this project will in no way relieve the Contractor of the requirement to comply with all of the specifications.
- d. Where the Contractor has been directed by the Owner or Architect to leave certain items of work exposed for inspection, and he fails to do so, he will be required to uncover such work, at his own expense.

130. FINAL INSPECTION

- a. When the improvements embraced in this Contract are substantially completed, The Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Owner having charge of inspection. If the Owner determines that the status of the improvements is as represented, he will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable. The inspection party may also include the representative of the Village of Mt. Kisco having charge of improvements of like character when such improvements are later to be accepted by the Village.

131. INSURANCE

- a. The insurance requirements for this contract are specified in the Insurance Section of this document.

132. WARRANTY OF TITLE

- a. No material, supplies or equipment, incorporated or to be incorporated in the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of person furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

133. GENERAL GUARANTEE

- a. Neither the final certificate of payment nor any provisions in the Contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials and workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final payment.

134. NO ARBITRATION

- a. All claims, counterclaims, disputes and other matters in question between the Owner and the Contractor, not otherwise resolved, arising out of or relating to this agreement or its breach shall be decided in a court of competent jurisdiction. The Owner and the Contractor hereby agree that

there shall be no requirement for arbitration of any controversies or disputes hereunder, all such matters to be resolved at law.

135. RISK OF LOSS

- a. The Owner assumes no responsibility for the condition of existing buildings and structures and other property on the Project Area not for their continuance in the condition existing at the time of issuance of the Invitation for Bids or thereafter. No adjustment of Contract Price or allowance for any change in conditions which may occur after the Invitation for Bids has been issued will be made except as provided for herein.

136. REQUIRED PROVISIONS DEEMED INSERTED

- a. Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

137. CORRECTIONS

- a. The Architect shall have the right to correct any errors or omissions in the Contract, specifications or Contract Drawings when such corrections are necessary for the proper expression of their intent.
- b. Such corrections shall take effect from the time that the Architect gives notice thereof, and any alterations in the work rendered necessary thereby shall be made as corrected. Any conflict between the approved Contract Drawings and specifications, or any disagreement in measurements upon the Contract Drawings must be submitted to the Architect before construction of the work.

138. SAFETY PROVISIONS

- a. The safety provisions of applicable laws, building and construction codes and the safety codes approved by the Owner shall be observed.
- b. The provisions of the Federal Occupational Safety and Health Administration's "Occupational Safety and Health Standards" and "Safety and Health Regulations for Construction" shall be observed.
- c. Should at any time during the work under this Contract any Local/State/Federal safety inspector visit the site for the purpose of a safety inspection, the Contractor shall immediately notify the Architect's representative on the job site.

139. CONNECTING TO EXISTING WORK

- a. The Contractor shall remove such existing masonry, concrete, equipment and p1pmg as is necessary, in order to make the proper connections to the existing work at the locations shown. Also, he shall make the necessary pipe line, roadway and other connections at the several points in order than on completion of this Contract, water, sewage, or storm water, as the case may be, will flow through the several pipe lines and structures. Unless otherwise specified herein, no extra payment will be made for this work, but the entire cost of the same shall be included in the unit or lump sum prices bid for the various items of the work to be done under this Contract.

140. EXISTING IMPROVEMENTS

- a. The Contractor shall conduct his work so as to minimize damage to existing improvements, except where specifically stated otherwise in the specifications or drawings; it will be the responsibility of the Contractor to restore, as nearly as practical, to their original conditions all

improvements on public or private property damaged by his operations.

141. ACCESS TO SITE

- a. All costs of the removal and restoration to original condition of walls, fences, structures, utility lines, poles, guy wires and anchors, and other improvements required for passage of the Contractor's equipment shall be borne by the Contractor. The Contractor shall notify the proper authorities of the Village of Mt. Kisco and the Owner and all utilities of any intended modification or disruption to their property prior to the start of construction and shall cooperate with them in the scheduling and performance of his operation.
- b. The Contractor shall be responsible for and reimburse the Owner and others for any and all losses, damage or expense which the Owner and/or Local Government or those others may suffer, either directly or indirectly or through any claims of any person or party, for any trespass outside the spaces provided by the Owner to the Contractor or any violation or disregard of the terms and conditions established for the use or occupancy of those rights or for negligence in the exercise of those rights.
- c. The Owner may retain or deduct from any sum or sums due or to become due to the Contractor such amount or amounts as may be proper to insure the Owner against loss or expense by reason of the failure of the Contractor to observe the limits and conditions of the rights-of-way, rights-of-access, etc., provided by the Owner.

142. INDEMNITY CLAUSE

- a. The Contractor shall sign and be held to Indemnification Agreement at the end of this document.

143. DISPUTES

- a. All disputes arising between the parties arising out of, or in any way related to this Contract and/or the performance of the same, or its interpretation, shall within ten (10) days of the event or action giving rise to the dispute be presented to the Architect. All papers pertaining to the dispute shall be filed in quadruplicate. Such notice shall state the facts surrounding the dispute in sufficient detail to identify the dispute, together with its character and scope. In the meantime, the Contractor shall proceed with the work under this Contract as directed. Any dispute not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the dispute is of a continuing character and notice of the dispute is not given within ten (10) days of its commencement, the dispute will be considered only for a period commencing ten (10) days prior to the receipt by the Architect of notice thereof. The Contractor shall in no case allow any dispute to delay the work under this Contract.
- b. As soon as practicable after the final submission of all information the Owner shall make a determination of the dispute. Said decision of the Owner shall be a condition precedent to any further action on the dispute. However, upon certification in writing by the claimant that the dispute has been submitted in its final form the Owner shall be obliged to render a decision on said dispute within sixty (60) days of the date of said certification. Should the
- c. Owner fail to render its decision within the aforementioned sixty- (60) day period, its decision will not be a condition precedent to any further action on the part of the claimant.
- d. Each decision by the Owner will be in writing and will be mailed to the Contractor by registered or certified mail, return receipt requested, directed to his last known address.
- e. In the event of an unfavorable decision by the Owner, the Contractor shall have the right to contest said decision as provided for under the provisions of this Contract. The Contractor shall in no case allow the dispute or decision to delay any work but shall notify the Owner promptly that he is proceeding with the work under protest and he may then except the matter in question from the final release.

144. "OR EQUAL" CLAUSE, UNLESS OTHERWISE SPECIFIED:

- a. Whenever a material, article or piece of equipment other than the pumps and VSD units, is identified on the Contract Drawings or in the specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, etc., the intent is to establish a standard. Any material, article, or equipment of other manufacturers and vendors of equally high quality (particularly with regard to points specified in the specifications) which will perform equivalently within the design ranges specified will be equally acceptable provided that the material, article or equipment so proposed is, in the opinion of the Architect, of equal substance and function. Further the manufacturer must agree to comply fully with the warranty requirements of the specifications. The Contractor may not assume that the Architect will approve substitute equipment and non-approval of said equipment will form no basis for a claim for additional compensation by the Contractor. No substitute equipment shall be purchased or installed by the Contractor without the Architect's written approval. If the Architect's approval is obtained for alternate equipment, the Contractor shall, at his own expense, make any changes in the structures, building, piping or electrical necessary to accommodate the equipment and if Architecting is required due to substitution of other material the Contractor shall reimburse the owner for the Architecting service. The Contractor must pay for any laboratory testing required to establish the equality of his proposal.

145. CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES

- a. The Contractor's attention is directed to the State of New York, Department of Labor, Board of Standards and Appeals Industrial Code Rule 753 - "Construction, Excavation and Demolition Operations at or near Underground Facilities" effective April 1, 1975 and any amendments thereto.
- b. The Contractor will be required to comply with all applicable requirements of Industrial Code Rule 53.
- c. Requests for copies by mail should be directed to the State of New York, Department of Labor, Office of Public Information, State Office Building Campus, Albany, New York 12201; or, single copies may be obtained by applying in person at the Department's office in Albany or in New York City at the Department of Labor, Two World Trade Center, New York, New York 10047.

146. REVIEW BY OWNER

- a. The Owner, its authorized representatives and agents shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices and other relevant data and records pertaining to this
- b. Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

147. DEDUCTIONS FOR UNCORRECTED WORK

- a. If the Owner deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner and subject to settlement, in case of dispute, as herein provided.

148. PATENTS

- a. The Contractor shall hold and save the Owner and Architect, their officers, and employees, harmless from liability of any nature or kind, including but not limited to court costs and attorney's fees, for or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the Contract, which has been recommended by the Contractor, including its use by the Owner, unless otherwise specifically stipulated in the

Technical Specifications.

149. INFORMATION FROM OWNER

- a. In addition to showing the construction under this Contract, the drawings may show certain information obtained by the Owner regarding conditions and features, which exist at the site of the work, both at and below the surface of the ground. The Owner and the Architect expressly disclaim any responsibility for the accuracy or completeness of the information given on the drawings with regard to the existing conditions and features and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information. The information, which is shown, is only for the convenience of the Contractor, who must verify this information to his own satisfaction.

150. EXISTING UTILITIES, STRUCTURES AND FIXTURES

- a. The Contractor will be required, at no additional expense to the Owner, to do everything necessary to support, protect and sustain all sewer, water, gas mains or service pipes; electric light, power poles, telephone or telegraph poles, manholes, valve boxes, concrete gutters, guide rails conduits and any and all utilities, structures or fixtures laid across or along the site of the work. In case any of the said utilities, structures or fixtures are damaged by the Contractor, they shall be repaired by the Contractor at his own expense, or by the authorities having control of the same and the expense of said repairs shall be deducted from the monies due or to become due the Contractor under this Contract.
- b. If the Contractor desires temporary changes of location for his convenience for any reason whatsoever, of water lines, gas lines, sewer lines, wire lines, service connections, water and gas meter boxes, valve boxes, light standards, cableways, signals and any other utilities, structures or fixtures, he shall satisfy the Architect and Owner that the proposed relocation does not interfere with his or other Contractor's operations, or the requirements of the Contract Drawings and does not cause an obstruction or a hazard to traffic. The Contractor shall make his own request to the utility companies, pipe owners or other parties affected for such relocation work. Such relocation work for the convenience of the Contractor shall be made solely at the Contractor's expense.
- c. The Contractor shall not remove or relocate any utility, structure or fixture without the written approval of the owner of that utility, structure or fixture unless otherwise shown on the Contract Drawings, specifications or ordered by the Architect.

151. HOURS OF WORK

- a. No work shall be done on the job before 3:30 p.m. nor after 12:30 a.m. unless the Owner is notified, nor shall any work be done on Saturdays, Sundays, or legal holidays unless Contractor shall have given Owner written request at least forty-eight (48) hours in advance. Owner will make no additional payment for overtime work under any circumstances unless the Architect has given a prior written order. The Contractor shall comply with the any municipal Noise Ordinance.

152. EMERGENCY WORK

- a. If in the opinion of the Owner the work is carried on in such fashion that the public safety, private property, or utilities are endangered, or that the work is carried on in such a manner as to create unnecessary inconvenience to the public, the Owner shall, immediately upon giving notice, be authorized to undertake such corrective measures as he may deem to be necessary. The cost of such work shall be deducted from payments due the Contractor under this contract.

153. PROTECTION

- a. The Contractor shall protect and maintain all property, structures and utilities, public or private and shall provide whatever means are required to do so, as part of this contract

154. PAYMENT FOR GENERAL CONDITIONS

- a. The cost of the performance of any work required by these General Conditions shall be considered to be a part of the Contractor's Base Bid if the contract is a Lump Sum Contract, and spread out among all the unit prices if the contract is a Unit Price Contract. There will be no additional payment for work required by these General Conditions.

155. DAMAGE TO PRIVATE PROPERTY

- a. If the Contractor damages private property or facilities outside the designated work area (which work area is to be restored under the restoration provisions of the contract), he shall restore the private property or facilities promptly and completely in the same manner as specified under the restoration provisions of these specifications. If he does not do so within a reasonable period of time, as determined by the Owner, the Owner may retain or deduct from any sum or sums due to the Contractor such amount or amounts as are necessary to correct the condition and employ its own forces or another contractor to do the corrective work. The fact that the Contractor has referred damage claim to his insurance carrier shall not relieve him of liability for prompt and full restoration of damage. For purposes of this section of the contract, the Owner will treat what are essentially private facilities within a public right-of-way (including but not limited to mail boxes, shrubs, flowers and other plantings, walls, light poles, etc.) in the same manner as described above for private property.

156. RESTORATION

- a. All man-made and natural features in the construction site disturbed or removed for the proper completion of the work shall be reset or replaced. All man-made or natural features damaged or destroyed shall be repaired or restored to a condition equal to or better than that existing at the start of the work, with materials equal to or better than the original ones. In cases where it is impossible to replace an item with an equivalent item the Contractor may, subject to the approval of the Architect, substitute other similar items whose total value shall equal that of the destroyed one.
- b. If the contract documents contain more detailed or more stringent specifications for restoration than in this section, the more detailed or stringent specifications shall take precedence over this section. If the contract documents do not contain detailed specifications for restoration, then this section expresses the intent of the Owner; all published specifications of the Owner containing details of construction applicable to items of restoration (e.g. grass, pavement, etc.) shall be deemed included in these contract documents as if set forth in full, if not actually printed herein.
- c. If the contract documents contain a specific payment clause for restoration, then that clause shall apply; otherwise, payment for restoration shall be as described in Section 156.

INDEMNIFICATION AGREEMENT

The Contractor agrees to protect, defend, indemnify and hold the Village of Mt. Kisco, Bar Down Studio, and any agents, officers, employees and consultants of any of them; free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character in connection with or arising directly or indirectly out of this agreement and/or the performance hereof: without limiting the generality of the foregoing, any and all such claims, etc., relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged infringement of any patent, trademark, copyright (or application for any thereof) or of any other tangible or intangible personal or property right, or any actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, decree of any court, shall be included in the indemnity hereunder. The Contractor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, etc., at his sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.), is groundless, false or fraudulent. In any case in which such indemnification would violate Section 5-322.1 of the New York General Obligations Law, or any other applicable legal prohibition, the foregoing provisions concerning indemnification shall not be construed to indemnify the Owner for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the Owner, or its employees.

SIGNED AND SEALED this _____ day of _____ A.D. 2022

In the presence of:

{ _____ (Seal)

PRINCIPAL

WITNESS

{ _____

SPECIAL CONDITIONS

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Davis Bacon Wage Rates and State Prevailing Wages can be found in Section 007343.1. Note that it is the Contractor's responsibility to pay the higher wage for the employee's job classification.

INTRODUCTION

COMPLIANCE INFORMATION WESTCHESTER URBAN COUNTY AND PARTICIPATING MUNICIPALITIES

This project is funded with a grant from the federal Community Development Block Grant program administered by Westchester County.

By submitting a bid for this project, a contractor and all subcontractors agree to comply with these federal requirements:

- Equal Employment Opportunity and Affirmative Action
(Pages 5 to 13)
- Minority and Women-Owned Business Enterprise Goals
(Page 6)
- Davis Bacon Labor Reporting Requirements and Section 3
Requirements
(Pages 17 to 23)

Bidders must sign pages 10, 11, 15, 16, and 17 in order for their bids to be considered valid.

For more information regarding these materials, telephone:

John Estrow
Payroll Coordinator
Westchester County
Planning Department
(914) 995-2407

**EQUAL EMPLOYMENT OPPORTUNITY AND
AFFIRMATIVE ACTION**

CERTIFICATION BY BIDDER

NOTE:

The attached document is from the U.S. Department of Housing and Urban Development. By signing this document, contractors and subcontractors agree to comply with the federal equal employment opportunity requirements. The attached document serves as the bidder's Affirmative Action Plan.

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



AFFIRMATIVE ACTION PLAN
FOR
WESTCHESTER COUNTY COMMUNITY
DEVELOPMENT BLOCK GRANT PROJECTS

BID CONDITIONS

AFFIRMATIVE ACTION REQUIREMENTS

EQUAL EMPLOYMENT OPPORTUNITY

For All Non-Exempt Federal and Federally-Assisted Construction Contracts to be Awarded in Westchester County, New York

Part I: The provisions of this Part I apply to bidders, contractors and subcontractors with respect to those construction trades for which they are parties to collective bargaining agreements with a labor organization or organizations and who together with such labor organizations have agreed to the Westchester County, New York Area Equal Employment Opportunity Agreement (but only as to those trades as to which there are commitments by labor organizations to specific goals of minority employee utilization) between the Building Trades Employers Association of Westchester County, the Builder's Institute of Westchester and Putnam Counties, various labor organizations, general and specialty contractors and their associations and the minority coalition, together with all implementing agreements that have been and may hereafter be developed pursuant thereto, all of which documents are incorporated herein by reference and are hereinafter cumulatively referred to as the Westchester County Plan.

Any bidder, contractor or subcontractor using one or more trades of construction employees must comply with either Part I or Part II of these Bid Conditions as to each such trade. Thus, a bidder, contractor or subcontractor may be in compliance with these conditions by its inclusion, with its union, in the Westchester Plan as to trade "A", provided there is set forth in the Westchester Plan a specific commitment by that union to a goal of minority employee utilization for such trade "A", thereby meeting the provisions of this Part I, and by its commitment to Part II in regard to trade "B" in the instance in which it is not included in the Westchester Plan and, therefore, cannot meet the provisions of this Part I.

To be eligible for award of a contract under Part I of this invitation, a bidder or subcontractor must execute the certification required by Part III hereof.

Part II: A. Coverage. The provisions of this Part II shall be applicable to those bidders, contractors and subcontractors, who, in regard to those construction trades to be utilized on the project to which these bid conditions pertain:

1. Are not or hereafter cease to be signatories to the Westchester County Plan referred to in Part I hereof;
2. Are signatories to the Westchester County Plan but are not parties to collective bargaining agreements;

3. Are signatories to the Westchester County Plan but are parties to collective bargaining agreements with labor organizations who are not or hereafter cease to be signatories to the Westchester County Plan;

4. Are signatories to the Westchester County Plan but as to which no specific commitment to goals of minority employee utilization by labor organization have been executed pursuant to the Westchester County Plan; or

5. Are no longer participating in an affirmative action plan acceptable to the Director, OFCC, including the Westchester County Plan.

B. Requirement - An Affirmative Action Plan. The bidders, contractors and subcontractors described in paragraphs 1 through 5 above will not be eligible for award of a contract under this Invitation for Bids, unless it certifies as prescribed in paragraph 2b of the certification specified in Part III hereof that it adopts the minimum goals and timetables of minority employee utilization ¹ and specific affirmative action steps set forth in Section B-1 and 2 of this Part II directed at increasing minority employee utilization by means of applying good faith efforts to carrying out such steps; or is deemed to have adopted such a program pursuant to Section B.3 of this Part II.

1. Goals and Timetables. The goals of minority employee utilization required of the bidder and subcontractors are applicable to each trade not otherwise bound by the provisions of Part I hereof which will be used on the project in Westchester County New York (hereinafter referred to as the Westchester area):

Goals of Minority Employee Utilization Expressed in Percentage Terms

In accordance with the Westchester-Putnam Home Town Plan Agreement, the female goal which now pertains is 6.9%. The goal for minorities is 22.6%.

The percentage goals of minority employee utilization above are expressed in terms of hours of training and employment as a proportion of the total hours to be worked by the bidder's, contractor's and subcontractor's entire work force in that trade on all projects (both federal and non-federal in the Westchester County area during the performance of its contract or subcontract. The hours for minority work and training must be substantially uniform throughout the length of the contract, on all projects and for each of the trades. Further, the transfer of minority employees or trainees from employer-to-employer or from project-to-project for the sole purpose of meeting the contractor's or subcontractor's goal shall be a violation of these conditions. In reaching the goals of minority employee utilization required of bidders, contractors and subcontractors pursuant to this Part II, every effort shall be made to find and employ qualified journeymen. Provided, however, and pursuant to the requirements of Department of Labor regulations, 24 CFR 5a, apprentices or trainees shall be employed on all projects subject to the

¹ 1. "Minority" is defined as including Black (Non-Hispanic Origin), Hispanic, Asian or Pacific Islander, and American Indian or Alaskan Native, and includes both men and women.

requirements of these Bid Conditions and, where feasible, 25 percent of apprentices or trainees employed on each project shall be in their first year of apprenticeship or training.

In order that the nonworking training hours of trainees may be counted in meeting this goal, such trainees must be employed by the contractor during the training period. The contractor must have made a commitment to employ the trainees at the completion of their training subject to the availability of employment opportunities and the trainees must be trained pursuant to established training programs which must be the equivalent of the training programs now or hereafter provided for in the Westchester County Plan with respect to the nature, extent and duration of training offered.

A contractor or subcontractor shall be deemed to be in compliance with the terms and requirements of this Part II by the employment and training of minorities in the appropriate percentage of his aggregate work force in the Westchester County area for each trade for which it is committed to a goal under this Part II.

However, no contractor or subcontractor shall be found in noncompliance solely on account of its failure to meet its goals within its timetables, but such contractor shall be given the opportunity to demonstrate that it has instituted all of the specific affirmative action steps specified in this Part II and has made every good faith effort to make these steps work toward the attainment of its goals within its timetables, all to the purpose of expanding minority employee utilization on all of its projects in the Westchester County area.

In all cases, the compliance of a bidder, contractor or subcontractor will be determined in accordance with its respective obligations under the terms of these Bid Conditions. Therefore, contractors or subcontractors who are governed by the provisions of this Part II shall be subject to the requirements of that Part regardless of the obligations of its prime contractor or lower tier subcontractors.

All bidders and all contractors and subcontractors performing or to perform work on projects subject to these Bid Conditions hereby agree to inform their subcontractors of their respective obligations under the terms and requirements of these Bid Conditions, including the provisions relating to goals of minority employment and training.

2. Specific Affirmative Action Steps. Bidders, contractors and subcontractors subject to this Part II must engage in affirmative action directed at increasing minority employee utilization, which is at least as extensive and as specific as the following steps:

- a. The contractor shall notify community organizations that the contractor has employment opportunities available and shall maintain records of the organizations' response.
- b. The contractor shall maintain a file of the names and addresses of each minority worker referred to him and what action was taken with respect to each such referred worker, and if the worker was not employed, the

reasons therefor. If such worker was not sent to the union hiring hall for referral or if such worker was not employed by the contractor, the contractor's file shall document this and the reasons therefor.

c. The contractor shall promptly notify the HUD New York Area Office (agency) when the union or unions with whom the contractor has a collective bargaining agreement has not referred to the contractor a minority worker sent by the contractor or the contractor has other information that the union referral process has impeded him in his efforts to meet his goal.

d. The contractor shall participate in training programs in the area, especially those funded by the Department of Labor.

e. The contractor shall disseminate his EEO policy within his own organization by including it in any policy manual; by publicizing it in his company newspapers, annual reports, etc.; by conducting staff, employee and union representatives' meetings to explain and discuss the policy; by posting of the policy; and by specific review of the policy with minority employees.

f. The contractor shall disseminate his EEO policy externally by informing and discussing it with all recruitment sources; by advertising in news media, specifically including minority news media; and by notifying and discussing it with all subcontractors and suppliers.

g. The contractor shall make specific and constant personal (both written and oral) recruitment efforts directed at all minority organizations, schools with minority students, minority recruitment organizations and minority training organizations, within the contractor's recruitment area.

h. The contractor shall make specific efforts to encourage present minority employees to recruit their friends and relatives.

i. The contractor shall validate all employee specifications, selection requirements, tests, etc.

j. The contractor shall make every effort to promote after-school, summer and vacation employment to minority youth.

k. The contractor shall develop on-the-job training opportunities and participate and assist in any association or employer-group training program relevant to the contractor's employee needs consistent with its obligations under this Part II.

l. The contractor shall continually inventory and evaluate all minority personnel for promotion opportunities and encourage minority employees to seek such opportunities.

m. The contractor shall make sure that seniority practices, job classifications, etc., do not have a discriminatory effect.

n. The contractor shall make certain that all facilities and company activities are non-segregated.

o. The contractor shall continually monitor all personnel activities to ensure that his EEO policy is being carried out.

p. The contractor shall solicit bids for subcontracts from available minority subcontractors engaged in the trades covered by these Bid Conditions.

3. Contractors and Subcontractors Deemed to be Bound by Part II. In the event that a contractor or subcontractor, who is at the time of bidding eligible under Part I of these Bid Conditions, is no longer participating in an affirmative action plan acceptable to the Director of the Office of Federal Compliance, including the Westchester County Plan, s/he shall be deemed to be committed to Part II of these Bid Conditions; s/he shall be considered to be committed to the minority employee utilization percentage goal of the minimum range for that trade for the appropriate year.

4. Subsequent Signatory to the Westchester County Plan. Any contractor or subcontractor subject to the requirements of this Part II for any trade at the time of submission of a bid who together with the labor organization with whom it has a collective bargaining agreement subsequently becomes a signatory to the Westchester County Plan, either individually or through an association, may meet the requirements under these Bid Conditions for such trade, if such contractor or subcontractor executes and submits a new certification committing to Part I of these Bid Conditions. No contractor or subcontractors shall be deemed to be subject to the requirements of Part I until such certification is executed and submitted.

5. Non-discrimination. In no event may a contractor or subcontractor utilize the goals, timetables or affirmative action steps required by this Part II in such a manner as to cause or result in discrimination against any person on account of race, color, religion, sex or national origin.

Part III: Certifications.

A. Bidders' Certifications. A bidder will not be eligible for award of a contract under this Invitation for Bids unless such bidder has submitted as a part of the bid the following certification, which will be deemed a part of the resulting contract:

BIDDERS' CERTIFICATION

_____ (Bidder) certifies that:

1. It intends to use the following listed construction trades in the work under this contract: _____

2. (a) As to those trades set forth in the proceeding paragraph one hereof for which it is eligible under Part I of those Bid Conditions for participation in the Westchester County Plan, it will comply with the Westchester County Plan on all construction work (both federal and non-federal) in the Westchester County area within the scope of coverage of that Plan, those trades being: _____

_____ and/or by these Bid Conditions to comply with Part II of these Bid Conditions, it adopts the minimum minority employee utilization goals and the specific affirmative action steps contained in said Part II, for all construction work (both federal and non-federal) in the Westchester County area subject to these Bid Conditions, those trades being: _____

_____, and

3. It will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these Bid Conditions.

(Date)

(Signature of Authorized Representative of Bidder)

Typed/Printed Signature

8. Subcontractors' Certifications. Prior to the award of any subcontract under this Invitation for Bids, regardless of tier, the prospective subcontractor must execute and submit to the Prime Contractor the following certification, which will be deemed a part of the resulting subcontract:

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



SUBCONTRACTORS' CERTIFICATION

_____ (Subcontractor) certifies that:

1. It intends to use the following listed construction trades in the work under the subcontract: _____

_____;

2. (A) As to those trades set forth in the preceding paragraph one hereof for which it is eligible under Part I of these Bid Conditions for participation in the Westchester County Plan, it will comply with the Westchester County Plan on all construction work (both federal and non-federal) in the Westchester County area subject to these Bid Conditions, those trades being: _____

_____, and/or

(b) As to those trades for which it is required by these Bid Conditions to comply with Part II of these Bid Conditions, it adopts the minimum minority employee utilization goals and the specific affirmative action steps contained in said Part II for all construction work (both federal and non-federal) in the Westchester County area subject to these Bid Conditions, those trades being: _____

_____, and

3. It will obtain from each of its subcontractors prior to the award of any subcontract under this subcontract the subcontractor certification required by these Bid Conditions.

(Date)

(Signature of Authorized Representative of Bidder)

Typed/Printed Signature

The said subcontractors' certification must become a part of all subcontracts under the prime contract. Any subcontract executed without such incorporated certification shall be void.

C. Materiality and Responsiveness. The certifications required to be made by the bidder pursuant to these Bid Conditions is material, and will govern the bidder's performance on the project and will be a made a part of the bid. Failure to submit the certification will render the bid nonresponsive.

Part IV: Compliance and Enforcement. Contractors are responsible for informing their subcontractors (regardless of tier) as to their respective obligations under Parts I and II hereof (as applicable). Bidders, contractors and subcontractors hereby agree to refrain from entering into any contract or contract modification subject to Executive Order 11246, as amended of September 24, 1965, with a contractor debarred from, or who is determined not to be a "responsible" bidder for, Government contracts and federally-assisted construction contracts pursuant to the Executive Order. The bidder, contractor or subcontractor shall carry out such sanctions and penalties for violation of the equal opportunity clause including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered by the administering agency, the contracting agency or the Office of Federal Contract Compliance pursuant to the Executive Order. Any bidder, or contractor or subcontractor who shall fail to carry out such sanctions and penalties shall be deemed to be in noncompliance with these Bid Conditions and Executive Order 11246, as amended.

Nothing herein is intended to relieve any contractor or subcontractor during the term of its contract on this project from compliance with Executive Order 11246, as amended, and the Equal Opportunity Clause of its contract, with respect to matters not covered in the Westchester County Plan or in Part II of these Bid Conditions.

Violation of any substantial requirement in the Westchester County Plan by a contractor or subcontractor covered by Part I of these Bid Conditions including the failure of such contractor or subcontractor to make a good faith effort to meet its fair share of the trade's goals of minority employee utilization, or of the requirements of Part II hereof by a contractor or subcontractor who is covered by Part II shall be deemed to be noncompliance by such contractor or subcontractor with the Equal Opportunity Clause of the contract, and shall be grounds for imposition of the sanctions and penalties provided at Section 209(a) of Executive Order 11246, as amended.

Each agency shall review its contractors' and subcontractors' employment practices during the performance of the contract. If the agency determines that the Westchester County Plan no longer represents effective affirmative action, it shall so notify the Office of Federal Contract Compliance which shall be solely responsible for any final determination of that question and the consequences thereof.

In regard to Part II of these conditions, if the contractor or subcontractor meets its goals or if the contractor or subcontractor can demonstrate that it has made every good faith effort to meet these goals, the contractor or

subcontractor shall be presumed to be in compliance with Executive Order 11246, as amended, the implementing regulations and its obligations under these Bid Conditions and no formal sanctions or proceedings leading toward sanctions shall be instituted unless the agency otherwise determines that the contractor or subcontractor is not providing equal employment opportunities. In judging whether a contractor or subcontractor has met its goals, the agency will consider each contractor's or subcontractor's minority employee utilization and will not take into consideration the minority employee utilization of its subcontractors. Where the agency finds that the contractor or subcontractor has failed to comply with the requirements of Executive Order 11246, as amended, the implementing regulations and its obligations under these Bid Conditions, the agency shall take such action and impose such sanctions as may be appropriate under the Executive Order and the regulations. When the agency proceeds with such formal action it has the burden of proving that the contractor has not met the requirements of these Bid Conditions, but the contractor's failure to meet the goals shall shift to the contractor the requirement to come forward with evidence to show that he has met the "good faith" requirements of these Bid Conditions by instituting at least the Specific Affirmative Action steps listed above and by making every good faith effort to make those steps work toward the attainment of its goals within its timetables. The pendency of such formal proceedings shall be taken into consideration by Federal agencies in determining whether such contractor or subcontractor can comply with the requirements of Executive Order 11246, as amended, and is therefore a "responsible prospective contractor" within the meaning of the Federal procurement regulations.

It shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.

The procedures set forth in these conditions shall not apply to any contract when the head of the contracting or administering agency determines that such contract is essential to the national security and that its award without following such procedures is necessary to the national security. Upon making such a determination, the agency head will notify, in writing, the Director of the Office of Federal Contract Compliance within thirty days.

Requests for exemptions from these Bid Conditions must be made in writing, with justification, to the Director, Office of Federal Contract Compliance, U.S. Department of Labor, Washington, DC 20210, and shall be forwarded through and with the endorsement of the agency head.

Contractors and subcontractors must keep such records and file such reports relating to the provisions of these Bid Conditions as shall be required by the contracting or administering agency or the office of Federal Contract Compliance.

For the information of bidders, a copy of the Westchester County Plan may be obtained from the contracting officer.

Section 3 Compliance

Certification by Bidder

NOTE:

The attached certification and Section 3 Plan must be signed by all bidders. This certificate indicates that the bidder will make every effort to follow the federal Section 3 requirements.

A fact sheet describing Section 3 is also attached.

Section 3 Bidders Certification

Training, Employment and Contracting Opportunities for Businesses and Lower Income Persons

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

COMPANY NAME: _____

ADDRESS: _____

OFFICIAL SIGNATURE: _____

TITLE _____

Name		Address	
1.			
2.			
3.			
4.			
5.			

Date: _____

WAGE RATE CERTIFICATION

The project assisted under this agreement is subject to the requirements of the Davis-Bacon Act (the Act), 40 USC 276a. The Act requires that all construction employees of both contractors and subcontractors working on a federally-funded or assisted construction project be paid the current prevailing Davis-Bacon wages (wages).

The wages are those included in the bid package. By submitting a bid and by signing this form, a bidding contractor agrees to pay his/her construction employees the current prevailing Davis-Bacon wages as included in the bid package and to assure that any sub-contractors used on the project also pay their construction employees the wages included in the bid package.

Since this project is subject to the requirements of both Federal and State Labor Standards, the Contractor is required to pay the higher of the two rates for the job classification.

Company Name: _____

Federal ID #: _____

Address: _____

Signature of Authorized Representative: _____

Printed Name/Title of Authorized
Representative: _____

SECTION 3: PROVIDING ECONOMIC OPPORTUNITIES THROUGH HUD PROGRAMS

A FACT SHEET

What is Section 3?

Section 3 is a provision of the Housing and Urban Development Act of 1968 which requires that programs of direct financial assistance administered by the U.S. Department of Housing and Urban Development (HUD) provide, to the greatest extent feasible, opportunities for job training and employment to lower income residents in connection with projects in their neighborhoods. Further, to the greatest extent feasible, contracts in connection with these projects are to be awarded to local businesses. Section 3 is a tool for fostering local economic development, neighborhood economic improvement and individual self sufficiency.

Who Must Comply with Section 3 Requirements?

Section 3 applies to financial assistance awarded, provided or otherwise made available to a project or activity under a program administered by HUD in aid of housing, urban planning, redevelopment, development or renewal, public or community facilities and new community development. Section 3 does not apply to financial assistance made available solely in the form of insurance or guaranty or to tenant-based assistance. Recipients of Section 3 covered assistance include but are not limited to, states, units of local government, public housing agencies, Indian housing authorities, public and private nonprofit organizations, private agencies, developers, builders, community development housing organizations, resident management corporations and resident councils. Also, contractors who perform work in connection with projects funded under covered programs must comply with Section 3 requirements.

- ◆ Low Income Public Housing Programs
- ◆ Community Development Block Grant Programs
- ◆ Homeless Assistance Programs
- ◆ HOPE Programs
- ◆ HOME Programs
- ◆ National Affordable Housing Act Programs
- ◆ Fair Housing Initiatives Program
- ◆ Fair Housing Assistance Program

What Does Section 3 Require?

Recipients and contractors must make a good faith effort to utilize Section 3 area residents as trainees and employees in connection with the project. Targeted recruitment and the selection of Section 3 area residents for available positions are two examples of good faith efforts to meet this requirement.

Recipients and contractors must make a good faith effort to award contracts to Section 3 business concerns for work in connection with the project. An example of a good faith effort to meet this requirement is the implementation of an affirmative action plan which includes targets for the number and dollar value for awarding contracts to Section 3 business concerns.

Recipients and contractors must keep records and submit reports to HUD documenting the good faith efforts taken and the results of these actions. Examples of such documentation include letters to community organizations, employment development and business development centers; copies of solicitation for bids or proposals; and copies of affirmative action plans.

Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A.1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage of determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which might be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, and programs, which cover the particular weekly period, are determined to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates confirmed under 29 CFR Part 5.5(a)(1)(ii) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rates (including the amount designated for fringe benefits, where appropriate) HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

2. **Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or subcontractor the full amount of wages required by the contract in the event of failure to pay any laborer or mechanic, including any apprentice trainee or helper, employed or working on the site of the work (or under the United States Housing act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract. HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3 (l) **Payrolls and Basic Records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such work, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a) (1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefit is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-00017).

(ii)(a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case might be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149).

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance", signed by the contractor or subcontractor or his or her agency who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.5 (a)(3)(i) and that such information is correct and complete.

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph A.3(ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3(i) of this section available for inspection, copying or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

4 (l) Apprentices and Trainees. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which the program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the administrator determines that a different practice prevails for the applicable apprentice classification, fringe shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the

approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the acceptable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal Employment Opportunity.** The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. **Compliance with Copeland Act Requirements.** The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all contract clauses in 29 CFR Part 5.5.

7. **Contracts Termination: Debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3 and 5 are herein incorporated by reference in this contract.

9. **Disputes Concerning Labor Standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (I) **Certification of Eligibility.** By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C., "Federal Housing Administration Transactions" provides in part, "Whoever, for the purpose of .. influencing in any way the action of such administration makes, utters or publishes any statement, knowing the same to be false, shall be fined not more than \$5,000 or imprisoned not more than two years, or both".

11. **Complaints, Proceedings or Testimony by Employees.** No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime Requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of eight hours in any calendar day or in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such workweek, whichever is greater.

(2) **Violation: Liability for Unpaid Wages: Liquidated Damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable to the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under the contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) **Withholding for Unpaid Wages and Liquidated Damages.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29, Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54.83, Stat 96).

(3) The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontract as the secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

D. Anti-Discrimination

Section 109 of Title I of the Housing and Community: Section 109 prohibits discrimination on the basis of race, color, national origin, sex or religion in programs and activities receiving financial assistance from HUD's Community Development and Block Grant Program. Section 109 also directs that the prohibitions against discrimination on the basis of age under the Age Discrimination Act and the prohibitions against discrimination on the basis of disability under Section 504 shall apply to programs or activities receiving Federal financial assistance under Title I programs.

REQUIRED DISCLOSURE OF RELATIONSHIPS TO MUNICIPALITY

(Prior to execution of a contract by the Municipality, a potential Municipality contractor must complete, sign and return this form to the Municipality)

Contract Name and/or ID No.:

(To be filled in by Municipality)

Name of Contractor:

(To be filled in by Contractor)

A.) Related Employees:

1. Are any of the employees that you will use to carry out this contract with the Municipality also an officer or employee of the Municipality, or the spouse, or the child or dependent of such Municipality officer or employee?

Yes _____ No _____

If yes, please provide details: _____

B.) Related Owners:

1. If you are the owner of the Contractor, are you or your spouse, an officer or employee of the Municipality?

Yes _____ No _____

If yes, please provide details: _____

To answer the following question, the following definition of the word "interest" shall be used:

Interest means a direct or indirect pecuniary or material benefit accruing to a Municipality officer or employee, his or her spouse, child or dependent, whether as the result of a contract with the Municipality or otherwise. For the purpose of this chapter, a Municipality officer or employee shall be deemed to have an "interest" in the contract of:

- i. His/her spouse, children and dependents, except a contract of employment with the Municipality;
- ii. A firm, partnership or association of which such officer or employee is a member or employee;
- iii. A corporation of which such officer or employee is an officer, director or employee; and

- iv. A corporation of which more than five (5) percent of the outstanding capital stock is owned by any of the aforesaid parties.

2. Do any officers or employees of the Municipality have an **interest** in the Contractor or in any subcontractor that will be used for this contract?

Yes _____ No _____

If yes, please provide details: _____

Authorized Company Official shall sign below and type or print
information below the signature line:

Name:

Title:

Date:

CONTRACTORS INSURANCE REQUIREMENTS

- 1) The Contractor, prior to signing of the contract, shall provide to the Village of Mt. Kisco and maintain throughout the life of the contract, at his own cost and expense, proof of the following insurance by insurance companies licensed in the State of New York.
 - a) Workmen's Compensation. The Contractor shall take out and maintain during the life of this contract the statutory Workmen's Compensation, Disability, and Employer's Liability insurance for all of his employees to be engaged in work on the project under this Contract, and, in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Workmen's Compensation, Disability, and Employer's Liability Insurance for all of the latter's employees to be engaged in such work.
 - b) General Liability Insurance with a single limit of liability per occurrence for bodily injury and property damage of \$1,000,000. The Certificate of Insurance shall indicate the following coverage:
 - i) Premises - Operations;
 - ii) Any deductibles shall not be the liability of the Village of Mt. Kisco, New York.
 - c) Automobile Liability Insurance with the single limit of liability per occurrence for bodily injury and per occurrence for property damage at \$1,000,000. This insurance shall include coverage for:
 - i) Owned automobiles;
 - ii) Hired automobiles;
 - iii) Non-owned automobiles.
 - d) Owners and Contractors Protective Liability Policy - \$1,000,000 single limit endorsed that the Village of Mt. Kisco is not responsible for the premium.
 - e) Umbrella Liability Insurance Policy - \$5,000,000 single limit endorsed that the
 - i) Village of Mt. Kisco is not responsible for the premium.
 - f) Property Damage - Property Damage Insurance shall include the legal liability of its Contractor for loss or damage to property of the Village of Mt. Kisco.
 - g) Unemployment Insurance - The Contractor for the agreed consideration, promises and agrees to pay the contributions measured by the wages of his employees required by State Unemployment Insurance Law and all amendments thereto, and to accept the account of any contribution measured by the wages as aforesaid of employees of the Contractor and his subcontractors assessed against the Owner under the authority of said law.
- 2) The Contractor shall obtain and maintain in full force and effect all of his insurance policies with a reputable insurer licensed to do business in the State of New York with at least a Best rating of A-.
- 3) All policies and certificates of the Contractor shall contain clauses as follows:
 - a) The insurance companies issuing the policy or policies shall have no recourse against the Village of Mt. Kisco, New York for payment of any premium or for assessments under any form of policy.
 - b) Any and all deductibles in the above described insurance policies shall be assumed by and be for the account of, and at the sole risk of the Contractor.
 - c) In case of cancellation or material change in any of the policies, thirty (30) days notice shall be given to the

Village of Mt. Kisco, New York, by registered mail, return receipt requested.

- 4) All property losses shall be made payable to and adjusted with the Village of Mt. Kisco.
- 5) All policies of insurance shall be acceptable to and approved by the Department of Law prior to the inception of any work.
- 6) Other coverages may be required by the Village of Mt. Kisco based on specific need.
- 7) If, at any time, any of the said policies shall be or become unsatisfactory to the Village of Mt. Kisco, as to form or substance, or if a company issuing such a policy shall be or become unsatisfactory to the Village of Mt. Kisco the Contractor shall promptly obtain a new policy, submit same to the Village of Mt. Kisco, for approval and submit a certificate thereof as hereinafter provided. Upon failure of the Contractor to furnish, deliver and maintain such insurance as above provide, this Contract, at the election of the Village of Mt. Kisco, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor to take out and/or to maintain or the taking out and/or maintenance of any required insurance, shall not relieve the Contractor for any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligations of the Contractor.
- 8) In the event that claims in excess of these amounts are filed by reason of any operations under the contract, the amounts of excess of such claims, or any portion thereof, may be withheld from payment due or to become due the Contractor until such time as the Contractor shall furnish additional security covering such claims.
- 9) The Insurance Policy shall be endorsed to name the Village of Mt. Kisco, Bar Down Studio, and any directors, officers, employees, consultants, subsidiaries, and affiliates, as additional insured on
 - a) all policies and Hold Harmless documents, and shall stipulate that this insurance is primary, that any other insurance or self-insurance maintained by the Village of Mt. Kisco and Bar Down Studio shall be excess only and shall not be called upon to contribute with this insurance. ISO Additional Insured Endorsement form number CG2010 1185 under GL. Contractors Form B must be utilized and accompany the Certificate of Insurance.
- 10) Copies of the insurance policies shall be submitted to the Village of Mt. Kisco attorney for approval prior to the signing of the Contract.

SECTION 007319 – HEALTH AND SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 PROJECT SITE SAFETY

- A. The Prime Contractor, not the Architect, or the entity recognized as Construction Site representative, is responsible for Project site safety.

1.3 SAFETY AND HEALTH REGULATIONS

- A. The Prime Contractor, and any entity working for the Prime Contractor, shall comply with the U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-54), latest revisions and with the latest requirements of the "Right to Know" laws and the New York State Labor Law.
- B. In order to protect the general public and the lives and health of his/her employees under the Contract, the Prime Contractor shall comply with all pertinent provisions of the latest issues of the Federal Register, Bureau of Labor Standards, Safety and Health Regulations; New York State Industrial Code Rule 30 pertaining to Tunneling Operations; New York State Industrial Code Rule 23 pertaining to Trenching Operations; and the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work under this Contract. In case of a conflict between the above noted authorities, the most stringent shall prevail.
- C. The Prime Contractor shall have on the project site at all times, while work is in progress, at least one person skilled in safety and health procedures and familiar with State and Federal safety and health regulations whose responsibility shall be to observe methods and procedures. He shall have the duty and authority to stop and correct all unsafe and unhealthy conditions.
- D. Toxic, noxious or otherwise hazardous fumes, gases or dusts, etc. from welding, cadwelding, painting, grinding, sawing, sweeping or any other operations shall be kept to the absolute minimum and shall be vented directly to the outside by the Contractor, and only used when authorized by the Architect.
- E. The Prime Contractor to submit to the Architect and Construction Site Representative, prior to first payment application approval, 2 copies of Safety Data Sheets (SDS) for all material used on site. The Prime Contractor shall also keep one (1) complete set of Safety Data Sheets (SDS) onsite at all times.
 - 1. These reference materials shall be updated continuously throughout the Project, as additional materials are added to/brought to the Project site.

1.4 SAFETY AND FIRST AID

- A. The Prime Contractor shall at all times exercise caution of his/her operations and shall be responsible for the safety and protection of all persons on or about the site arising out of or relating to his/her Work. All hazards shall be avoided or guarded in accordance with the provisions of the Manual of Accident Prevention in Construction of the AGCA, unless such provisions contravene local law. The safety provisions of all applicable laws, codes and ordinances shall be observed.

- B. The Prime Contractor shall provide and maintain at the Site, at each location where work is in progress, as part of his/her plant, an approved first aid kit. Ready access thereto shall be provided at all times when persons are employed on the work site.
- C. The Prime Contractor shall take due precautions against infectious diseases, and shall arrange for the immediate isolation and removal from the Site of any employee who becomes ill or is injured while engaged on the work site.
- D. The Prime Contractor shall, upon request of the Architect and/or Construction Site Representative, immediately correct all conditions that constitute a clear and present danger to persons as interpreted by the Architect and/or Construction Site Representative. If such danger is not so corrected, the Owner or the Architect will employ other persons to do such work and the expense thereof shall be deducted from any monies due or to become due to the Prime Contractor.
- E. Clean up of the Prime Contractor's, and/or their subcontractor's, materials and/or debris shall be deemed a safety and health issue.

1.5 ACCIDENTS AND ACCIDENT REPORTS

- A. Notify Architect immediately of any accidents involving Prime Contractor, subcontractor or supplier personnel on site.
- B. Within 24 hours of the occurrence, the Prime Contractor shall submit a written accident report, to the Architect, fully detailing the occurrence.

1.6 TOOL BOX SAFETY MEETINGS

- A. The Prime Contractor shall hold weekly toolbox safety meetings with his/her own workers. Records of these meetings shall be forwarded to the Owner, through the Construction Site Representative's office, each week.
 - 1. Failure to comply with this requirement shall result in Applications for Payment not being reviewed and processed.

END OF SECTION 007319

SECTION 007343 - WAGE RATE REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. The labor on this contract shall be performed in all respects in full accordance with the Labor Law of the State of New York. In accordance with Section 220, Subdivision 3, and Section 220-D, of the Labor Law, the Industrial Commissioner has designated as the minimum hourly rates to be paid to employees on the work the rates shown on the attached schedules which shall be posted in a prominent and convenient place for the inspection of the Contractor's employees. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides, among other things, that it shall be the duty of the fiscal officer to make a determination of the schedule of wages and supplementals to be paid to all laborers, workmen and mechanics employed on public works projects. The amount of supplemental listed on the enclosed schedule does not necessarily include all types of prevailing supplements.
- B. The Contractor shall make provision for disability benefits, workman's compensation, unemployment insurance and social security, as required by law.
- C. Every Contractor and Subcontractor shall submit to the Contracting Agency, within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true in accordance with the general provisions of laws Covering Workers on Public Works Contracts.
- D. Copies of Wage rates prepared by the New York State Department of Labor can be obtained online as follows:
 - 1. <https://apps.labor.ny.gov/wpp/showFindProject.do?method=showIt>
 - 2. Enter the PRC number: 2022004155
 - 3. In the event that the Contractor does not have web access or is unable to access the Department's website, please fax a written request for a printed copy of the schedule to the Central Office of the Bureau of Public Works at (518) 485-1870.
- E. Copies of Davis-Bacon Wage Rates are appended hereto.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Project information.
 - 2. Access to site.
 - 3. Coordination with occupants.
 - 4. Work restrictions.
 - 5. Specification and drawing conventions.
- B. Related Requirements:
 - 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: Village Hall & Old Post Office Exterior Work
 - 1. Project Location: 104 E Main Street & 120 E Main Street, Mount Kisco NY 10549
- B. Owner: Village/Town of Mount Kisco
 - 1. Owner's Representative: Edward Brancati, ebrancati@mountkisco.ny.gov.
- C. Architect: Bar Down Studio, dana@bardownstudio.com.

1.4 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
 - 1. Adequate protection shall be provided at the end of every work shift to allow continued use of the facility.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. 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.

- a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.5 OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with 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 Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 6:30 a.m. to 3:30 p.m., Monday through Friday, unless otherwise indicated.
 - 1. Weekend Hours: Saturday 8:30 a.m. – 3:30 p.m upon written request and approval.
 - 2. Early Morning Hours: 6:30 a.m. – 8:30 a.m.
 - 3. Hours for Utility Shutdowns: 6:30 a.m. – 8:30 a.m.
 - 4. Hours for Core Drilling or other noisy activity: 6:30 a.m. – 8:30 a.m.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
 - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Controlled Substances: Use of tobacco products and other controlled substances within the existing building is not permitted.
- F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

1.7 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 Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the 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 published as part of the U.S. National CAD Standard and scheduled on Drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

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SECTION 011200 - MULTIPLE CONTRACT SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.
- B. Specific requirements for Work of each contract are also indicated in individual Specification Sections and on Drawings.
- C. Related Requirements:
 - 1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site, coordination with occupants, and work restrictions.
 - 2. Section 013100 "Project Management and Coordination" for general coordination requirements.
 - 3. Section 015000 "Temporary Facilities and Controls" for specific requirements for temporary facilities and controls.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, the condition at which roofing is insulated and weathertight; exterior walls are insulated and weathertight; and openings are closed with permanent construction or substantial temporary closures equivalent in weather protection to permanent construction.

1.4 PROJECT COORDINATOR

- A. Project coordinator shall be responsible for coordination between the General Construction Contract and Elevator Contract.
 - 1. The General Construction Contractor shall act as the Project Coordinator.

1.5 PROJECT COORDINATOR RESPONSIBILITIES

- A. Project coordinator shall perform Project coordination activities for the multiple contracts, including, but not limited to, the following:
 - 1. Provide typical overall coordination of the Work.
 - 2. Coordinate shared access to workspaces.
 - 3. Coordinate product selections for compatibility.
 - 4. Provide overall coordination of temporary facilities and controls.
 - 5. Coordinate, schedule, and approve interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services.
 - 6. Coordinate construction and operations of the Work with work performed by each Contract.

7. Prepare coordination drawings in collaboration with each contractor to coordinate work by more than one contract.
8. Coordinate sequencing and scheduling of the Work. Include the following:
 - a. Initial Coordination Meeting: At earliest possible date, arrange and conduct a meeting with contractors for sequencing and coordinating the Work; negotiate reasonable adjustments to schedules.
 - b. Prepare combined Contractors' Construction Schedule for entire Project. Base schedule on preliminary construction schedule. Secure time commitments for performing critical construction activities from contractors. Show activities of each contract on a separate sheet. Prepare a simplified summary sheet indicating combined construction activities of contracts.
 - 1) Submit schedules for approval.
 - 2) Distribute copies of approved schedules to contractors.
9. Provide photographic documentation.
10. Provide quality-assurance and quality-control services specified in Section 014000 "Quality Requirements."
11. Coordinate sequence of activities to accommodate tests and inspections, and coordinate schedule of tests and inspections.
12. Provide information necessary to adjust, move, or relocate existing utility structures affected by construction.
13. Provide progress cleaning of common areas and coordinate progress cleaning of areas or pieces of equipment where more than one contractor has worked.
14. Coordinate cutting and patching.
15. Coordinate protection of the Work.
16. Coordinate firestopping.
17. Coordinate completion of interrelated punch list items.
18. Coordinate preparation of Project Record Documents if information from more than one contractor is to be integrated with information from other contractors to form one combined record.
19. Collect record Specification Sections from contractors, collate Sections into numeric order, and submit complete set.

1.6 GENERAL REQUIREMENTS OF CONTRACTS

- A. Extent of Contract: Unless the Agreement contains a more specific description of the Work of each Contract, requirements indicated on Drawings and in Specification Sections determine which contract includes a specific element of Project.
 1. Unless otherwise indicated, the work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
 2. Trenches and other excavation for the work of each contract shall be the work of each contract for its own work.
 3. Blocking, backing panels, sleeves, and metal fabrication supports for the work of each contract shall be the work of each contract for its own work.
 4. Furnishing of access panels for the work of each contract shall be the work of each contract for its own work. Installation of access panels shall be the work of the General Construction Contract.
 5. Painting for the work of each contract shall be the work of the General Construction Contract.
 6. Cutting and Patching: Provided under each contract for its own work.
 7. Through-penetration firestopping for the work of each contract shall be provided by the General Construction Contract.
 8. Contractors' Startup Construction Schedule: Within ten working days after startup horizontal bar-chart-type construction schedule submittal has been received from Project coordinator, submit a matching startup horizontal bar-chart schedule showing construction operations sequenced and coordinated with overall construction.
- B. Substitutions: Each contractor shall cooperate with other contractors involved to coordinate approved substitutions with remainder of the work.
 1. Project coordinator shall coordinate substitutions.

- C. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Section 015000 "Temporary Facilities and Controls," each contractor is responsible for the following:
1. Installation, operation, maintenance, and removal of each temporary facility necessary for its own normal construction activity, and costs and use charges associated with each facility, except as otherwise provided for in this Section.
 2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
 3. Temporary enclosures for its own construction activities.
 4. Staging and scaffolding for its own construction activities.
 5. General hoisting facilities for its own construction activities, up to 2 tons (2000 kg).
 6. Waste disposal facilities, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials.
 7. Progress cleaning of work areas affected by its operations on a daily basis.
 8. Secure lockup of its own tools, materials, and equipment.
- D. Use Charges: Comply with the following:
1. Owner will maintain and pay for existing electric, water and sewer services.

1.7 GENERAL CONSTRUCTION CONTRACT

- A. Work of the General Construction Contract includes, but is not limited to, the following:
1. All work identified on A- Drawings unless specifically noted otherwise.
 2. All work identified in Specification Divisions 02-33, excluding Division 09.
 3. Replacement of stone coping at Old Post Office.
 4. Roofing work, including coping, fascia, scuppers, flashing, and gutters.
 - a. New roof drains as specified.
 - b. Remove and reinstall all gutters at Village Hall as part of painting work.
 - c. Replace specified sections of gutter to match existing.
 - d. Snow guards at Village Hall.
 - e. Ladder.
 - f. Skylight and associated framing.
 5. Rough carpentry/framing.
 6. Masonry repointing and crack repair.
 7. Foamed-in-place insulation throughout Village Hall attic rafters.
 8. Repair/replacement of exterior wood surfaces identified as DSD-04.
 9. Remove and reinstall all window accessories for painting (screens, storm units, air conditioner/supports, etc.).

1.8 PAINTING CONTRACT

- A. Work of the Mechanical Construction Contract includes, but is not limited to, the following:
1. All work identified on A- Drawings unless specifically noted otherwise.
 2. All work identified in Specification Section 099113 "Exterior Painting".
 3. Preparation of all exterior wood surfaces for repainting identified as DSD-03 and below.
 4. Preparation of dome at Village Hall for repainting.
 5. Preparation of exterior steel work scheduled for repainting.
 6. Repainting as scheduled.

1.9 ELECTRICAL CONTRACT

A. All work identified on E- Drawing.

1. Electrical identification work as specified.
2. Remove existing generator and transfer switch.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011200

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Quantity allowances.
 - 2. Contingency allowances.
- C. Related Requirements:
 - 1. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.3 QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.4 CONTINGENCY ALLOWANCES

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

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. GC Allowance No. 1: Quantity Allowance: Include replacement of (10) corner trim sections at clock tower.
 - 1. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- B. GC Allowance No. 2: Contingency Allowance: Include a contingency allowance of \$100,000.00 for use according to Owner's written instructions.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit price shall be used when and if required by Owner through Architect for all additions and deletions to the Contract quantities and shall be inclusive of furnishing and installing all necessary material, plus costs for delivery, insurance, labor, overhead, profit, equipment, hoisting, scaffolding, trucking, handling, submissions, layout, permits, coordination, hangers, inserts, couplings, testing, delivery, supervision, etc. as per change orders, and shall remain installed in quantities and locations as approved by the Architect/Construction Manager.
- B. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- C. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. General Construction Contract:

1. Unit Price 1: Masonry repointing.
 - a. Description: Repoint masonry mortar joints as specified.
 - b. Unit of Measurement: 3' x 3' (9 sf. ft.).
2. Unit Price 2: Wood repair.
 - a. Description: Repair exterior wood trim as specified in Section 062500 "Wood Repairs".
 - b. Unit of Measurement: 1 sq. ft.

B. Painting Contract

1. Unit Price 1: Replace glazing compound.
 - a. Description: Remove existing glazing putty, clean pane and reglaze.
 - b. Unit of Measurement: Per window.

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This 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. 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: Modify 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: A Schedule of Alternates is included at the end of this Section identifying each Alternate by number and describes basic changes to be incorporated into the Work only when that Alternate is made part of the Work by specific provision in the Owner/Contractor Agreement. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - SCHEDULE OF ALTERNATES

- A. Alternate 01: IGU at Skylight
 - 1. Provide insulated glazing units at skylight in lieu of polycarbonate.
 - a. 1-1/16" (1.0625") SB60 #2 Clear Low-E² (Argon filled).

B. Alternate 02: Re-solder Seams at Copper Roofs

1. Clean existing seams and re-solder at (3) Village Hall dormer roofs.

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. The Architect will consider requests for substitutions prior to award of the Contract
- C. Related sections:
 - 1. Division 01 Section "Allowances" for products selected under an allowance.
 - 2. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
 - 3. Divisions 02 through 32 Sections for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

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

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. 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 facsimile of form provided in the Project Manual.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.

- e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.
- B. The burden of proof to provide product equivalence rests on the Contractor.
- C. The Contractor shall submit three (3) copies of the "Request for Substitution Form" for consideration including all required information.
- D. The Contractor shall use the form included in this section.
- E. All forms shall be type written,
- 1.5 QUALITY ASSURANCE
- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.
- 1.6 PROCEDURES
- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than thirty (30) days prior to time required for preparation and review of related submittals, or from the date if Notice to Proceed.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - i. If requested substitution is accepted the Contractor waives all claims of additional costs or contract time extensions.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.
 - j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - k. If requested substitution is accepted the Contractor waives all claims of additional costs or contract time extensions.
 - l. The Contractor accepts that they may be required to reimburse the Owner and/or Architect for review or redesign services associated with re-approval by authorities.
 - m. The Contractor shall reimburse the Owner for all additional architectural services claimed by the Architect, or on behalf of his engineers, for extra services associated with the review of the Contractor's substitution item since it could have been originally included in the Architect's professional architectural services agreement. Reimbursement shall be based on the man-hours expended, not current billing rates.
2. Substitutions will not be considered when they are indicated or implied on Contractor shop drawings or product data submittals, without separate written request, or when acceptance will require revisions to the Contract Documents.

PART 3 - EXECUTION (Not Used)

VILLAGE/TOWN OF MOUNT KISCO
VILLAGE HALL & OLD POST OFFICE
EXTERIOR WORK
CONTRACT #2022-07



END OF SECTION 012500

SUBSTITUTION REQUEST FORM

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.: _____
Installer: Address: _____ Phone: _____

History: ☐ New product ☐ 2-5 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

☐ Point-by-point comparative data attached - REQUIRED BY A/E

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
_____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitution: _____ (\$ _____).

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

(Continued)

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.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- 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.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments: _____

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01330.
- ☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
- ☐ Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by:

Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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 012500 "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 time specified in Proposal Request 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.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

- C. Proposal Request Form: Use AIA Document G709 for Proposal Requests or forms approved by the Architect and Construction Manager, clearly identifying the change in condition.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

1.6 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. All quotations shall be accompanied by a complete itemization of costs, including labor (type, quantity and unit cost per hour), materials (type, quantity and unit cost) and copies of written quotations from subcontractors and suppliers itemized in the same manner.
 - a. Overhead shall be deemed to include the cost of insurance, bonds, and similar contract requirements.
 - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
2. The combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:
 - a. Prime Contractor: Work performed by the Prime Contractor's own forces, markup shall not exceed a total of 15 percent broken down with 7.5 percent for the value of materials and labor (L/M) and 7.5 percent for the value of overhead and profit (O&P).
 - b. Prime Contractor's Subcontractor: Work performed by the Subcontractor's own forces, markup shall not exceed a total of 10 percent broken down with 5 percent for the value of materials and labor (L/M) and 5 percent for the value of overhead and profit (O&P). For the Prime Contractor, for Work performed by that Prime Contractor's Subcontractor, mark-up shall not exceed 5 percent for the value of overhead and profit.
 - c. Sub-subcontractor: Work performed by Sub-subcontractor's own forces, markup shall not exceed 5 percent for the value of materials, labor, overhead and profit. For the Subcontractor, for Work performed by Sub-subcontractor, markup shall not exceed 5 percent for the value of overhead and profit. For the Prime Contractor, for Work performed by Sub-subcontractor, markup shall not exceed 5 percent for the value of overhead and profit.

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 012600

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SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. The Contractor shall allocate portions of the Contract Sum to labor, material and major equipment costs to various portions of the Work as indicated on the form.
- B. Format and Content: Format and Content: Use the 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 Section under Division 01, including, but not limited to, those indicated within Prime Contract scope under Division 01 Section 011000 "Summary."

1. Arrange the Schedule of Values with separate columns to indicate the following for each item listed:
 - a. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Major Equipment.
2. Provide a breakdown of Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum.
3. Schedule a separate line item in the Schedule of Values for each part of the work related to General Requirements as follows:
 - a. Performance and Payment Bonds.
 - b. Project Insurance.
 - c. Mobilization & Demobilization.
 - d. Field supervision and layout.
 - e. Temporary facilities.
 - f. Submittals: Schedule 2% of total Contract amount for line item.
 - g. Meeting Attendance: Schedule 1% of total Contract amount for line item. This value will be divided by the monthly duration of the project as identified in the Milestone Schedule.
 - h. Project Closeout: Schedule 1% of total Contract amount for line item.
 - i. Record Drawings and Construction Progress Documentation: Schedule 1% of total Contract amount for line item.
 - j. Punch List: Schedule 1.5% of total Contract amount for line item.
 - k. Clean up: Schedule 1% of total Contract amount for line item.
 - l. Testing or Balancing (if applicable).
 - m. System Commissioning (if applicable).

- n. Allowances: Provide a separate line item for each Contract Allowance (if applicable). Add each Allowance Disbursement as a sub-line item as cumulatively issued/approved through duration of project.
 - o. Alternates: Provide a separate line item for each Alternate (if applicable).
 - p. Change Orders: On separate G703 sheet, add each Change Order for the Prime Contract, as cumulatively issued/approved through duration of project.
- 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - a. Show total costs including overhead and profit.
 - b. Percentage of total Contract Sum adjusted to equal 100 percent.
 - 5. Allowances: If applicable, provide a separate line item in the schedule of values for each allowance.
 - 6. 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, except Lump Sum and Quantity of Work Allowances.
 - 7. After review by the Architect, revise and resubmit Schedule of Values if required by the Architect as many times as required until approval by the Architect is received.

1.5 MONTHLY APPLICATIONS FOR PAYMENTS

- A. Each Application for Payment shall be consistent with previous applications and payments as approved by the Owner and paid for by the Owner.
 - 1. Initial Application for Payment, the Owner shall not approve any billing request until the Schedule of Values and Construction Schedule is approved.
 - 2. Payment for allowance items and stored materials involve additional requirements.
 - 3. Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Billing request may be submitted to the Owner once each month.
 - 1. Submit Contractor's Pencil Copy billing request seven days prior to due date for review by the Owner.
- C. Payment Forms: All forms and documents required for payment are included in the Project Manual.
 - 1. If applicable, the Contractor shall obtain from the Owner, an Allowance Notice to Proceed for Allowance items and an Agreement for Materials Stored Off-Site prior to billing.
 - 2. Submit Contractor's Pencil Copy billing request to the Architect for approval.
- D. Procedure: Upon the Architect's approval of the Contractor's Pencil Copy billing request, payment documents will be provided to the Contractor. The Contractor shall complete each document and submit two copies of all documents with original signature & notary where indicated on forms, the following:
 - 1. Application for Payment.
 - 2. Waiver of Mechanic's Liens.
 - 3. Contractor and Subcontractor Certifications Form
 - 4. Contractor's Certified Payroll Form.
 - 5. Allowance Allocation Form, if applicable
- E. Payroll Forms: The Contractor and all Sub-contractors to the Contractor shall submit original copies of the Contractor and Subcontractor Certifications Form and Contractor's Certified Payroll Form.
- F. Transmittal: Sign and notarize where indicated on each document, submit two original copies to Owner.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about payment.

- G. Liens: Upon receipt of a lien, the Owner shall deduct a sum of one and one-half (1.5) times the amount stated to be due in the notice of lien from the application for payment. Upon official receipt of discharge of lien, the Owner shall provide payment as stated above.

1.6 APPLICATION FOR PAYMENT AT SUBSTANTIAL COMPLETION

- A. Preliminary Procedure: After issuance of the executed Notice of Substantial Completion, submit a Contractor's Pencil Copy billing request showing 100 percent completion for portion of the Work claimed as complete at Substantial Completion.
 - 1. Submit Contractor's Pencil Copy billing request to the Owner for approval.
- B. Reduction of Retainage: The Contractor may request a reduction of retainage upon Substantial Completion of the Work or when a phase of Work is accepted by the Owner.
 - 1. The Contractor submits to the Owner a written request to have retainage reduced and provides a cost estimate and schedule to complete all remaining Work items indicated on the executed Notice of Substantial Completion.
 - 2. The Owner shall deduct from the sum two times the value of remaining items of Work to be completed or corrected.
 - 3. The Owner will provide the Contractor with General Release and Consent of Surety forms based on the amount of reduction. The Contractor shall complete each document and submit three copies of each document with original signature & notary where indicated on forms.
 - 4. The Owner shall hold payment until receipt of completed General Release and Consent of Surety forms.
- C. Procedures: Upon the Owner approval of Contractor's Pencil Copy billing request, payment documents will be provided to the Contractor. The Contractor shall complete each document and submit two copies of all documents with original signature & notary where indicated on forms, the following:
 - 1. Application for Payment.
 - 2. Compliance Report.
 - 3. Contractor and Subcontractor Certifications Form (NYS Department of Labor Form PW12).
 - 4. Contractor's Certified Payroll Form.
- D. Payroll Forms: The Contractor and all Sub-contractors to the Contractor shall submit original copies of the Contractor and Subcontractor Certifications Form and Contractor's Certified Payroll Form.
- E. Transmittal: Sign and notarize where indicated on each document, submit two original copies to Owner.
- F. Payment: Timely payment by the Owner to the Contractor is governed by Section 2880 of the Public Authorities Law.
- G. Liens: Upon receipt of a lien, the Owner shall deduct a sum of one and one-half (1 ½) times the amount stated to be due in the notice of lien from the application for payment. Upon official receipt of discharge of lien, the Owner shall provide payment as stated above.
- H. Final Payment Application: Submit final Application for Payment with executed 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.

- I. Full and Final Payment will not be made until the following have been supplied, approved and accepted by the Owner and Architect.
 1. The required number of copies of all written guarantees, warranties, bonds, operating and maintenance manuals, and test results.
 2. Documentation that all verbal and written instructions and training sessions required by the Contract has been completed.
 3. The required number of copies of all Project Record Documents ("as-built" drawings) has been received.
 4. All materials and equipment required as stock is delivered.
 5. Any other requirement of the Contract Documents which remains outstanding.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
 - 1. Section 011200 "Multiple Contract Summary" for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
 - 2. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 3. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 4. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

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 entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses 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.

1.5 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 and activities of other contractors 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.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare 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 Drawing Organization: Organize coordination drawings as follows:

- 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
- 2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
- 3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
- 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
- 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
- 6. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
- 7. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches (32 mm) in diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
 - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
- 8. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.

C. 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 Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.
- 3. 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.
- b. Digital Data Software Program: Drawings are available in AutoCad .dwg format.
- c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Architect. Agreement may include fees for preparation of files.

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.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 1. Date.
 2. Name of Contractor.
 3. Name of Architect.
 4. RFI number, numbered sequentially.
 5. RFI subject.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. 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: Form bound in Project Manual.
 1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven 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 012600 "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 10 days of receipt of the RFI response.

1.8 PROJECT MEETINGS

- A. General: Architect will 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.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, within five days of the meeting.
- B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
 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. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Submittal procedures.
 - k. Preparation of record documents.
 - l. Use of the premises and existing building.
 - m. Work restrictions.
 - n. Working hours.
 - o. Owner's occupancy requirements.
 - p. Responsibility for temporary facilities and controls.
 - q. Procedures for disruptions and shutdowns.
 - r. Parking availability.
 - s. Office, work, and storage areas.
 - t. Equipment deliveries and priorities.
 - u. Security.
 - v. Progress cleaning.
 4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Progress/Coordination Meetings: Architect will conduct progress meetings at biweekly intervals.
 1. Coordinate dates of meetings with preparation of payment requests.
 2. 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 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.
 - b. 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.
 - c. Review present and future needs of each entity present, including the following:
 - 1) Status of submittals.
 - 2) Progress cleaning.
 - 3) Quality and work standards.
 - 4) Status of correction of deficient items.
 - 5) Field observations.
 - 6) Status of RFIs.
 - 7) Status of proposal requests.
 - 8) Pending changes.
 - 9) Status of Change Orders.
 - 10) Pending claims and disputes.
 - 11) 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

013200 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Daily construction reports.
 - 3. Site condition reports.
 - 4. Special reports.
- B. Related Requirements:
 - 1. Section 013300 "Submittal Procedures" for submitting schedules and reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file, where indicated.
 - 2. PDF electronic file.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
- C. Construction Schedule Updating Reports: Submit with Applications for Payment.
- D. Daily Construction Reports: Submit at weekly intervals.
- E. Site Condition Reports: Submit at time of discovery of differing conditions.

1.5 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of Substantial Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 - 2. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 - 3. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
 - 4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 - 5. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, and the following interim milestones:
 - 1. Temporary enclosure and space conditioning.
- D. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 - 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and Contract Time.
- E. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

- F. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 30 days of date established for commencement of the Work.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.3 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (see special reports).
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Orders and requests of authorities having jurisdiction.
 - 12. Change Orders received and implemented.
 - 13. Construction Change Directives received and implemented.
 - 14. Services connected and disconnected.
 - 15. Equipment or system tests and startups.
 - 16. Substantial Completions authorized.
- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final completion percentage for each activity.

- B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 3. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect'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 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. 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: 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 additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit within 14 days of date established for commencement of the Work. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit before first Application for Payment is received. Application for Payment approval will not occur until Architect has received Final Submittal Schedule.

- a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
- 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled 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 reserves 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 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect 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 15 days for review of each resubmittal.
 - 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
 - 5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to 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., MKVH-061000-01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., MKVH-061000-01.1).
 - b. Coordinate file naming with requirements of Architect.
 - 3. Transmittal Form for Electronic Submittals: Use electronic Submittal Transmittal form included in Project Manual, containing the following information:
 - a. Date.

- b. Name of Contractor.
 - c. Name of firm or entity that prepared submittal.
 - d. Names of subcontractor, manufacturer, and supplier.
 - e. Category and type of submittal.
 - f. Submittal purpose and description.
 - g. Specification Section number and title.
 - h. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - i. Drawing number and detail references, as appropriate.
 - j. Location(s) where product is to be installed, as appropriate.
 - k. Related physical samples submitted directly.
 - l. Indication of full or partial submittal.
 - m. Transmittal number.
 - n. Other necessary identification.
 - o. 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 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 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 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. Submit electronic submittals via email as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. 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.
- 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. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams 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.
- 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, unless submittal based on Architect's digital data drawing files is otherwise permitted.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 24 by 36 inches (610 by 914 mm).
- 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. For projects where electronic submittals are required, 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 one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
- 6. Samples for Verification: If request, 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 three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- F. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- G. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
- H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
- I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- J. Maintenance Data: Comply with requirements specified in Section 017823 "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.
- S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- T. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- U. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- V. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- W. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

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 paper copies of certificate, signed and sealed by the responsible design professional licensed in the State of New York, 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.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "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 ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will mark each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
 - 1. No Exception Taken – Submittal is approved and released for fabrication and can be incorporated into the work.
 - 2. Make Corrections Noted - Submittal is approved and released for fabrication and can be incorporated into the work with the modifications as noted.
 - 3. Revise & Resubmit – Submittal is not approved and resubmission is required per the Architect's comments. Such products cannot be purchased nor incorporated into the work.
 - 4. Rejected – Submittal is not approved and submission does not meet requirements of the Project. Resubmit products that conform to the Contract Documents.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect 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.
- 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 013300

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SECTION 013573 - DELEGATED DESIGN PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 REFERENCE STANDARDS

- A. Refer to Part 1 in each Section including Work requiring Delegated Design.

1.3 DEFINITIONS

- A. Delegated Design: Professional design service or certification specifically required of the Contractor in Sections of the Project Manual.
- B. Delegated Design Components: Complete systems provided for intended use.
- C. AHJ: Authorities Having Jurisdiction.
- D. Seal: Certification that drawings, computations and specifications were designed and prepared under direct supervision of Architect or Professional Engineer whose name appears thereon.
- E. Delegated Design Component Review Stamp: Confirmation that Delegated Design drawings have been reviewed for compatibility with design intent of the Contract Documents.

1.4 RESPONSIBILITIES

- A. Contractor's Responsibilities: Provide services or certifications by Contractor's Design Engineer, whose signature and seal appear on drawings, calculations, specifications, certifications, shop drawings and other submittals prepared by that design professional. Ensure shop drawings and other submittals related to the Work designed or certified by that professional, if prepared by others, bears that design professional's written approval when submitted to the Architect. The Architect and Owner shall rely on the completeness of the services, certifications and approvals performed or provided by the design professional.
 - 1. Coordinate and assume or assign to subcontractors complete responsibility for design, documentation, calculations, submittals, permits, fabrication, transportation and installation of components requiring Delegated Design.
 - 2. Coordinate components requiring Delegated Design with adjacent or related systems whether designed by Architect or are other Delegated Design components. Ensure complete, operational systems that perform their intended use are provided.
 - 3. Engineer components of the Work requiring Delegated Design for wind, gravity, lateral, and seismic loads and include design for life safety, sizing of supports, anchors, framing, connections, spans, and other characteristics required to meet or exceed requirements of applicable codes, standards, regulations, AHJ, and design requirements of the Contract Documents.
 - a. Refer to Structural Drawings for load criteria. If load criteria are not indicated on Structural Drawings, request criteria from Architect.

4. Ensure Delegated Design executes design intent indicated in the Contract Documents.
 5. Coordinate and assume or assign to subcontractors and/or suppliers complete responsibility for design, calculations, submittals, permits if required, fabrication, delivery and installation of Delegated Design components.
 6. Without exception, submit Delegated Design component documents to AHJ for review, as required, in a manner that will not adversely affect Project's construction schedule.
- B. Contractor's Design Engineer: Professional engineer registered in the State in which the Project is located and engaged by Contractor, subcontractor or supplier to provide drawings, computations and specifications required for Delegated Design systems, in accordance with criteria specified in Contract Documents; include documentation required by AHJ. Responsibilities of Contractor's Design Engineer include, but are not limited to, the following:
1. Preparation of Delegated Design submittals.
 2. Periodic field review of Delegated Design work, including review of associated mock-ups where applicable, at locations where the Work is in progress, fabrication and installation of Delegated Design work, and submission of field review report after each visit to Architect, AHJ as required, and in accordance with applicable building codes.
 - a. Provide field reviews at intervals as necessary and appropriate to progress of the Work to allow Contractor's Design Engineer to be familiar with progress and quality of Work related to Delegated Design components and to determine if Work related to Delegated Design components is proceeding in general conformity with Contract Documents, including reviewed shop drawings and design calculations.
 - b. Include costs for field reviews and field review reports and letters of general conformity in Contract Sum.
 3. Upon completion of Delegated Design components of the Work, prepare and submit to Architect and AHJ as required a letter of general conformity for Delegated Design components of the Work, certifying that they have been supplied and installed in accordance with the requirements of the Contract Documents and AHJ.

1.5 SCHEDULING

- A. Schedule design process and submittals required for Delegated Design portions to comply with Project Construction Schedule.
1. Allow sufficient time for Architect's review of Delegated Design submittals. Provide time estimate and coordination of schedule for review of Delegated Design submittals to Contractor.
 2. If Architect's approval of Shop Drawings relating to Delegated Design components is required prior to application for permit, schedule and sequence Delegated Design shop drawing review prior to permit submittal. Comply with requirements specified in Division 1 Section "Submittal Procedures."
- B. Owner is not responsible to pay for any delays, additional products, additional hours of Work, or overtime, restocking or rework required due to failure by Contractor or subcontractor to coordinate their Work with Work of other trades on Project or to provide Delegated Design portion or component in a timely manner to meet project schedule.

1.6 SUBMITTAL PROCEDURES FOR DELEGATED DESIGN COMPONENTS

- A. Comply with requirements specified for submittals in Division 01 sections and Division 01 Section "Submittal Procedures, including, but not limited to, form and procedures for delivering submittals.
1. Before the Work proceeds, complete the following:
 - a. Submit complete legible documents for Delegated Design components.
 - b. Architect and AHJ as appropriate accept Delegated Design documents.

2. Submit Delegated Design documents for approval prior to fabrication of components included in Delegated Design work.
 3. Architect's review of Delegated Design submittals is for the limited purpose of checking for general conformance with information given and the design concept expressed in the Contract Documents. Architect will review, approve or take other appropriate action on submittals consistent with this limited purpose.
 - a. Architect's review does not lessen nor shift burden of responsibility from Contractor or assigned subcontractor/ supplier to Owner or Architect.
- B. In addition to other submittal requirements specified in other Sections of the Project Manual, include in submittals for Delegated Design components submittals the following:
1. Complete criteria.
 2. Design assumptions.
 3. Details.
 4. Calculations.
 5. Reactions to structure.
 6. Structural elements stamped by Contractor's Design Engineer responsible for preparation of submittals.
 7. Instructions for fabrication, assembly, installation and interface with other trades.
- C. Subcontractor and Contractor's Design Engineer List: Submit list of Delegated Design subcontractors and Contractor's Design Engineers in accordance with requirements specified in General Conditions, Supplementary General Conditions, and Division 01 Section Submittal Procedures for Subcontract List.
1. Submit Subcontractor and Contractor's Design Engineer list to AHJ, if required.
- D. Preliminary Design: Submit to Architect drawings and product data describing Contractor's Design Engineer's design prior to performing engineering calculations and shop drawings.
1. Purpose of Preliminary Design submittal is to avoid engineering and detailing an unacceptable design.
- E. Final Review: Submit final Delegated Design documents to Architect and AHJ as required for review and approval, allowing not less than 10 days for review by Architect's, Architect's consultants, and AHJ.
1. Include design criteria, design assumptions, structural calculations, fabrication and construction details, required clearances, and interface requirements in Final Review Delegated Design documents.
 - a. Delegated Design drawings are in addition to shop drawings.
 2. Comply with AHJ requirements.
 3. Affix Contractor's Design Engineer's professional seal on submittals.
 4. Make corrections as noted by Architect and Architect's consultants and comply with AHJ requirements.
 5. Execute corrections to Delegated Design Work at no additional cost to Owner and prior to Substantial Completion.
 - a. Notify Architect completion of required changes as soon as the changes are completed.
- F. Submit Delegated Design engineer's qualifications and proof of insurance, identifying insurer, policy number, policy term and limit of liability, on duly signed letterhead or certificate of insurance.
- 1.7 QUALITY ASSURANCE
- A. In addition to requirements specified in this Article, comply with quality assurance requirements specified in other Sections with Delegated Design components.

- B. Quality assurance specified in this Section and other Sections constitute minimum acceptable standards for this Project. Should quality assurance not be defined within a Section, printed industry standards for "normal" quality practices govern.
- C. Documentation: Comply with the following:
 - 1. Uniform Drawing System, NCS/UDS published by National Institute of Building Sciences.
 - 2. Minimum Text Size: 1/8 inch.
- D. Pre-Submittal Meeting: Meet with Architect, subcontractors, and Contractor's Design Engineer to discuss requirements of work, submittals, scheduling, and sequencing of Delegated Design components.
- E. Contractor's Design Engineer's Qualifications: In addition to qualification requirements specified in Sections containing Delegated Design components, ensure submittals for items required to be sealed by professional engineer are prepared, sealed, and signed under direct control and supervision of Contractor's Design Engineer who has professional liability insurance with minimum limit of liability of \$2,000,000 per claim in force.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. Delegated Design Components: Refer to individual Project Manual Sections for work requiring Delegated Design.
- B. Delegated Design components shown in Contract Documents are shown for design intent with Contractor responsible for designing, providing, coordinating, and installing Delegated Design components including specified products.
 - 1. Design components requiring Delegated Design that are attached to structural frame or supplemental to structural frame for anticipated loads specified on structural drawings, inherent gravity loads supported by system and coordinated with Contractor, or loads included in applicable building codes where Project is located.
 - 2. Coordinate Delegated Design components with appropriate subcontractors.
 - 3. Clearly define load reactions at interface between Delegated Design components and structural frame to allow for review by Engineer of Record.

PART 3 - EXECUTION (Not Used)

END OF SECTION 013573

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
 - 1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspection activities.
 - 3. Divisions 02 through 33 Sections for specific test and inspection requirements.

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 Site Representative.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
- D. 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.

- E. 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.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. 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).
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONSTRUCTION TESTING

- A. Prime Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, each Prime Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. Costs for these services are to be included in the Contract Sum.
 - 1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are Prime Contractor's responsibility, Prime Contractor shall employ and pay a qualified independent testing agency to perform quality-control services.
 - 2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.
 - a. Where the Owner has engaged a testing agency and Prime Contractor is also required to engage an entity for the same or related element, the Prime Contractor shall not employ the entity engaged by the Owner, unless agreed to in writing by the Owner.
- B. Retesting: Prime Contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Prime Contractor's responsibility.
 - 1. Cost of retesting construction, revised or replaced by Prime Contractor, is Prime Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.
- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
 - 1. Provide access to the Work.
 - 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
 - 3. Ladders.
 - 4. Provide facilities for storage and curing of test samples.
 - 5. Delivery of samples to testing laboratories.
 - 6. Provide design mix documentation.

7. Provide security and protection of samples and test equipment at the Project Site.
- D. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Construction Manager and Prime Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
 1. The agency shall notify the Architect, Construction Site Representative and Prime Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
 3. The agency shall not perform any duties of Prime Contractor.
- E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 1. Each Prime Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities through the Construction Site Representative.

1.5 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.

1.6 INFORMATIONAL SUBMITTALS

- A. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.7 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 or inspecting 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 methods, citing ASTM reference standard used.
 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.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.8 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar in material, design, and extent to those indicated for this Project.
- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329 ; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1. Each independent inspection and testing agency engaged shall be authorized by jurisdiction to operate in the state where Project is located.
 2. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 3. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
 4. Testing agency qualifications must be approved by the Architect prior to proceeding with work.
- G. 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.
- H. 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.
- I. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, through Construction Manager, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- J. 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.
 - a. Construct mockups complete, including work of all trades required in finished Project.
 2. Notify Architect and Construction Site Representative seven (7) calendar 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 approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven (7) calendar 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.
 7. Demolish and remove mockups when directed unless otherwise indicated.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
 3. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform tests and inspections and to prepare test reports.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified.

2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least twenty-four (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 triplicate, of each quality-control service.
 5. Contractor shall furnish to the Laboratory such samples of materials as may be necessary for testing purposes.
 6. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 7. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. **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 pre-installation 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.
- E. **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.
- 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. Provide safe access to items to be tested. This includes sheeting and ladders for deep excavation; scaffolding and ladders for inspection and testing of superstructure items. Incidental labor and facilities necessary to facilitate tests and inspections.
 2. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 3. Facilities for storage and field curing of test samples.
 4. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 5. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.10 PRODUCTS (Not Used)

PART 2 - EXECUTION

2.1 REPAIR AND PROTECTION

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

END OF SECTION 014000

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SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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. "Installer": An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. The term 'replace' means remove designated, damaged, rejected, defective, unacceptable, or nonconforming work from the Project and provide new work meeting the requirements of the Contract Documents in place thereof.

- L. "Include": The words "include," in any form other than inclusive,' is non-limiting and is not intended to mean all-inclusive."
- M. The terms 'Specifications' and 'Project Manual' are interchangeable.
- N. "Custom Color" is a special color that is not available from the manufactures standard colors and will require a once in a lifetime color match as selected by the Architect.
- O. "Standard color" is a minimum of 8 standard colors that the manufacture commonly offers for their product.
- P. "Match existing" is to match the existing material system including but not limited to: color, texture, size, and edge treatment (including the systems grout/mortar color, texture, size, shape and reveal)
- Q. "Concealed" where used in connection with insulation, painting of piping, piping, conduit, ducts, and accessories shall mean that they are hidden from sight as in trenches, chases, shafts, furred spaces, walls, slabs, or hung ceilings; also where they are not hidden from sight in the following locations: in partly excavated spaces or crawl spaces, or in service tunnels and used solely for repairs or maintenance.
- R. "Exposed" where used in connection with insulation, painting of piping, piping, conduit, ducts, accessories shall mean that they are not "concealed" as defined herein above.
- S. "Piping" includes in addition to pipe, also fittings, valves, hangers, and other accessories that comprise system.
- T. "Below Grade" includes all areas below the finished grade line and below the finished floor, where the finished floor system is supported on earth and gravel systems.
- U. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- V. Salvage: Detach items from existing construction and deliver them to Owner ready for reuse or safely store in a controlled environment and reinstall where indicated.
- W. Reinstall: Prepare for reuse, clean, replace missing or damaged accessories, and reinstall them where indicated.
- X. Existing: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, salvaged, or removed and reinstalled.

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.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the organizations responsible for the standards and regulations.

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 indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

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SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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 011100 "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without payment of use charges. Provide connections and extensions of services as required for construction operations. Provide temporary backflow preventer.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.5 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.2 EQUIPMENT

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

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. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- E. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- F. 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 SUPPORT FACILITIES INSTALLATION

- A. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- B. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- C. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
 1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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 012500 "Substitution Procedures" for requests for substitutions.
 - 2. Section 014200 "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 of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

- a. Form of Approval: As specified in Section 013300 "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 013300 "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.
- 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 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. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 - 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
 - 1. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
 - 2. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
 - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
 - 3. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate

sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 - 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 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 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. General installation of products.
 - 3. Progress cleaning and protection during construction.
 - 4. Protection of installed construction.
 - 5. Correction of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Acceptance of Conditions: 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. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests for information (RFI) on standard form included in this Project Manual.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings. If discrepancies are discovered, notify Architect and Construction Site Coordinator promptly.

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.
- 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. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
- G. 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.
- H. Hazardous Materials:
 - 1. Use products, cleaners, and installation materials that are not considered hazardous.

3.5 PROGRESS CLEANING AND PROTECTION DURING CONSTRUCTION

- A. General: Each Prime Contractor shall clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly among Subcontractor's employees. This includes sweeping floors clean as may be deemed necessary by Construction Site Coordinator. Dispose of material lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Each Prime Contractor shall 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 and when directed by Construction Site Coordinator.
- D. Installed Work: Prime Contractor shall keep all installed work clean for subcontractors retained who are no longer required to be present on site. 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.
1. Provide cleaning products compliant with VOC requirements.
- 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: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- 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.
- K. Each day Prime Contractor shall affect the following:
1. Areas of intense activity, such as cutting and sawing must be swept clean and reorganized at the end of each day.
 2. Areas of moderate activity such as installation of plumbing, ductwork, electrical work must be returned to good order at the end of each day.
 3. Debris below scaffolds (and shoring/reshoring) must at all times, be kept sufficiently consolidated to keep walkways free of tripping hazards. These work areas must also be swept clean immediately upon removal of scaffolds.
 4. All swept up debris, waste materials, and packing must be removed and placed in the dumpster by noon of the following workday.
 5. All stored materials must be kept in good order.
 6. As portions of the work are completed, all used and excess materials must be removed promptly.
 7. Daily clean-up and good housekeeping is the responsibility of each Prime Contractor individually and will be monitored by the Construction Site Coordinator.
 8. Prime Contractors and their retained subcontractors, Installers or manufacturers shall promptly comply with requests of Construction Site Coordinator to organize scattered materials.

- L. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

3.6 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.
- C. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- D. Clean and provide maintenance on completed construction as frequently as necessary or as requested by Construction Site Coordinator, through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- E. Limiting Exposure: Each Prime Contractor to supervise construction operations to assure that no part of the construction, complete or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessive static or dynamic loading.
 - 2. Excessive internal or external pressures.
 - 3. Excessive high or low temperatures.
 - 4. Thermal shock.
 - 5. Excessive high or low humidity.
 - 6. Air contamination or pollution.
 - 7. Ice or water.
 - 8. Solvents or chemicals.
 - 9. Light.
 - 10. Radiation.
 - 11. Puncture.
 - 12. Abrasion.
 - 13. Heavy traffic.
 - 14. Soiling, staining and corrosion.
 - 15. Bacteria.
 - 16. Rodent and insect infestation.
 - 17. Combustion.
 - 18. Electrical current.
 - 19. High-speed operation.
 - 20. Improper lubrication.
 - 21. Unusual wear or misuse.
 - 22. Contact between incompatible materials.
 - 23. Destructive testing.
 - 24. Misalignment.
 - 25. Excessive weathering.
 - 26. Unprotected storage.
 - 27. Improper shipping and handling.
 - 28. Vandalism or theft.
- F. Each Prime Contractor for its Work shall provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- G. Comply with manufacturer's written instructions for temperature and relative humidity.

- D. Anchor unit skylights securely to supporting substrates.
- E. Where aluminum surfaces of unit skylights will contact another metal or corrosive substrates, such as preservative-treated wood, apply bituminous coating on concealed metal surfaces or provide other approved permanent separation recommended in writing by unit skylight manufacturer.

3.3 FIELD QUALITY CONTROL

- A. After completion of installation and nominal curing of sealant and glazing compounds but before installation of interior finishes, test for water leaks according to AAMA 501.2.
- B. Perform test for total area of each unit skylight.
- C. Work will be considered defective if it does not pass tests and inspections.
- D. Additional testing and inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- E. Prepare test and inspection reports.

3.4 CLEANING

- A. Clean exposed unit skylight surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes.
- B. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Remove and replace glazing that has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Protect unit skylight surfaces from contact with contaminating substances resulting from construction operations.
- E. Unit Skylight Operating System: Clean and lubricate joints and hardware. Adjust for proper operation.

END OF SECTION 086200

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SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
 - 1. Unless otherwise assigned within the Documents, all cutting and patching shall be performed by each Prime Contractor as required to execute their work.
- B. See Divisions 00 through 33 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

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 surfaces to original conditions after installation of other Work.
- C. Demolition: Removal, Cutting.

1.4 QUALITY ASSURANCE

- A. Maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be removed; do not cut such existing construction beyond indicated limits.
- B. Maintain existing non-shell, nonstructural components (walls, flooring, and ceilings) not indicated to be removed; do not cut such existing construction beyond indicated limits.
- C. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- D. 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. Operating elements include the following:
 - 1. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Mechanical systems piping and ducts.
 - 4. Control systems.
 - 5. Communication systems.
 - 6. Electrical wiring systems.
 - 7. Operating systems of special construction in Division 13 Sections.
- E. 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 results 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.
6. Noise- and vibration-control elements and systems.

- F. 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.
- G. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.5 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

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.
- D. 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 minimize and prevent interruption to occupied 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 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 Division 31 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. 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, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 - b. Where demolition of a wall leaves a remaining perpendicular wall unfinished, restore the wall finish with similar materials blending the finishes into each other flush and seamlessly.
 - c. At masonry walls, cut any protruding reinforcing back below the finished surface. Remove enough masonry material to provide finished masonry faces within the existing coursing.
 - d. At masonry walls cut any protruding reinforcing back below the finished surface. Remove enough masonry material to provide finished masonry faces within the existing coursing.
 - e. Where demolition of a wall leaves a remaining end of the wall unfinished, restore the wall finish with similar materials blending the finishes into each other flush and seamlessly.

- f. Where demolition of a wall leaves a remaining column exposed, provide gypsum board enclosure of equivalent rating if any.
 - g. Where the removal of a wall, equipment and/or furnishing leaves an unfinished condition at the floor, patch the floor and extend the finished floor system across the demolition area.
 - h. Where the removal of a wall, equipment and/or furnishing leaves an unfinished condition at the ceiling, patch the floor and extend the finished ceiling system across the demolition area.
 - i. Where the removal of a louver, grill, ductwork or other construction in a finished space or elsewhere, fill the opening with material that matches the existing adjacent materials and finishes.
 - j. Where the removal leaves a raised painted edge, remove raised edge and feather paint finish to the extent that the raised painted edge is not detected.
 - 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.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 017329

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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 017300 "Execution" for progress cleaning of Project site.
 - 2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 4. Section 017900 "Demonstration and Training" for requirements for instructing Owner's personnel.
- C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 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 MAINTENANCE MATERIAL SUBMITTALS

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

1.5 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 5. Submit test/adjust/balance records.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. 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.

1.6 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 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), 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 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.

1.7 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. Use CSI Form 14.1A or similarly formatted document.
 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.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:

1.8 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. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. 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.
 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. 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. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. 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.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - q. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

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 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 017700

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SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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. Product maintenance manuals.
- B. Related Requirements:
 - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for 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. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.

- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 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 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.

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. 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.
- C. 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 017839 "Project Record Documents."
- D. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

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SECTION 017836 - WARRANTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
 - 2. General closeout requirements are included in Section "Project Closeout."
 - 3. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.
- C. Related Sections include the following:
 - 1. Division 1 Section "Closeout Procedures" for general closeout requirements.
 - 2. Division 1 Section "Operation and Maintenance Data" for copies of warranties included in manuals.

1.3 DEFINITIONS

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

1.4 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Prime Contractor providing Work is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

- A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
 - 1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Prime Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.
- B. Prepare a written document utilizing the appropriate form, ready for execution by the Prime Contractor, or the Contractor and subcontractor, supplier or manufacturer.
- C. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Prime Contractor, or by the Prime Contractor's, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- D. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 by 11 inch paper.
 - 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a type description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 - 2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES", the Project title or name, and the name of the Contractor.
- E. When operating and maintenance manuals are required for warranted construction, provide warranty, for inclusion in that required manual.

PART 2 - PART 2 – PRODUCTS (Not Used)

PART 3 - PART 3 – EXECUTION (Not Used)

END OF SECTION 017836

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special 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. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Section 017700 "Closeout Procedures" for general closeout procedures.
 - 2. Section 017823 "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 PDF electronic files of scanned record prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit PDF electronic files of scanned record prints.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
 - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.

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. Locations and depths of underground utilities.
 - d. Revisions to routing of piping and conduits.
 - e. Revisions to electrical circuitry.
 - f. Actual equipment locations.
 - g. Duct size and routing.
 - h. Locations of concealed internal utilities.
 - i. Changes made by Change Order or Construction Change Directive.
 - j. Changes made following Architect's written orders.
 - 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. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
 2. Consult Architect for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared record Drawings into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Format: Annotated PDF electronic file with comment function enabled.
2. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
- B. Format: Submit record Specifications as annotated PDF electronic file.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
- B. Format: Submit record Product Data as annotated PDF electronic file.
 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

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 reference during normal working hours.

END OF SECTION 017839

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Work of this Section includes requirements for worker protection and waste disposal related to demolition involving lead-based paint (LBP)-coated building components and surfaces (the "Work") at the Chelsea City Hall Clock Tower in Chelsea, Massachusetts (the "Site").
- B. The procedures referenced herein shall be utilized during required demolition work specified elsewhere, that may impact building components coated with LBP. It is assumed that certain elements of the existing structure that were painted may be coated with LBP.
- C. Work impacting LBP- coated components may result in dust and debris exposing workers to levels of lead above the Occupational Safety and Health Administration's (OSHA) Action Level. Worker protection, training, and engineering controls referenced herein shall be strictly followed, until completion of exposure assessment with results indicating exposures below the "Action Level". This Section does not involve lead abatement, but identified worker protection requirements for trades involved in the demolition and disposal procedures if LBP is involved in the demolition waste stream.
- D. Construction activities disturbing surfaces coated with LBP that are likely to be employed, such as demolition, sanding, grinding, welding, cutting, and burning, have been known to expose workers to levels of lead in excess of the OSHA Permissible Exposure Limit (PEL). All work specified in the Contract Documents shall also be in conformance with this Section. DEFINITIONS

1.3 DEFINITIONS

- A. The following definitions relative to LBP shall apply:
 - 1. Action Level (AL) - The allowable employee exposure, without regard to use of respiratory protection, to an airborne concentration of lead over an eight (8)-hour time- weighted average (TWA) as defined by OSHA. The current action level is thirty micrograms per cubic meter (30 µg/m³) of air.
 - 2. Architect - Context Architecture.
 - 3. Area Monitoring - The sampling of lead concentrations, which is representative of the airborne lead concentrations that may reach the breathing zone of personnel potentially exposed to lead.
 - 4. Biological Monitoring - The analysis of a person's blood and/or urine, to determine the level of lead concentration in the body.
 - 5. CDC - The Center for Disease Control.
 - 6. Change Room - An area provided with separate facilities for clean protective work clothing and equipment and for street clothes, which prevents cross-contamination.
 - 7. Competent Person - A person employed by the Contractor who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions, and who has authorization to take prompt corrective measures to eliminate them as defined by OSHA.
 - 8. Consultant - Fuss & O'Neill EnviroScience, LLC.
 - 9. EPA - The United States Environmental Protection Agency.
 - 10. Exposure Assessment - An assessment conducted by an employer to determine if any employee may be exposed to lead at or above the AL.
 - 11. High-Efficiency Particulate Air (HEPA) - A type of filtering system capable of filtering out particles of 0.3 microns diameter from a body of air at 99.97% efficiency or greater.

12. HUD - The United States Housing and Urban Development.
13. Lead - Refers to metallic lead, inorganic lead compounds, and organic lead soaps. Excluded from this definition are other organic lead compounds.
14. Lead Work Area - An area enclosed in a manner to prevent the spread of lead dust, paint chips, or debris resulting from LBP disturbance.
15. Lead-Based Paint - Refers to paints, glazes, and other surface coverings containing a toxic level of lead.
16. MSHA - The Mine Safety and Health Administration.
17. NARI - The National Association of the Remodeling Industry.
18. NIOSH - The National Institute of Occupational Safety and Health.
19. OSHA - The Occupational Safety and Health Administration.
20. Owner - City of Chelsea.
21. Permissible Exposure Limit (PEL) - The maximum allowable limit of exposure to an airborne concentration over an 8-hour TWA, as defined by OSHA. The current PEL for lead is fifty (50) $\mu\text{g}/\text{m}^3$ of air. Extended workdays lower the PEL by the formula: PEL equals 400 divided by the number of hours of work.
22. Personal Monitoring - Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour TWA concentration in accordance with OSHA Title 29 CFR, Parts 1910.1025 and 1926.62. Samples shall be representative of the employee's work tasks. Breathing zone shall be considered an area within a sphere with a radius of eighteen (18) inches and centered at the nose or mouth of an employee.
23. Resource Conservation and Recovery Act (RCRA) - RCRA establishes regulatory levels of hazardous chemicals. There are 8 heavy metals of concern for disposal: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Six (6) of the metals are typically in paints, excluding selenium and silver.
24. SDS - Safety Data Sheets.
25. Toxic Level of Lead - A level of lead, when present in dried paint or plaster, contains more than 0.50% lead by dry weight as measured by atomic absorption spectrophotometry (AAS) or 1.0 milligram per square centimeter (mg/cm^2) as measured by on-site testing utilizing an x-ray fluorescence analyzer.
26. Toxicity Characteristic Leaching Procedure (TCLP) - The EPA required sample preparation and analysis method for determining the hazard characteristics of a waste material.
27. TWA - Time-Weighted Average.

1.4 REGULATIONS AND STANDARDS

- A. The following regulations, standards, and ordinances of federal, state, and local agencies are applicable and made a part of this specification by reference:
1. American National Standards Institute (ANSI)
 - a. ANSI 288.2 - 1980 Respiratory Protection
 2. Code of Federal Regulation (CFR)
 - a. Title 29 CFR, Part 1910.134 - Respiratory Protection
 - b. Title 29 CFR, Part 1910.1025 - Lead
 - c. Title 29 CFR, Part 1910.1200 - Hazard Communication
 - d. Title 29 CFR, Part 1926.55 - Gases, Vapors, Fumes, Dusts, and Mists
 - e. Title 29 CFR, Part 1926.57 - Ventilation
 - f. Title 29 CFR, Part 1926.59 - Hazard Communication in Construction
 - g. Title 29 CFR, Part 1926.62 - Lead in Construction Interim Final Rule
 - h. Title 40 CFR, Parts 124 and 270 - Hazardous Waste Permits
 - i. Title 40 CFR, Part 172 - Hazardous Materials Tables and Communication Regulations
 - j. Title 40 CFR, Part 178 - Shipping Container Specifications
 - k. Title 40 CFR, Part 260 - Hazardous Waste Management Systems: General
 - l. Title 40 CFR, Part 261 - Identification and Listing of Hazardous Waste
 - m. Title 40 CFR, Part 262 - Generators of Hazardous Waste
 - n. Title 40 CFR, Part 263 - Transporters of Hazardous Waste
 - o. Title 40 CFR, Part 264 - Owner and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

- p. Title 40 CFR, Part 265 - Interim Statutes for Owner and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
 - q. Title 40 CFR, Part 268 - Lead Disposal Restrictions
 - r. Title 49 CFR, Parts 170 - 180 Hazardous Wastes
3. Underwriters Laboratories, Inc. (UL)
- a. UL586 - 1990 High Efficiency Particulate Air Filter Units

1.5 QUALITY ASSURANCE

A. Hazard Communication Program

1. The Contractor shall establish and implement a Hazard Communication Program as required by OSHA Title 29 CFR, Part 1926.59.

B. Compliance Plan (Site-Specific)

1. The Contractor shall establish a written compliance plan, which is specific to the Site, to include the following:
- a. A description of work activity involving LBP disturbance including equipment used, material included, controls in place, crew size, employee job responsibilities, operating procedures, and maintenance practices.
 - b. Methods of engineering controls to be used to control lead exposure.
 - c. The proposed technology the Contractor will implement in meeting the PEL.
 - d. Air monitoring data documenting the source of lead emissions.
 - e. A detailed schedule for implementing the program, including documentation of appropriate supply of equipment, etc.
 - f. Proposed work practice which establishes proper protective work clothing, housekeeping methods, hygiene facilities, and practices.
 - g. Worker rotation schedule, if proposed, to reduce TWA.
 - h. A description of methods for informing workers of potential lead exposure.

C. Hazardous Waste Management

1. The Contractor shall establish a Hazardous Waste Management Plan, which shall comply with applicable regulations and address the following:
- a. Identification of hazardous wastes.
 - b. Estimated quantity of waste to be disposed.
 - c. Names and qualifications of each subcontractor who will be transporting, storing, treating, and disposing of wastes.
 - d. Disposal facility location and 24-hour point of contact.
 - e. Establish EPA state hazardous waste and identification numbers, if applicable.
 - f. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.
 - g. List of waste handling equipment to be used in performing the work to include cleaning, volume reduction, if applicable, and transport equipment.
 - h. Qualifications of laboratory to be utilized for TCLP sampling and analysis, if applicable.
 - i. Spill Prevention, Containment, and Countermeasure (SPCC) plan.
 - j. Work plan and schedule for waste containment, removal, treatment, and disposal.

D. Medical Examinations

1. Before exposure to lead-contaminated dust, provide workers with a comprehensive medical examination as required by OSHA Title 29 CFR, Parts 1910.1025 and 1926.62.
2. The examination shall not be required if adequate records show that employees have been examined as required by OSHA Title 29 CFR, Part 1926.62 within the last year.
3. Medical examination shall include, at a minimum, biological monitoring and approval to wear respiratory protection.

E. Training

1. The Contractor shall ensure that workers are trained to perform LBP disturbing activities and disposal operations prior to the start of work, in accordance with OSHA Title 29 CFR, Part 1926.62.

F. Respiratory Protection Program

1. The Contractor shall furnish each employee required to wear a negative pressure respirator with a respirator fit test at the time of initial fitting and at least once every 6 months thereafter, as required by OSHA Title 29 CFR, Part 1926.62.
2. The Contractor shall establish a Respiratory Protection Program in accordance with ANSI Z88.2 and OSHA Title 29 CFR, Parts 1910.134 and 1926.62.

1.6 SUBMITTALS

A. The Contractor shall submit to the Consultant, in one complete package, the following prior to the pre-construction meeting and at least ten (10) business days before the start of the Work:

1. Submit a schedule to the Owner and the Consultant, which defines a timetable for executing and completing the project, including work area preparations, removal, cleanup, and decontamination.
2. Submit a current, valid certificate of insurance.
3. Submit the name and address of the hauling contractor and location of the landfill to be used. Also, submit current valid operating permits and certificates of insurance for the transporter and landfill.
4. Submit the plans and construction details for the decontamination systems and the isolation of the work areas as may be necessary for compliance with this Section and applicable regulations.
5. Submit copies of medical records for each employee to be used on the project, including results of biological monitoring and a notarized statement by the examining physician that such an examination occurred.
6. Submit valid training certificates for each employee to be used on the project.
7. Submit a successful respirator fit testing record performed by a qualified individual within the previous six months for each employee to be used on this project. The employee's name and social security number must be provided with each record.
8. Submit the name and address of the Contractor's blood lead testing lab, OSHA CDC listing, and state certification.
9. Submit detailed product information on all materials and equipment proposed for demolition work on this project.
10. Submit pertinent information regarding the qualifications of the Project Supervisor (competent person) for this project, as well as a list of past projects completed.
11. Submit a chain-of-command for the project.
12. Submit a site-specific Emergency Action Plan for the project.
13. Submit a written, site-specific Respiratory Protection Program for employees, including make, model, and NIOSH approval numbers of respirators to be used at the Site (if applicable).
14. No work on the Site will be allowed to begin until the Owner and the Consultant, as listed herein, accept the Pre-Construction Submittals. Any delay caused by the Contractor's refusal or inability to submit this documentation accurately, completely, and in a timely manner does not constitute a cause for change order or a time extension.

B. The following shall be submitted to the Consultant during the Work:

1. Results of personal air sampling.
2. Training and medical records for new employees to start Site work (24-hours in advance).

C. The following shall be submitted to the Consultant at the completion of the Work:

1. Copies of all air sampling results.
2. Contractor logs.
3. Copies of manifests and receipts acknowledging disposal of all waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.

1.7 PERSONAL PROTECTION

A. Exposure Assessment

1. The Contractor shall determine if any worker will be exposed to lead at or above the AL.
2. The exposure assessment shall identify the level of exposure a worker would be subjected to without respiratory protection.
3. The exposure assessment shall be achieved by obtaining personal air monitoring samples representative of a full shift, at least an 8-hour TWA.
4. During the period of the exposure assessment, the Contractor shall institute the following procedures for protection of workers:
 - a. Protective clothing shall be utilized
 - b. Respiratory protection
 - c. Change areas shall be provided
 - d. Hand washing facilities and shower shall be provided
 - e. Biological monitoring
 - f. Training of workers

B. Respiratory Protection

1. The Contractor shall furnish appropriate respirators approved by NIOSH/MSHA for use in atmospheres containing lead dust.
2. Respirators shall comply with the requirements of OSHA Title 29 CFR, Part 1926.62.
3. Workers shall be instructed in all aspects of respiratory protection.
4. The Contractor shall have an adequate supply of HEPA-filter cartridges and spare parts on-site for all types of respirators in use.
5. The following minimum respirator protection for use during paint removal or demolition of components and surfaces with LBP shall be the half-face, air-purifying respirator with a minimum of dual P100 filter cartridges (for exposures not in excess of 500 µg/m³ or 10 x PEL).

C. Protective Clothing

1. Personal protective clothing shall be provided for all workers, supervisors, and authorized visitors entering the work area.
2. Each worker shall be provided daily with a minimum of two (2) complete disposable coverall suits.
3. Removal workers shall not be limited to 2 coveralls, and the Contractor shall supply additional coveralls as necessary.
4. Under no circumstances shall anyone entering the abatement area be allowed to re-use a contaminated disposable suit.
5. Disposable suits (TYVEK™ or equivalent) and other personal protective equipment (PPE) shall be donned prior to entering a lead work area. A change room shall be provided for workers to don suits and other PPE with separate areas to store street clothes and personal belongings.
6. Eye protection for personnel engaged in lead operations shall be furnished when the use of a full-face respirator is not required.
7. Goggles with side shields shall be worn when working with power tools, a material that may splash or fragment, or if protective eye wear is specified on the SDS for a particular product to be used on the project.

1.8 PERSONAL MONITORING

A. General

1. The Contractor shall be required to perform the personal air sampling activities during LBP disturbing work. The results of such air sampling shall be posted, provided to individual workers, and submitted to the Client, as described herein.

B. Air Sampling

1. Air samples shall be collected for the duration of the work shift or for 8 hours, whichever is less. Personal air samples need not be collected every day after the first day, if working conditions remain unchanged, but must be collected each time there is a change in removal operations, either in terms of the location or in the type of work. Sampling will be used to determine the 8-hour TWA. The Contractor shall be responsible for personal air sampling as outlined in OSHA Title 29 CFR, Parts 1910.1025 and 1926.62.
2. Air sampling results shall be reported to individual workers, in written form, no more than 48 hours after the completion of a sampling cycle. The reporting document shall list each sample's result, sampling time and date, personnel monitored and their social security numbers, flow rate, sample duration, sample yield, cassette size, and analyst's name and company, and shall include an interpretation of the results. Air sample analysis results will be reported in $\mu\text{g}/\text{m}^3$.

C. Testing Laboratory

1. The Contractor's testing lab shall be currently participating in AIHA's Environmental Lead Laboratory Accreditation Program (ELLAP). The Contractor shall submit to the Consultant for review and acceptance, the name and address of the laboratory, certification(s) of AIHA participation, a listing of relevant experience in air lead analysis, and presentation of a documented Quality Assurance and Quality Control Program.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Any substitution in materials, equipment, or methods to those specified shall be approved by the Owner and Consultant prior to use. Any requests for substitution shall be provided in writing to the Owner and Consultant. The request shall clearly state the rationale for the substitution.
- B. Submit to the Owner and Consultant product data for all materials and equipment and samples of all materials to be considered as an alternate.
- C. Product data shall consist of manufacturer catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, SDS, and other standard descriptive data. Submittal data shall be clearly marked to identify pertinent materials, products, or equipment and show performance characteristics and capacities.
- D. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of the product or material with integrally related parts and attachment devices.

2.2 MATERIALS AND PRODUCTS

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.
- B. Damaged or deteriorating materials shall not be used and shall be removed from the premises.
- C. The Contractor shall have available sufficient inventory or dated purchase orders for materials necessary for the project including protective clothing, respirators, filter cartridges, polyethylene (poly) sheeting of proper size and thickness, tape, and air filters.
- D. Materials
 1. Poly sheeting in a roll size to minimize the frequency of joints shall be delivered to the Site with factory label indicating 6-mil.
 2. Poly disposable bags shall be 6-mil. Tie wraps for bags shall be plastic, five (5)-inches long (minimum), pointed and looped to secure filled poly bags.

3. Tape or spray adhesive will be capable of sealing joints in adjacent poly sheets and for attachment of poly sheeting to finished or unfinished surfaces of dissimilar materials and capable of adhering onto both dry and wet conditions, including use of amended water.
4. Impermeable containers are to be used to receive and retain any lead-containing or lead-contaminated materials until disposal at an acceptable disposal site. The containers shall be labeled in accordance with EPA and DOT standards.
5. HEPA-filtered exhaust systems shall be used during powered dust-generating removal operations. The use of powered equipment without HEPA exhaust systems in-place on this Site is prohibited.

2.3 TOOLS AND EQUIPMENT

- A. Provide suitable tools for all LBP disturbing operations.
- B. The Contractor shall provide (as needed) temporary electrical power panels, electrical power cables, and electrical power sources (such as generators). Any electrical connection work affecting the building electrical power system shall be performed by a Commonwealth of Massachusetts-licensed electrician.
- C. Vacuum units, of suitable size and capacities for the project, shall have HEPA filter(s) capable of trapping and retaining 99.97% of all mono-dispersed particles of 0.3 micrometers in diameter.
- D. The Contractor will have reserve units so that system will operate continuously.

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION MEETING

- A. At least one week prior to the start of work, a Pre-Construction Meeting will be scheduled and must be attended by the Contractor and any Subcontractors. The assigned Contractor Site Supervisor must attend this meeting.
- B. The Contractor shall present a detailed project schedule and project submittal package at the Pre-Construction Meeting. Variations, amendments, and corrections to the presented schedule will be discussed, and the Owner and Consultant will inform the Contractor of any scheduling adjustments for this project.
- C. Following the Pre-Construction Meeting, the Contractor shall submit a revised schedule (if needed) no later than one week after the meeting.

3.2 WORKER PROTECTION/TRAINING

- A. The Contractor shall provide appropriate training, PPE, and biological monitoring for each worker and ensure proper usage during potential lead exposure and the initial exposure assessment.

3.3 CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor shall be responsible for establishing and maintaining controls referenced herein to prevent lead contamination outside the lead work area.
- B. The Contractor shall also be responsible for conducting work with applicable federal, state, and local regulations as referenced herein.

- 3.4 WORKER HYGIENE PRACTICES (Required during initial exposure assessment and if results of air sampling are above OSHA AL)
- A. Work Area Entry
 - 1. Workers shall don PPE, including respiratory protection, disposable coveralls, gloves, headgear, and footwear, prior to entering the work area.
 - B. Work Area Departure
 - 1. While leaving respirators on, workers shall remove all gross contamination, debris, and dust from disposable coveralls and proceed to change room to remove coveralls and footwear and place in hazardous waste disposal container.
 - C. Hand-Washing Facilities
 - 1. All workers must wash their hands and faces upon leaving the work area.
 - D. Equipment
 - 1. All equipment used by workers inside the work area shall be wet-wiped or bagged for later decontamination before removal from the work area.
 - E. Prohibited Activities
 - 1. Under no circumstances shall workers eat, drink, smoke, chew gum or tobacco, apply cosmetics, or remove their respirators in the work area.
 - F. Shock Hazards
 - 1. The Contractor shall be responsible for using safe procedures to avoid electrical hazards. All temporary electrical wiring will be protected by ground-fault circuit interrupters (GFCI).
- 3.5 LEAD WORK AREA (Required during initial exposure assessment and if results of air sampling are above OSHA AL)
- A. The Contractor shall place lead warning signs at all entrances and exits from the work area. Signage shall be a minimum of 20" x 14" and shall state the following:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING OR DRINKING
UNAUTHORIZED ENTRY PROHIBITED
 - B. The Contractor shall designate a change room as specified in this Section. The change room shall consist of 2 layers of 6-mil poly sheeting on the floor surface adjacent to the lead work area. The change room shall have separate storage facilities for street clothes to avoid cross- contamination.
 - C. The Contractor shall provide potable water for hand and face washing.
 - D. The Contractor shall place 6-mil poly sheeting on floor/ground surfaces prior to beginning removal work to facilitate clean-up.

3.6 WORK AREA CLEAN-UP

- A. The Contractor shall remove all loose chips and debris from floor surfaces and place in hazardous waste disposal bags.
- B. The Contractor shall clean adjacent surfaces using a HEPA-filtered vacuum equipment to remove dust and debris.
- C. Poly sheeting shall be cleaned and properly disposed as general construction and demolition waste.

3.7 WASTE DISPOSAL

- A. The Contractor's contractual liability shall be the proper disposal of all non-hazardous wastes generated at the Site in accordance with all applicable federal, state, and local regulations as referenced herein.
 - 1. The Contractor shall be responsible for collecting a waste characterization sample for TCLP analysis, as is required by the disposal site. Results of the TCLP analysis shall be forwarded by the Contractor to the Consultant prior to the waste being transported off- Site.

3.8 CONSULTANT

- A. The Owner may retain a Consultant for the purpose of construction administration and project monitoring during demolition work at the Site.
- B. The Consultant will represent the Owner in all tasks of the project at the discretion of the Owner.

END OF SECTION 028310

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SECTION 040120 - MAINTENANCE OF UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes maintenance of unit masonry in the area where demolition work is adjacent to the existing masonry building. Work consists of brick restoration as follows:
 - 1. Repairing unit masonry.
 - 2. Repointing joints.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.
- B. Samples for Verification: For the following:
 - 1. Pointing Mortar: Submit sets of mortar for pointing in the form of sample mortar strips, 6 inches (150 mm) long by 1/4 inch (6 mm) wide.
 - a. Have each set contain a close color range of at least three Samples of different mixes of colored sands and cements that produce a mortar matching the cleaned masonry when cured and dry.
 - b. Submit with precise measurements on ingredients, proportions, gradations, and sources of colored sands from which each Sample was made.
- C. Test Data: For matching historic mortar:
 - 1. Submit analysis of existing mortar for matching in accordance with ASTM C-1324 "Standard Method for Examination and Analysis of Hardened Masonry Mortar".

1.4 QUALITY ASSURANCE

- A. Repair Appearance Standard: repaired surfaces are to have a uniform appearance as viewed from 20 feet (6 m) away by Architect.
- B. Mockups: Prepare in place mockups of restoration to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation.
 - 1. Masonry Repair: Prepare sample areas for each type of masonry material indicated to have repair work performed. If not otherwise indicated, size each mockup not smaller than 2 adjacent whole units or approximately 48 inches (1200 mm) in least dimension. Erect sample areas in existing walls unless otherwise indicated, to demonstrate quality of materials, workmanship, and blending with existing work. Include the following as a minimum:

2. Repointing: Rake out joints in 2 separate areas each approximately 36 inches (900 mm) high by 48 inches (1200 mm) wide as indicated for each type of repointing required and repoint one of the areas.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver required masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons.
- B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- D. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- E. Store lime putty covered with water in sealed containers.
- F. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.6 PROJECT CONDITIONS

- A. Repair masonry units and repoint mortar joints only when air temperature is between 40 and 90 deg F (4 and 32 deg C) and is predicted to remain so for at least 7 days after completion of the Work unless otherwise indicated.
- B. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.
- C. Clean masonry surfaces only when air temperature is 40 deg F (4 deg C) and above and is predicted to remain so for at least 7 days after completion of cleaning.

PART 2 - PRODUCTS

2.1 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type II, white or gray or both where required for color matching of exposed mortar.
- B. Hydrated Lime: ASTM C 207, Type S or SA.
- C. Mortar Sand: ASTM C 144 unless otherwise indicated.
 1. Color: Provide natural sand of color necessary to produce required mortar color.
 2. For pointing mortar, provide sand with rounded edges.
 3. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
- D. Water: Potable.

2.2 ACCESSORY MATERIALS

- A. Joint Reinforcing: Continuous wire, 1/4" (6.35 mm) diameter Type 304 stainless steel.

2.3 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
- B. Do not use admixtures in mortar unless otherwise indicated.
- C. Mortar Proportions: Mix mortar materials in the following proportions:
 - 1. Pointing Mortar for Brick: 1 part portland cement, 1 part lime, and 5-6 parts sand.

2.4 PROTECTION

- A. Protect persons, surrounding surfaces of building being restored, plants, and surrounding buildings from harm resulting from masonry restoration work.
 - 1. Erect temporary protective covers over walkways and at points of pedestrian entrance and exit that must remain in service during course of restoration.
- B. Prevent mortar from staining face of surrounding masonry and other surfaces.

2.5 REPOINTING MASONRY

- A. Rake out and repoint joints to the following extent:
 - 1. All joints in areas indicated.
- B. Do not rake out and repoint joints where not required.
- C. Rake out joints as follows, according to procedures demonstrated in approved mockup:
 - 1. Remove mortar from joints to depth of joint width specified or not less than that required to expose sound, unweathered mortar.
 - 2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
 - 3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Architect.
 - a. Cut out mortar by hand with chisel and resilient mallet. Do not use power-operated grinders without Architect's written approval based on approved quality-control program.
 - b. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades. Remove remaining mortar by hand with chisel and resilient mallet. Strictly adhere to approved quality-control program.
- D. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.
- E. Pointing with Mortar:

1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
 2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch (9 mm) until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
 3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch (9 mm). Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.
 4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
 5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours including weekends and holidays.
 - a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
 - b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.
- F. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

2.6 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure. (Coordinate all cleaning operation with the Museum's representative to assure proper protection is provided inside the existing building).
1. Do not use metal scrapers or brushes.
 2. Do not use acidic or alkaline cleaners.
- B. Clean mortar and debris from roof; remove debris from gutters and downspouts.

2.7 FIELD QUALITY CONTROL

- A. Notify Architect in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until Architect has had reasonable opportunity to make observations of work areas at lift device or scaffold location.

END OF SECTION 040120

SECTION 040342 - HISTORIC STONE MASONRY REPAIR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Stone trim including the following:
 - a. Coping.
 - b. Embedded flashing.

1.3 REFERENCE STANDARDS

- A. ASTM C503, Standard Specification for Marble Dimension Stone (Exterior).
- B. ASTM C97, Standard Test Method for Absorption and Bulk Specific Gravity of Dimension Stone.
- C. ASTM C99, Standard Test Method for Modulus of Rupture of Dimension Stone.
- D. ASTM C119, Standard Terminology Relating to Dimension Stone.
- E. ASTM C170: Standard Test Method for Compressive Strength of Dimension Stone.
- F. ASTM C1354, Standard Test Method for Strength of Individual Stone Anchorages in Dimension Stone.
- G. ANSI A41.1, American Standard Building Code Requirements for Masonry (NBS Miscellaneous Publication 211).

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of natural stone.
- B. Shop Drawings: Showing general layout, jointing, anchoring, stone thickness, and such other pertinent information. Drawings shall show all bedding, bonding, jointing, and anchoring details along with the net piece dimensions of each marble unit.
- C. Samples for Initial Selection:
 - 1. Submit three (3) stone and finish samples not less than 12" square for each stone type required, together with Manufacturer's technical data for each stone, showing full range of color, texture, grain, veining, and finish to be expected. Where necessary to show variations in color and markings, larger samples or range sets of samples should be submitted.
 - a. If marble is to be matched, a minimum of two sets each containing four matched samples showing proposed veining and range of color in each set must be supplied. Samples designating finished face shall be clearly labeled on the back with the name of the marble, the group classification for soundness, and the use for which the marble is intended.

2. Submit six (6) cured sample mortar strips as specified in this Section, for each different type/finish color of mortar to be used.

D. Samples for Verification: For the following:

1. Full-Size Samples: For each shape of stone unit required.
 - a. Make available for Architect's review at Project site.
2. For mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicated types and amounts of pigments used.
3. Approved Samples may be installed in the Work.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Material Test Reports: For each type of natural stone indicating compliance with Specifications.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Engage a firm with a minimum of 10 years successful experience in the fabrication and installation of stone of similar sizes, shapes, and finishes to the units required for this project, and which has ample production facilities to produce, furnish, and supply the quantity of units as required for installation without delay to the work.
 1. Firm shall be Accredited by Natural Stone Institute as a Commercial A Contractor or Commercial B Contractor.
- B. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.
- C. Source Limitations for Stone: Obtain stone units through single source from single fabricator.
 1. All marble shall be obtained from quarries having adequate capacity and facilities to meet the specified requirements, and by a firm equipped to process the material promptly on order and in strict accord with specifications. The Specifying Authority (architect, designer, engineer, contracting officer, end user, etc.) reserves the right to approve the Material Supplier prior to the award of this contract. Stone and workmanship quality shall be in accordance with Industry Standards and Practices as set forth by the MIA.
- D. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color, from one manufacturer for each cementitious component and from one source or producer for each aggregate.
- E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
- F. Defective Work: Any piece of marble or onyx showing flaws or imperfections upon receipt at the storage yard or building site shall be referred to the Specifying Authority for determination as to responsibility and decision as to whether it shall be rejected, patched, or redressed for use.
- G. Repairing Damaged Stone: Small chips at the edges or corners of marble may be patched provided the structural integrity of the stone is not affected and the patch matches the color and finish of the marble so that the patch does not detract from the stone's appearance.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate delivery of stone to avoid delaying the Work and to minimize the need for on-site storage.

- B. Pack, handle, and ship stone units in suitable packs or pallets.
 - 1. Lift with wide-belt slings; do not use wire rope or ropes that might cause staining. Move stone units, if required, using dollies with wood supports.
 - 2. Store stone units on wood skids or pallets with nonstaining, waterproof covers, securely tied. Arrange to distribute weight evenly and to prevent damage to units. Ventilate under covers to prevent condensation.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- D. Store mortar aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

1.8 PROJECT CONDITIONS

- A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and above and will remain so until stone has dried, but no fewer than seven days after completing cleaning.
- B. Hot-Weather Requirements: Comply with hot-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MARBLE

- A. General: All marble shall be of kind or kinds shown on the Architect's drawing or as specified herein, conforming to or within the range of approved samples and in accordance with the characteristics and working qualities set forth under their respective Soundness Group Classifications, A, B, C, or D, as defined by the Marble Institute of America. Care shall be taken in selection to produce as harmonious effects as possible. Patching and waxing, where permitted under the Marble Institute of America Group Classifications, shall be carefully done to conform to the marble's general character and finish. Texture and finish shall be within the range of sample(s) approved by the Architect.
- B. Material Standard: Comply with ASTM C503.
 - 1. MIA Soundness Classification: Group A.

2.2 MARBLE UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. A. Ottavino Corp.
 - 2. International Dimensional Stone.
 - 3. Petrillo Stone Corporation.
- B. Description:
 - 1. Vermont Quarries Corp.; Olympian White Danby (Mountain White).
 - a. Color: Uniform fine-grained, white to match existing.
 - b. Finish: Honed.

C. Fabrication:

1. All stones shall be cut accurately to shape and dimension required with jointing to match existing. All exposed faces shall be dressed true. Beds and joints shall be at right angles to the face.

2.3 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

1. Alkali content shall not be more than 0.1 percent when tested according to ASTM C 114.

- B. Hydrated Lime: ASTM C 207, Type S.

- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

- D. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.
4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

- E. Water: Potable.

2.4 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.

- B. Do not use admixtures in mortar unless otherwise indicated.

- C. Mortar Proportions: Mix mortar materials in the following proportions:

1. Bedding Mix: one 1 part portland cement, 1/2 part lime, and 4-1/2 parts sand.
 - a. The bedding mix is subject to approval by the Architect for color and texture match.
2. Grout: 1 part portland cement, 2-1/2 parts sand.
 - a. Grout shall be made with the same cement and sand used in bedding mix. Hydrated lime may be added (up to 15% volume) to insure workability.
 - b. Grout used to set reinforcing bars shall have a minimum compressive strength of 2000 psi.

2.5 ACCESSORIES

- A. Anchors: Type and size indicated, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

- B. Dowels: 1/2-inch- (12-mm-) diameter, round bars, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

- C. Setting Shims: High-impact plastic.

D. Lead Tee Joint Closures:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Litsco
 - b. Nuclead Co, Inc.
 - c. Weathercap, Inc.

2.6 MORTAR MIXES

- A. Comply with requirements in Section 042000 "Unit Masonry" for mortar mixes.
- B. Do not use admixtures including pigments, air-entraining agents, accelerators, retarders, water- repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 1. Do not use calcium chloride in mortar or grout.
 2. Use portland cement-lime mortar unless otherwise indicated.
- C. Comply with ASTM C 270, Proportion Specification.
 1. For setting mortar, use Type S.

2.7 EMBEDDED FLASHING

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:
 1. Copper: ASTM B 370, Temper H00, cold-rolled copper sheet, 16-oz./sq. ft. (4.9-kg/sq. m) weight or 0.0216 inch (0.55 mm) thick or ASTM B 370, Temper H01, high-yield copper sheet, 12-oz./sq. ft. (3.7-kg/sq. m) weight or 0.0162 inch (0.41 mm) thick.
 2. Fabricate continuous flashings in sections 96 inches (2400 mm) long minimum, but not exceeding 12 feet (3.7 m). Provide splice plates at joints of formed, smooth metal flashing.
 3. Fabricate through-wall metal flashing embedded in masonry from copper, with ribs at 3-inch (76-mm) intervals along length of flashing to provide an integral mortar bond.
 4. Fabricate through-wall flashing with snaplock receiver on interior face where indicated to receive counterflashing.
 5. Fabricate through-wall flashing with drip edge where indicated. Fabricate by extending flashing 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed.
 6. Solder metal items at corners.

2.8 SOURCE QUALITY CONTROL

- A. Engage a qualified independent testing agency to sample and test stone units according to ASTM C 503.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PROTECTION

- A. Protect windows, doors and frames, hardware, trim and other surfaces from damage and immediately remove stains, mortar droppings, efflorescence or other unsightly excess resulting from the work of this section.
- B. Protect adjacent exposed masonry surfaces to remain from damage during work. While masonry areas under repair are subject to weather penetration, they shall be protected with tarpaulins or other devices to prevent damage to interior surfaces.
- C. Protect roof membranes, flashing and existing masonry walls scheduled to remain with sheets of 1/2" plywood over full extent of work area or traffic route or any other means of protection receiving written approval by the Architect.

3.3 SETTING STONE IN MORTAR

- A. Set stone as indicated on Drawings. Set units accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.
 - 1. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.
- B. Wet joint surfaces thoroughly before applying mortar or setting in mortar.
- C. Set units in full bed of mortar with full head joints unless otherwise indicated.
 - 1. Set units with joints 3/8 to 1/2 inch (10 to 13 mm) wide unless otherwise indicated.
 - 2. Build anchors and ties into mortar joints as units are set.
 - 3. Fill dowel holes and anchor slots with mortar.
 - 4. Fill collar joints solid as units are set.
 - 5. Build concealed flashing into mortar joints as units are set.
 - 6. Keep head joints in coping and other units with exposed horizontal surfaces open to receive sealant.
- D. Rake out joints for joint cover to depths of not less than 3/4 inch (19 mm). Rake joints to uniform depths with square bottoms and clean sides. Scrub faces of units to remove excess mortar as joints are raked.
 - 1. Prime stone surfaces to receive sealant and install compressible backer rod in joints before applying sealant unless otherwise indicated.
 - 2. Install lead joint closure according to manufacturer's written instructions.
- E. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.4 INSTALLATION TOLERANCES

- A. Variation from Level: Do not exceed 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
- B. Variation in Joint Width: Do not vary joint thickness more than 1/8 inch in 36 inches (3 mm in 900 mm) or one-fourth of nominal joint width, whichever is less.
- C. Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than 1/16 inch (1.5 mm), except where variation is due to warpage of units within tolerances specified.

3.5 ADJUSTING AND CLEANING

- A. Remove and replace stained and otherwise damaged units and units not matching approved Samples. Stone may be repaired if methods and results are approved by Architect.
- B. Replace units in a manner that results in stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.
- C. In-Progress Cleaning: Clean stone as work progresses.
 - 1. Remove mortar fins and smears before tooling joints.
 - 2. Remove excess sealant immediately, including spills, smears, and spatter.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed stone as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample; leave one sample uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of stone.
 - 3. Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
 - 5. Clean stone by bucket-and-brush hand-cleaning method.

END OF SECTION 047200

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SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Framing with dimension lumber.
 - 2. Rooftop equipment bases and support curbs.
 - 3. Wood blocking, cants and nailers.

1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal (38 mm actual) size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) size or greater but less than 5 inches nominal (114 mm actual) size in least dimension.
- C. Exposed Framing: Framing not concealed by other construction.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
- B. Shop Drawings:
 - 1. Submit wood roof-framing layouts including dimension lumber, timber, engineered wood products, and plated wood trusses. Include computer-generated design calculations for representative joist and beam types.
 - 2. Identify location and magnitude of design loads on layouts and in member calculations.
 - 3. Identify metal connectors (joist, beam, post cap, anchors) by manufacturer and model number. Include a list of accessories required for installation at each connector (blocking, squash blocks, stiffeners, fasteners). Include allowable design loads for selected metal connectors in design calculation analysis.
 - 4. Identify manufacturer's recommended installation details in layouts.
 - 5. Provide documentation that allowable design stresses comply with allowable design properties of each product indicated.

1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
- B. Maximum Moisture Content of Lumber: 15 percent unless otherwise indicated.
- C. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 - 1. Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- D. Joists, Rafters: No. 2 or better grade.
 - 1. Species:
 - a. Hem-fir (north); NLGA.
 - b. Southern pine; SPIB.
 - c. Douglas fir-larch; WCLIB or WWPA.

2.2 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Rooftop equipment bases and support curbs.
 - 2. Cants.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any species.

2.3 FASTENERS

- A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.
- B. Nails, Brads, and Staples: ASTM F1667.

- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 or ICC-ES AC58 as appropriate for the substrate.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B633, Class Fe/Zn 5.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction.
- C. Do not splice structural members between supports unless otherwise indicated.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
 - 2. ICC-ES evaluation report for fastener.
- E. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

END OF SECTION 061000

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SECTION 062500 – WOOD REPAIRS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specifications, apply to this section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Removal of decayed and contaminated wood
 - 2. Installation of borate wood preservatives
 - 3. Installation of wood repair compound materials
- B. Related Requirements:
 - 1. Section 099113 "Exterior Painting" for preparation requirements of painted surfaces.

1.3 ACTION SUBMITTALS

- A. Product data: For each type of product.
 - 1. Include installation instructions, and general recommendations from manufacturer for types of repair required including technical data sheets defining performance properties.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for wood repairs indicated.
 - 1. Engage an installer who employs workers for this Project who are trained or certified by manufacturer for installation techniques required.
- B. Mockups:
 - 1. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

1.6 DELIVERY STORAGE AND HANDLING

- A. Deliver all materials in original unopened containers labeled with the manufacturer's name, brand name, item name and installation instructions.
- B. Store materials in compliance with the manufacturer's requirements for temperature, maximum and minimum, and other conditions. Keep all materials under cover and dry. Protect against exposure to the weather.
- C. Discard and remove from the job site any materials damaged in handling or storage and any materials that have been subjected to conditions contrary to the manufacturer's recommendations or whose maximum shelf life has expired.

1.7 PROJECT CONDITIONS

- A. Coordination: Coordinate wood repair with paint stripping so that the effected surfaces are exposed for a minimal time to avoid further damage to bare wood. Coordinate with painting so that all restored surfaces are primed as soon as possible after repair.
- B. Weather: Proceed with the work of this section only when existing and foreseen weather conditions permit the work to be performed in accordance with the manufacturer's recommendations for temperature and humidity range, minimum and maximum.
- C. Substrate Conditions: Do not proceed with product applications until substrates have been inspected and are determined to be in satisfactory conditions. Substrate moisture content shall not be in excess of 18% during preparation and application
 - 1. Remove all decayed wood to a clean, sound, unaffected substrate
 - 2. Remove all built up paints, and other debris to a clean sound substrate.
 - 3. Remove all wood sawdust to a clean sound substrate.
- D. Protection:
 - 1. Use all necessary means to protect interior of building from all damage caused by precipitation and other environmental conditions during the work of the Section
 - 2. Protect all adjacent building surfaces from damage, staining or deterioration resulting from wood restoration work.
 - 3. Protect the restoration work in progress to prevent further deterioration exposed wood surfaces. Protect the completed work until the time of final inspection and acceptance by the architect.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations on Material: Obtain primary repair materials from a single manufacturer. Provide secondary materials as recommended by the manufacturer of the primary materials.

2.2 GENERAL

- A. Compatibility: provide products recommended by the manufacturers to be fully compatible with indicated substrate.

2.3 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Advanced Repair Technology; 'Epoxy Repair System' or comparable product by one of the following:
1. Abatron, Inc.
 2. ConServ Epoxy, LLC.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect all wood surfaces in conjunction with the Architect to determine the extent of restoration and methods to be used.
- B. Joints, Joinery and edges: Check wood members at joints, seams and edges for:
1. Any open seams or failed conditions.
 2. Wood moisture content.
 3. The presence of wood decay, by probing surfaces.
- C. Sills and Trim
1. Inspect wood surfaces for natural defects (knots) cracks and checks.
 2. Determine wood moisture content.
 3. Probe for the presence for wood decay.

3.2 PREPARATION

- A. Removal of Finishes:
1. Remove all peeling and loose paint by scraping. Taking care not to damage sound wood and profiles.
 2. Strip all painted wood surface to bare wood, taking care not to damage sound wood and profiles by the application of stripping paste or by the use of a heat gun or plate
 - a. Remove stripper and finishes as directed by manufacturer.
 - b. Dispose of debris in accordance with approved methods.
- B. Wash all surfaces with recommended neutralizing agents to remove any foreign particle, dust and chemical residue, allow surface to thoroughly dry.

3.3 INSTALLATION

- A. Preservation and Repair of Damaged/Decayed Wood:
1. Remove all decayed soft and discolored wood, to sound bright unaffected material
 - a. Remaining wood should be even color without red-brown and/or gray spots.
 - b. No soft wood, existing brittle compound, or other previous repair materials should remain.
 2. Sand bare wood to remove all loose fibers, paint, compounds. Remove all sawdust and dirt.
 3. Drill holes in effected area to receive borate gel and rods. Follow manufacturer's dose recommendations for dimensional lumber.
 4. Inject recommended dose of borate gel. Gel should not come in contact with exposed wood surface.
 5. Install borate rod in same hole as gel. Gel should not come in contact with exposed wood surface.

6. Pre-treat bare and sanded wood thoroughly with low viscosity epoxy coupling/bonding agent.
 - a. Allow coupling/bonding agent to penetrate wood surface for a minimum of 10 minutes and maximum of 30 minutes, or as recommended by the manufacturer. Avoid applying in direct sunlight
 - b. Remove any excess bonding agent with absorbing paper.
7. Apply epoxy repair compound over the uncured epoxy coupling agent.
 - a. Epoxy fill shall have optimal contact with wood
 - b. Avoid inclusion of air pockets during application
 - c. Fill joints fill, even and smooth in one application
 - d. Allow full cure time as specified by manufacturer before preparing for finishes.
8. After curing, sand surface even and smooth. Transitions and irregularities between wood and epoxy shall not be visible after sanding.
9. If required, smooth any remaining irregularities with an additional application of epoxy repair compound. Always sand between coats.

3.4 ADJUSTMENTS

- A. Repair or replace all defective work at no additional cost to the owner.

END OF SECTION 062500

SECTION 064013 - EXTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Exterior standing and running trim.
 - 2. Exterior ornamental work.
- B. Related Sections include the following:
 - 1. Section 099113 "Exterior Painting" for preparation and finishing of wood surfaces.

1.3 SUBMITTALS

- A. Product Data: For each type of product and process indicated and incorporated into items of exterior architectural woodwork during fabrication, finishing, and installation.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show locations and sizes of blocking and nailers, including concealed blocking and reinforcement specified in other Sections.
- C. Samples for Verification:
 - 1. Lumber and panel products for opaque finish, 8 by 10 inches (200 by 250 mm) for panels and 50 sq. in. (300 sq. cm) for lumber, for each finish system and color, with 1/2 of exposed surface finished.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required with a documented history of successful installations.
- B. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards", Chapter 3 'Lumber' for grades of exterior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1.5 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation of exterior woodwork only when existing and forecasted weather conditions permit work to be performed and at least one coat of specified finish to be applied without exposure to rain, snow, or dampness.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed and indicate measurements on Shop Drawings.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.6 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, reinforcements, and other related units of Work specified in other Sections to ensure that exterior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Products: Comply with the following:
 - 1. Softwood Plywood: DOC PS 1, Exterior.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPAC2 (lumber) and AWPAC9 (plywood) and the following:
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Use chemical formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 - 2. Kiln-dry lumber and plywood after treatment to a maximum moisture content, respectively, of 19 and 15 percent. Do not use materials that are warped or do not comply with requirements for untreated materials.
 - 3. Mark each treated item with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- B. Extent of Treatment: Treat blocking and nailers by pressure process and treat other exterior architectural woodwork either by pressure or nonpressure process.

2.3 INSTALLATION MATERIALS

- A. Blocking, Shims, and Nailers: Softwood or hardwood lumber, pressure-preservative treated, kiln dried to less than 15 percent moisture content.
- B. Nails: Hot-dip galvanized or stainless steel.
- C. Screws: Hot-dip galvanized or stainless steel.
- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts, unless otherwise indicated. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.4 FABRICATION, GENERAL

- A. Wood Moisture Content: 10 to 15 percent.
- B. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Edges of Solid-Wood (Lumber) Members 3/4 Inch (19 mm) Thick or Less: 1/16 inch (1.6 mm).

2.5 EXTERIOR TRIM AND ORNAMENTAL WORK FOR OPAQUE FINISH

- A. Grade: Custom.
- B. Backout or groove backs of flat trim members, and kerf backs of other wide, flat members, except for members with ends or edges exposed in finished work.
- C. Wood Species: Douglas Fir, vertical or flat grain.

2.6 SHOP PRIMING

- A. Woodwork for Opaque Finish: Shop prime woodwork for paint finish with one coat of wood primer specified in Division 9 painting Sections.
- B. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to surfaces installed in contact with concrete or masonry and to end-grain surfaces.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

3.2 INSTALLATION

- A. Quality Standard: Install woodwork to comply with same grade specified in Part 2 for type of woodwork involved.
- B. Install woodwork true and straight with no distortions. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- C. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- D. Preservative-Treated Wood: Where cut or drilled in field, treat cut ends and drilled holes according to AWPA M4.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk concealed fasteners and blind nailing. Use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 36 inches (900 mm) long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - 1. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches (3 mm in 2400 mm).
- G. Complete finishing work specified in this Section to extent not completed at shop or before installation of woodwork. Fill nail and screw holes with matching filler where exposed.
- H. Refer to Division 9 Sections for final finishing of installed architectural woodwork.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; replace woodwork where not possible to repair. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06401END OF SECTION 064013

SECTION 070150.19 - PREPARATION FOR REROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Full tear-off of roof areas indicated.
 - 2. Removal of base flashings.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for use of the premises and phasing requirements.

1.3 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.
- B. Full Roof Tear-Off: Removal of existing roofing system from deck.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.5 QUALITY ASSURANCE

- A. Reroofing Conference: Conduct conference at Project site.
 - 1. Meet with Architect; roofing system manufacturer's representative; roofing Installer, including project manager, superintendent, and foreman; and installers whose work interfaces with or affects reroofing, including installers of roof deck, roof accessories, and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing system tear-off and replacement, including, but not limited to, the following:
 - a. Reroofing preparation, including roofing system manufacturer's written instructions.
 - b. Temporary protection requirements for existing roofing system components that are to remain.
 - c. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
 - d. Existing roof deck conditions requiring notification of Architect.
 - e. Existing roof deck removal procedures and Owner notifications.
 - f. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
 - g. HVAC shutdown and sealing of air intakes.

- h. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
- i. Existing conditions that may require notification of Architect before proceeding.

1.6 FIELD CONDITIONS

- A. Existing Roofing System: EPDM roofing.
- B. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations are not disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
 - 1. Coordinate work activities daily with Owner so Owner can place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.
 - 2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.
- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding are maintained by Owner as far as practical.
 - 1. A roof moisture survey of existing roofing system is available for Contractor's reference.
 - 2. The results of an analysis of test cores from existing roofing system are available for Contractor's reference.
- F. Limit construction loads on roof to 250 lbs. for rooftop equipment wheel loads and 50psf for uniformly distributed loads.
- G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
 - 1. Remove only as much roofing in one day as can be made watertight in the same day.
- H. Hazardous Materials: It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS

2.1 TEMPORARY PROTECTION MATERIALS

- A. Expanded Polystyrene (EPS) Insulation: ASTM C 578.
- B. Plywood: DOC PS1, Grade CD Exposure 1.
- C. OSB: DOC PS2, Exposure 1.

2.2 INFILL AND REPLACEMENT MATERIALS

- A. Wood blocking, curbs, and nailers are specified in Section 061000 "Rough Carpentry."

2.3 AUXILIARY REROOFING MATERIALS

- A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new roofing system.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Shut off rooftop utilities and service piping before beginning the Work.
- B. Test existing roof drains to verify that they are not blocked or restricted. Immediately notify Architect of any blockages or restrictions.
- C. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- D. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- E. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 1. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing roofing system components that are to remain.

3.2 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed for that day and obtain authorization to proceed.
- B. Full Roof Tear-Off: Where indicated, remove existing roofing and other roofing system components down to the deck.
 - 1. Remove substrate board and roof insulation.
 - 2. Remove wood blocking, curbs, and nailers.
 - 3. Remove fasteners from deck.

3.3 ECK PREPARATION

- A. Inspect deck after tear-off of roofing system.

- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.

3.4 BASE FLASHING REMOVAL

- A. Remove existing base flashings. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.

3.5 DISPOSAL

- A. Collect demolished materials and place in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
 - 1. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19

SECTION 072119 - FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Closed-cell spray polyurethane foam.
 - 2. Intumescent coating.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product including:
 - 1. Preparation instructions and recommendations
 - 2. Storage and handling requirements and recommendations
 - 3. Installation methods
 - 4. Appropriate Fire Resistance Assembly approval per Type Building Construction and Wall design (NFPA 285, ASTM E119, UL 263).

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Evaluation Reports: For spray-applied polyurethane foam-plastic insulation, from an independent product code evaluation agency certifying appropriate code compliance for the specified building application, **ICC-ES**.
- C. Product Test Reports: For each product, for tests performed by a qualified testing agency to demonstrate compliance with applicable building code requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A spray foam contractor who is an authorized representative trained and approved by manufacturer.

PART 2 - PRODUCTS

2.1 CLOSED-CELL SPRAY POLYURETHANE FOAM

- A. Closed-Cell Spray Polyurethane Foam: Spray applied polyurethane foam insulation using HFC as the blowing agent.

1. Basis-of-Design Product: Subject to compliance with requirements, provide SWD Urethane Company; 'Quick-Shield 112' or a comparable product by one of the following:
 - a. Gaco Western LLC.
 - b. Volatile Free, Inc.
2. Physical Properties:
 - a. Core Density: 2.0 lbs/cu. ft. (32.0 kg/cu. m) when tested in accordance with ASTM D 1622.
 - b. Compressive Strength: 25 psi (172 kPa) minimum when tested in accordance with ASTM D1621.
 - c. Water Vapor Transmission: Less than or equal to 0.93 perms at 1.2 inch 0.61metric perms at 30 mm) thick when tested in accordance with ASTM E 96.
 - d. Closed Cell Content: Greater than 96 percent when tested in accordance with ASTM D 6226.
 - e. Air Leakage: Infiltration/exfiltration, report foam thickness for air permeance equal to or less than 0.02 L/s/sq. m. at 75 Pa (0.04 cfm/min at 1.57 psf) tested in accordance with ASTM E 2178.
 - f. Water Resistance: No Failure when tested in accordance with AATCC 127 and ASTM E 331.
3. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less at 4 inch (102 mm) thickness.
 - b. Smoke-Developed Index: 450 or less at 4 inch (102 mm) thickness.
4. R-Value: R-Value when tested in accordance with ASTM C 518.
 - a. R-Value: 6.6 or greater at 1 inch (25 mm) average thickness.
 - b. R-Value: 22 or greater at 3-1/2 inches (89 mm) average thickness.

2.2 INTUMESCENT COATING

- A. Coating as required for specified application thickness, and as part of a tested assembly in accordance with NFPA 286.
 1. Basis-of-Design Product: International Fireproof Technology Inc.; 'DC315 Intumescent Coating'.

2.3 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by insulation manufacturer where required for adhesion of insulation to substrates.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify that substrates are clean, dry, and free of substances that may inhibit the adhesion of the foam material. Verify dryness of questionable substrates with MDP strips.
- B. Mask off areas not receiving spray foam with masking material appropriate for application.
- C. Verify all wall or decking penetrations have been completed by other trades.

- D. Cordon off the spray zone with appropriate signage and zoning materials to prevent entry by other trade personnel not wearing appropriate personal protective equipment (PPE).
- E. Set up and maintain appropriate air flow ventilation as dictated by the manufacturer or current industry standards.
- F. Priming: Prime substrates where recommended by insulation manufacturer. Apply primer to comply with insulation manufacturer's written instructions. Confine primers to areas to be insulated; do not allow spillage or migration onto adjoining surfaces.

3.2 INSTALLATION

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.
- B. Spray insulation to envelop entire area to be insulated and fill voids.
- C. Apply in multiple passes to not exceed maximum thicknesses recommended by manufacturer. Do not spray into rising foam.
- D. Framed Construction: Install into cavities formed by framing members to achieve thickness indicated on Drawings.
- E. Miscellaneous Voids: Apply according to manufacturer's written instructions.
- F. Remove excess foam from framing members or areas that inhibit the installation of wall coverings.

3.3 PROTECTION

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes.
- B. Touch-up, repair damaged foam or remove and replace defective foam as needed to meet requirements.

END OF SECTION 072119

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SECTION 075323 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Adhered ethylene-propylene-diene-terpolymer (EPDM) roofing system.
 - 2. Vapor retarder.
 - 3. Roof insulation.
 - 4. Cover board.
- B. Related Requirements:
 - 1. Section 061000 "Rough Carpentry" Section for wood nailers, curbs, and blocking.
 - 2. Section 077100 "Roof Specialties" for roof edge flashings and counterflashings.

1.3 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Examine deck substrate conditions and finishes, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
 - 7. Review temporary protection requirements for roofing system during and after installation.
 - 8. Review roof observation and repair procedures after roofing installation.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:
 - 1. Layout and thickness if insulation.
 - 2. Base flashings and membrane terminations.
 - 3. Flashing details at penetrations.
 - 4. Tapered insulation, thickness, and slopes.
 - 5. Roof plan showing orientation of steel roof deck and orientation of roof membrane and fastening spacings and patterns for mechanically fastened roofing system.
 - 6. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- C. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer.
- B. Manufacturer Certificates:
 - 1. Performance Requirement Certificate: Signed by roof membrane manufacturer, certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - a. Submit evidence of complying with performance requirements.
 - 2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.
- C. Product Test Reports: For components of roof membrane and insulation, for tests performed by a qualified testing agency, indicating compliance with specified requirements.
- D. Evaluation Reports: For components of roofing system, from ICC-ES.
- E. Sample Warranties: For manufacturer's special warranties.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

1.8 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed or listed in FM Approvals' RoofNav for roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.10 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
 - 1. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, and other components of roofing system.
 - 2. Warranty Period: 30 years from Date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, fasteners, cover boards, and vapor retarders, for the following warranty period:
 - 1. Warranty Period: Two years from Date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing system and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and flashings shall remain watertight.
 - 1. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested in accordance with ASTM G152, ASTM G154, or ASTM G155.
 - 2. Impact Resistance: Roof membrane shall resist impact damage when tested in accordance with ASTM D3746, ASTM D4272, or the Resistance to Foot Traffic Test in FM Approvals 4470.
- B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
 - 1. Zone 1 (Roof Area Field): As indicated on Drawings.
 - 2. Zone 2 (Roof Area Perimeter): As indicated on Drawings.
 - 3. Zone 3 (Roof Area Corners): As indicated on Drawings.

- C. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials shall comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and shall be listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.

1. Fire/Windstorm Classification: Class 1A-120.
2. Hail-Resistance Rating: MH.

2.2 ETHYLENE-PROPYLENE-DIENE-TERPOLYMER (EPDM) ROOFING

- A. EPDM Sheet: ASTM D4637/D4637M, Type I, nonreinforced, EPDM sheet.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Versico Roofing Systems; VersiGard® EPDM or comparable product by one of the following:
 - a. Firestone Building Products.
 - b. GenFlex Roofing Systems.
2. Thickness: 90 mils (2.2 mm), nominal.
3. Exposed Face Color: Black.
4. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.

2.3 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: 60-mil- (1.5-mm-) thick EPDM, partially cured or cured, in accordance with application.
- C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- D. Bonding Adhesive: Manufacturer's standard, water based and, low VOC.
- E. Seaming Material: Manufacturer's standard, synthetic-rubber polymer primer and 3-inch- (75-mm-) wide minimum, butyl splice tape with release film.
- F. Lap Sealant: Manufacturer's standard, single-component sealant, colored to match membrane roofing.
- G. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.
- H. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.
1. Where exposed to view, provide termination bar fascia.
- I. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, molded pipe boot flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

2.4 VAPOR RETARDER

- A. Self-Adhering-Sheet Vapor Retarder: ASTM D1970/D1970M, polyethylene film laminated to layer of rubberized asphalt adhesive, minimum 40-mil- (1.0-mm-) total thickness; maximum permeance rating of 0.1 perm (6 ng/Pa x s x sq. m); cold applied, with slip-resisting surface and release paper backing. Provide primer when recommended by vapor retarder manufacturer.

2.5 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured by EPDM roof membrane manufacturer, approved for use in FM Approvals' RoofNav-listed roof assemblies.
- B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Versico Roofing Systems; Versicore MP-H Polyiso or a comparable product by one of the following:
 - a. Firestone Building Products.
 - b. Flex Membrane International Corp.
 - 2. Compressive Strength: 25 psi (172 kPa).
 - 3. Size: 48 by 48 inches (1219 by 1219 mm).
 - 4. Thickness:
 - a. Base Layer: 2" (50.8 mm).
- C. Tapered Insulation: Provide factory-tapered insulation boards.
 - 1. Material: Match roof insulation.
 - 2. Minimum Thickness: 1/2 inch (12.70 mm).
 - 3. Slope:
 - a. Saddles and Crickets: 1/2 inch per foot (1:24) unless otherwise indicated on Drawings.

2.6 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
- B. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
 - 1. Bead-applied, low-rise, one-component or multicomponent urethane adhesive.
- C. Cover Board: ASTM C1278/C1278M, fiber-reinforced gypsum board.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide USG Securock® Brand; Gypsum-Fiber Roof Board or comparable product by one of the following:
 - a. CertainTeed Corporation.
 - b. Georgia-Pacific Gypsum LLC.
 - 2. Thickness: 5/8 inch (16 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
 - 1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
 - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
 - 4. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer when tested in accordance with ASTM F2170.
 - a. Test Frequency: One test probe per each 1000 sq. ft. (93 sq. m), or portion thereof, of roof deck, with not less than three test probes.
 - b. Submit test reports within 24 hours of performing tests.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation in accordance with roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

3.3 ROOFING INSTALLATION, GENERAL

- A. Install roofing system in accordance with roofing system manufacturer's written instructions, FM Approvals' RoofNav assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.4 VAPOR RETARDER INSTALLATION

- A. Self-Adhering-Sheet Vapor Retarder: Prime substrate if required by manufacturer. Install self-adhering-sheet vapor retarder over area to receive vapor retarder, side and end lapping each sheet a minimum of 3-1/2 and 6 inches (90 and 150 mm), respectively.
 - 1. Extend vertically up parapet walls and projections to a minimum height equal to height of insulation and cover board.
 - 2. Seal laps by rolling.
- B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into roofing system.

3.5 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.
- B. Comply with roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Installation Over Wood Decking:
 - 1. Install base layer of insulation with joints staggered not less than 24 inches (610 mm) in adjacent rows.
 - a. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - b. Make joints between adjacent insulation boards not more than 1/4 inch (6 mm) in width.
 - c. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
 - d. Adhere each layer of insulation to substrate using adhesive in accordance with FM Approvals' RoofNav assembly requirements and FM Global Property Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification, as follows:
 - 1) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
 - 2. Install tapered insulation with joints of each layer offset not less than 12 inches (305 mm) from previous layer of insulation.
 - a. Staggered end joints within each layer not less than 24 inches (610 mm) in adjacent rows.
 - b. Make joints between adjacent insulation boards not more than 1/4 inch (6 mm) in width.
 - c. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
 - d. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
 - 1) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

3.6 INSTALLATION OF COVER BOARDS

- A. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction.
 - 1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - 2. At internal roof drains, conform to slope of drain sump.
 - a. Trim cover board so that water flow is unrestricted.
 - 3. Cut and fit cover board tight to nailers, projections, and penetrations.
 - 4. Adhere cover board to substrate using adhesive in accordance with FM Approvals' RoofNav assembly requirements and FM Global Property Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification, as follows:
 - a. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

3.7 ADHERED ROOFING INSTALLATION

- A. Adhere roof membrane over area to receive roofing in accordance with roofing system manufacturer's written instructions.
- B. Unroll membrane roof membrane and allow to relax before installing.

- C. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer, and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.
- E. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeters.
- F. Apply roof membrane with side laps shingled with slope of roof deck where possible.
- G. Tape Seam Installation: Clean and prime both faces of splice areas, apply splice tape.
 - 1. Firmly roll side and end laps of overlapping roof membrane to ensure a watertight seam installation.
 - 2. Apply lap sealant and seal exposed edges of roofing terminations.
- H. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.
- I. Spread sealant or mastic bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

3.8 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates in accordance with roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.9 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to inspect substrate conditions, surface preparation, roof membrane application, sheet flashings, protection, and drainage components, and to furnish reports to Architect.
- B. Perform the following tests:
 - 1. Flood Testing: Flood test each roofing area for leaks, in accordance with recommendations in ASTM D5957, after completing roofing and flashing. Install temporary containment assemblies, plug or dam drains, and flood with potable water.
 - a. Perform tests before overlying construction is placed.
 - b. Flood to an average depth of 2-1/2 inches (65 mm) with a minimum depth of 1 inch (25 mm) and not exceeding a depth of 4 inches (100 mm). Maintain 2 inches (50 mm) of clearance from top of base flashing.
 - c. Flood each area for 48 hours.

- d. After flood testing, repair leaks, repeat flood tests, and make further repairs until roofing and flashing installations are watertight.
 - 1) Cost of retesting is Contractor's responsibility.
 - e. Testing agency shall prepare survey report indicating locations initial leaks, if any, and final survey report.
- 2. Testing agency shall prepare survey report indicating locations of initial discontinuities, if any.
- C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.
- D. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and in accordance with warranty requirements.

3.11 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS _____ of _____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: <Insert name of Owner>.
 - 2. Address: <Insert address>.
 - 3. Building Name/Type: <Insert information>.
 - 4. Address: <Insert address>.
 - 5. Area of Work: <Insert information>.
 - 6. Acceptance Date: _____.
 - 7. Warranty Period: <Insert time>.
 - 8. Expiration Date: _____.
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
 - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. lightning;

- b. peak gust wind speed exceeding 120 mph (53.6 m/s);
 - c. fire;
 - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. vapor condensation on bottom of roofing; and
 - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
- 2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 - 3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
 - 4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
 - 5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
 - 6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
 - 7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work in accordance with requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this _____ day of _____, _____.

- 1. Authorized Signature: _____.
- 2. Name: _____.
- 3. Title: _____.

END OF SECTION 075323

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Formed roof-drainage sheet metal fabrications.
 - 2. Formed low-slope roof sheet metal fabrications.
- B. Related Requirements:
 - 1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
 - 2. Section 040120 "Maintenance of Unit Masonry" for materials and installation of manufactured sheet metal through-wall flashing and trim integral with masonry.
 - 3. Section 077100 "Roof Specialties" for manufactured copings, roof-edge specialties, roof-edge drainage systems, and counterflashings.
 - 4. Section 077200 "Roof Accessories" for equipment supports , and other manufactured roof accessory units.

1.3 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review construction schedule. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review special roof details, roof drainage, roof-penetration flashing, and condition of other construction that affect sheet metal flashing and trim.
 - 3. Review requirements for insurance and certificates if applicable.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product used.
- B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Include identification of material, thickness, weight, and finish for each item and location in Project.
3. Include details for forming, including profiles, shapes, seams, and dimensions.
4. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
5. Include details of connections to adjoining work.
6. Detail formed flashing and trim at scale of not less than 3 inches per 12 inches (1:5).

- C. Samples: For each exposed product and for each color and texture specified, 12 inches (300 mm) long by actual width.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.

1.7 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.
1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
 2. Protect stored sheet metal flashing and trim from contact with water.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.9 WARRANTY

- A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual: Architectural Metal Flashing, Condensation and Air Leakage Control, and Reroofing" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. Sheet Metal Standard for Copper: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat-gain and nighttime-sky heat loss.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 SHEET METALS

- A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Copper Sheet: ASTM B370, cold-rolled copper sheet, H00 or H01 temper.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Hussey Copper Ltd.
 - b. Revere Copper Products, Inc.
 - 2. Source Limitations: Obtain sheet from single source from single manufacturer.
- C. Aluminum Sheet: ASTM B209 (ASTM B209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface.
 - 1. Exposed Coil-Coated Finish:
 - a. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 2. Color: As selected by Architect from manufacturer's full range.
 - 3. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil (0.013 mm).

2.3 MISCELLANEOUS MATERIALS

- A. Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
 - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 - 2. Fasteners for Copper Sheet: Copper, hardware bronze or passivated Series 300 stainless steel.
 - 3. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Solder:
 - 1. For Copper: ASTM B32, Grade Sn50, 50 percent tin and 50 percent lead with maximum lead content of 0.2 percent.
- D. Elastomeric Sealant: ASTM C920, elastomeric polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

2.4 FABRICATION, GENERAL

- A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.
 - 1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
 - 2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 - 3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
 - 4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 - 5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances:
 - 1. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
 - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
 - 2. Use lapped expansion joints only where indicated on Drawings.

- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- G. Seams:
 - 1. Seams for Copper: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
 - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use.

2.5 ROOF-DRAINAGE SHEET METAL FABRICATIONS

- A. Parapet Scuppers: Fabricate scuppers to dimensions required, with closure flange trim to exterior, 4-inch-(100-mm-) wide wall flanges to interior, and base extending 4 inches (100 mm) beyond cant or tapered strip into field of roof. Fabricate from the following materials:
 - 1. Copper: 20 oz./sq. ft. (0.69 mm) thick.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof-to-Wall Transition: Fabricate from the following materials:
 - 1. Aluminum: 0.050 inch (1.27 mm) thick.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
 - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
 - 1. Install fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder and sealant.
 - 3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.

4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
 5. Install continuous cleats with fasteners spaced not more than 12 inches (300 mm) o.c.
 6. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
 7. Do not field cut sheet metal flashing and trim by torch.
- B. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
1. Space movement joints at maximum of 10 ft. (3 m) with no joints within 24 inches (600 mm) of corner or intersection.
 2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
 3. Use lapped expansion joints only where indicated on Drawings.
- C. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- D. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- E. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated.
 - a. Embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant.
 - b. Form joints to completely conceal sealant.
 - c. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way.
 - d. Adjust setting proportionately for installation at higher ambient temperatures.
 - 1) Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter.
1. Pre-tin edges of sheets with solder to width of 1-1/2 inches (38 mm); however, reduce pre-tinning where pre-tinned surface would show in completed Work.
 2. Do not use torches for soldering.
 3. Heat surfaces to receive solder, and flow solder into joint.
 - a. Fill joint completely.
 - b. Completely remove flux and spatter from exposed surfaces.
 4. Copper Soldering: Tin edges of uncoated sheets, using solder for copper.
- ### 3.3 INSTALLATION OF ROOF-DRAINAGE SYSTEM
- A. Install sheet metal roof-drainage items to produce complete roof-drainage system in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.
- B. Parapet Scuppers:
1. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
 2. Anchor scupper closure trim flange to exterior wall and solder to scupper.

3.4 INSTALLATION OF ROOF FLASHINGS

- A. Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard.
 - 1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
 - 2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

3.5 INSTALLATION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 ft. (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.

3.7 PROTECTION

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.
- C. Maintain sheet metal flashing and trim in clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION 076200

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SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Copings.
 - 2. Roof-edge specialties.
 - 3. Roof-edge drainage systems.
 - 4. Counterflashings
- B. Related Requirements:
 - 1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
- C. Preinstallation Conference: Conduct conference at Project site.
 - 1. Meet with Architect, roofing Installer, roofing-system manufacturer's representative, Installer, and installers whose work interfaces with or affects roof specialties, including installers of roofing materials and accessories.
 - 2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
 - 3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For roof specialties.
 - 1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.
 - 2. Include details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
 - 3. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.
 - 4. Detail termination points and assemblies, including fixed points.
 - 5. Include details of special conditions.
- C. Samples: For each type of roof specialty and for each color and texture specified.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer.
- B. Product Certificates: For each type of roof specialty.
- C. Product Test Reports: For copings and roof-edge flashings, for tests performed by a qualified testing agency.
- D. Sample Warranty: For manufacturer's special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing specialties to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are SPRI ES-1 tested to specified design pressure.
- B. Source Limitations: Obtain roof specialties approved by manufacturer providing roofing-system warranty specified in Section 075323 "Ethylene-Propylene-Diene-Monomer (EPDM) Roofing."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.
- B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof-specialty installation.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify profiles and tolerances of roof-specialty substrates by field measurements before fabrication, and indicate measurements on Shop Drawings.
- B. Coordination: Coordinate roof specialties with flashing, trim, and construction of parapets, roof deck, roof and wall panels, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.9 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions in Section Section 075323 "Ethylene-Propylene-Diene-Monomer (EPDM) Roofing."
- B. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. SPRI Wind Design Standard: Manufacture and install copings and roof-edge specialties tested according to SPRI ES-1 and capable of resisting the following design pressures:
 1. Design Pressure: As indicated on Drawings.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 COPINGS

- A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet (3.6 m), concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Metal-Era Roof Edge Solutions; 'Perma-Tite Gold Coping Tapered' or comparable product by one of the following
 - a. Architectural Products Company.
 - b. Atas International, Inc.
 - c. Pac-Clad Peterson (A Carlisle Company).
 2. Formed Aluminum Sheet Coping Caps: Aluminum sheet, 0.050 inch (1.27 mm) thick.
 - a. Surface: Smooth, flat finish.
 - b. Finish: Three-coat fluoropolymer .
 - c. Color: As selected by Architect from manufacturer's full range.
 3. Corners: Factory mitered and mechanically clinched and sealed watertight.
 4. Coping-Cap Attachment Method: Snap-on, fabricated from coping-cap material.
 - a. Snap-on Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches (300 mm) wide, with integral cleats.
 - b. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet.

2.3 ROOF-EDGE SPECIALTIES

- A. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet (3.6 m) and a continuous metal receiver with integral drip-edge cleat to engage fascia cover and secure single-ply roof membrane. Provide matching corner units.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Metal-Era Roof Edge Solutions; 'Anchor-Tite Drip Edge' or comparable product by one of the following
 - a. Architectural Products Company.
 - b. Atas International, Inc.
 - c. Pac-Clad Peterson (A Carlisle Company).
2. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.050 inch (1.27 mm) thick.
 - a. Surface: Smooth, flat finish.
 - b. Finish: Three-coat fluoropolymer.
 - c. Color: As selected by Architect from manufacturer's full range.
3. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
4. Receiver: Extruded aluminum, 0.080 inch (2.03 mm) thick.
5. Roof Edge Nailer: Metal-Era Roof Edge Solutions; "Eliminater-T" 1.5" version, or approved equal.

2.4 ROOF-EDGE DRAINAGE SYSTEMS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Metal-Era; 'Seal-Tite Gold Gutter IGG-B' or comparable product by one of the following:
 1. SAF Metal Fabrication.
 2. Drexel Metals.
- B. Gutters: Manufactured in uniform section lengths not exceeding 12 feet (3.6 m), with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch (25 mm) above front edge. Furnish flat-stock gutter straps, gutter brackets, expansion joints, and expansion-joint covers fabricated from same metal as gutters.
 1. Aluminum Sheet: 0.050 inch (1.27 mm) thick.
 2. Profile: IG-B.
 3. Gutter Accessories
 - a. Gutter Supports: External gutter brackets fabricated from 0.125 inch (3.18 mm) aluminum with finish matching gutters.
 - b. Gutter Hanger: Internal hangers fabricated from 0.100-inch (3-mm) aluminum.
 - c. End Caps: Manufacturers standard with finish to match gutters.
- C. Downspouts: Plain rectangular complete with mitered elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.
 1. Formed Aluminum: 0.063 inch (1.60 mm) thick.
- D. Aluminum Finish: Three-coat fluoropolymer.
 1. Color: As selected by Architect from manufacturer's full range.

2.5 COUNTERFLASHINGS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Metal-Era Roof Edge Solutions; 'Counter-Flash 2-Piece Counterflashing' or comparable product by one of the following
 1. Architectural Products Company.
 2. Atas International, Inc.
 3. Pac-Clad Peterson (A Carlisle Company).

- B. Counterflashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches (100 mm) and in lengths not exceeding 12 feet (3.6 m) designed to snap into reglets and compress against base flashings with joints lapped, from the following exposed metal:

1. Formed Aluminum: 0.040 inch (1.02 mm) thick .

- C. Accessories:

1. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

- D. Aluminum Finish: Two-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

2.6 MATERIALS

- A. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.
- B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by manufacturer for type of use and finish indicated, finished as follows:

2.7 MISCELLANEOUS MATERIALS

- A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
1. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
2. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.
- B. Elastomeric Sealant: ASTM C 920, elastomeric polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- C. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.8 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Coil-Coated Aluminum Sheet Finishes:

1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - b. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - c. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.
- C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage where applicable, and securely anchored.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
 3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
 4. Torch cutting of roof specialties is not permitted.
 5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
 1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.

1. Space movement joints at a maximum of 12 feet (3.6 m) with no joints within 18 inches (450 mm) of corners or intersections unless otherwise indicated on Drawings.
 2. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance but not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
- E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.
- F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F (4 deg C).

3.3 ROOF-EDGE SPECIALITIES INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.4 COUNTERFLASHING INSTALLATION

- A. General: Coordinate installation of counterflashings with installation of base flashings.
- B. Counterflashings: Insert counterflashings into masonry joints; ensure that counterflashings overlap 4 inches (100 mm) over top edge of base flashings. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with butyl sealant. Fit counterflashings tightly to base flashings.

3.5 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- C. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077100

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SECTION 077200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Equipment supports.
 - 2. Pipe supports.
 - 3. Pipe portals.
- B. Related Sections:
 - 1. Section 077100 "Roof Specialties" for manufactured fasciae, copings, gravel stops, gutters and downspouts, and counterflashing.

1.3 COORDINATION

- A. Coordinate layout and installation of roof accessories with interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of roof accessory.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

1.5 INFORMATIONAL SUBMITTALS

- A. Sample Warranties: For manufacturer's special warranties.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof accessories shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

2.2 EQUIPMENT SUPPORTS

- A. Equipment Supports: Rail-type metal equipment supports capable of supporting superimposed live and dead loads between structural supports, including equipment loads and other construction indicated on Drawings, spanning between structural supports; capable of meeting performance requirements; with welded corner joints, and integrally formed structure-mounting flange at bottom.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Curbs Plus, Inc.
 - b. Pate Company (The).
 - c. Roof Products and Systems (RPS); a division of Hart & Cooley, Inc.
- B. Size: Coordinate dimensions with equipment to be supported.
- C. Material: Zinc-coated (galvanized) steel sheet, 0.064 inch (1.63 mm) thick.
 - 1. Finish: Mill phosphatized.
- D. Construction:
 - 1. Curb Profile: Manufacturer's standard compatible with roofing system.
 - 2. Nailer: Factory-installed continuous wood nailers 3-1/2 inches (90 mm) wide under top flange on side of curb, continuous around support perimeter.
 - 3. Metal Counterflashing: Manufacturer's standard, removable, fabricated of same metal and finish as equipment support.
 - 4. Fabricate equipment supports to minimum height of 12 inches (305 mm) above roofing surface unless otherwise indicated.

2.3 PIPE AND DUCT SUPPORTS

- A. Adjustable-Height Roller-Bearing Pipe Supports: Polycarbonate pipe stand base, pipe support, and roller housing, with stainless-steel threaded rod designed for adjusting support height, accommodating up to 3 inch (76.2 mm) diameter pipe or conduit; with provision for pipe retainer and with manufacturer's support pad or deck plate as recommended for penetration-free installation over roof membrane type; as required for quantity of pipe runs and sizes.

2.4 PIPE PORTALS

- A. Wall-Mounted Pipe Portal: Gasketed aluminum framed, 3-piece configuration with removable panel and exit seals.
 - 1. Basis-of-Design: Vault Roof Penetration Housings, LLC; 'Wall Vault WV-1017 Series'.

2.5 METAL MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), manufacturer's standard alloy for finish required, with temper to suit forming operations and performance required.

1. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm). Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
- C. Aluminum Extrusions and Tubes: ASTM B 221 (ASTM B 221M), manufacturer's standard alloy and temper for type of use, finished to match assembly where used; otherwise mill finished.
- D. Stainless-Steel Sheet and Shapes: ASTM A 240/A 240M or ASTM A 666, Type 304.

2.6 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- C. Verify dimensions of roof openings for roof accessories.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install roof accessories according to manufacturer's written instructions.
 1. Install roof accessories level; plumb; true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
 2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
 3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
 4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
- C. Equipment Support Installation: Install equipment supports so top surfaces are level with each other.
- D. Pipe Support Installation: Comply with MSS SP-58 and MSS SP-89. Install supports and attachments as required to properly support piping. Arrange for grouping of parallel runs of horizontal piping, and support together.
- E. Seal joints with elastomeric or butyl sealant as required by roof accessory manufacturer.

3.3 REPAIR AND CLEANING

- A. Clean exposed surfaces according to manufacturer's written instructions.
- B. Clean off excess sealants.
- C. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077200

SECTION 077253 – SNOW GUARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Custom deck mounted snow retention system for slate roofs.

1.3 SYSTEM DESCRIPTION:

- A. COMPONENTS:
 - 1. Deck Mount Bracket/Base Plate
 - 2. 1" Diameter Round Tubing
 - a. End Cap
 - b. Insert
 - 3. Barricade Plate™
 - 4. Fasteners
 - a. Minimum (4) per plate.
 - b. Material to be compatible to that of the bracket/base plate material.
 - c. To be compatible with the roof deck.
 - d. Strength should be greater and/or equal to that of the snow retention system.
 - 5. Sealant:
 - a. Manufacturers standard.
- B. DESIGN REQUIREMENTS:
 - 1. Bracket/base plate spacing: As indicated on Drawings.

1.4 ACTION SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for snow guards.
- B. Shop Drawings: Include roof plans showing layouts and attachment details of snow guards.
- C. Include details of rail-type snow guards.
- D. Include calculation of number and location of snow guards based on snow load, roof slope, roof type, components, spacings, and finish.

- E. Samples: Bracket and 12-inch- (300-mm-) long rail.

1.5 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each type of snow guard, for tests performed by manufacturer and witnessed by a qualified testing agency.

1.6 QUALITY ASSURANCE

- A. Mockup: Provide snow guard work for roof mockup as specified in Division 13 section "Metal Building Systems." Mockup shall be full width of roof panels (48 inches) and include at least two clips to the standing seams and one flag.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Performance Requirements: Provide snow guards that withstand exposure to weather and resist thermally induced movement without failure, rattling, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

- 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 RAIL-TYPE SNOW GUARDS

- A. Seam-Mounted, Rail-Type Snow Guards:

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Sno Gem; 'Deck Mounted Double Round Bar System' or comparable product by one of the following"
 - a. Alpine SnowGuards.
 - b. PMC Industries, Inc.
 - 2. Description: Snow guard rails fabricated from metal tubing anchored to brackets and equipped with two rails.
 - 3. Material and Finish: Stainless steel; Manufacturer's standard..

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, snow guard attachment, and other conditions affecting performance of the Work.

- 1. Verify compatibility with and suitability of substrates including compatibility with existing finishes or primers.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install snow guards according to manufacturer's written instructions.

END OF SECTION 077253

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SECTION 086200 - UNIT SKYLIGHTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Unit skylights mounted on site-erected curbs.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of unit skylight.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for unit skylights.
- B. Shop Drawings: For unit skylight work.
 - 1. Include plans, elevations, sections, details, and connections to supporting structure and other adjoining work.
- C. Aluminum Finish Samples: For each type of exposed finish required, in a representative section of each unit skylight in manufacturer's standard size.
- D. Glazing Samples: For each color and finish of glazing indicated, 12 inches (300 mm) square and of same thickness indicated for the final Work.
- E. Delegated Design Submittal: For metal framed structural skylight, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Test Reports: For each type and size of unit skylight, for tests performed within the last four years by a qualified testing agency. Test results based on testing of smaller unit skylights than specified will not be accepted.
- C. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For unit skylights to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating unit skylights that meet or exceed performance requirements indicated and of documenting this performance by inclusion in lists and by labels, test reports, and calculations.
- B. Installer Qualifications: An installer acceptable to unit skylight manufacturer for installation of units required for this Project.
- C. Provide flat cellular polycarbonate panel fabricated from an approved cellular polycarbonate glazing (light transmitting) material identical to that tested with a CC1 fire rating classification per ASTM D-635.
 - 1. Self-Ignition Temperature: 1110° F (599 deg. C) or greater when tested per ASTM 1929 on multi-wall cellular panel filled with Lumira™ aerogel Insulation in the thickness (10mm) intended for use.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of unit skylights that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures.
 - b. Uncontrolled water leakage.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - d. Breakage, abnormal aging, or deterioration of polycarbonate glazing.
 - e. Deterioration of insulating-glass hermetic seal.
 - 2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Wasco Products Inc.; 'S-Series P350' or comparable product by one of the following:
 - 1. Kingspan Light + Air LLC.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Provide metal-framed skylights capable of withstanding loads and thermal and structural movements indicated without failure. Failure includes the following:
 - 1. Deflection exceeding specified limits.
 - 2. Thermal stresses transferred to the building structure.
 - 3. Skylight framing members transferring stresses, including those caused by thermal and structural movement, to glazing.
 - 4. Weakening of fasteners, attachments, and other components.
- B. Deflection Limits: As follows:

1. Deflection Normal to Glazing Plane: Limited to 1/175 of clear span for spans up to 13 feet 6 inches (4.1 m) and to 1/240 of clear span plus 1/4 inch (6.35 mm) for spans more than 13 feet 6 inches (4.1 m) or an amount that restricts edge deflection of individual glazing lites to 3/4 inch (19.1 mm), whichever is less.
 - C. Structural Loads: Provide metal-framed skylights, including anchorage, capable of withstanding the effects of the following design loads when supporting full dead loads:
 1. Roof Loads
 - a. Concentrated Load: 250 lbs applied to framing members at location that produces the most severe stress or deflection.
 - b. Snow Loads: 30 psf.
 - c. Roof Loads:
 - d. Wind Loads: As indicated on Drawings.
 - D. Structural Performance: Provide metal-framed skylights, including anchorage, capable of withstanding pressures indicated without material and deflection failures and permanent deformation of structural members exceeding 0.2 percent of span when tested according to ASTM E 330.
 - E. Air Infiltration: Provide metal-framed skylights with maximum air leakage of 0.23 cfm/sq. ft. (0.03 L/s per sq. m) of surface when tested according to ASTM E 283 at a minimum static-air-pressure differential of 6.24lb/sq. ft. (300 Pa).
 - F. Water Penetration: Provide metal-framed skylights that do not evidence water penetration when tested according to ASTM E 331 at a minimum differential static pressure of 20 percent of positive design wind pressure, but not less than 12 lbs/sq. ft. (718 Pa).
 - G. Thermal Movement: Provide metal-framed skylights that allow for thermal movements resulting from the following maximum change (range) in ambient temperatures by preventing buckling, sealant failure, and other detrimental effects.
 - H. Temperature Change (Range): 100 degrees F.
 - I. Thermal Transmittance: NFRC 100 maximum U-factor of 0.17 Btu/sq. ft. x h x deg F (0.97 W/sq. m x K).
 - J. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum SHGC of 0.34.
- 2.3 UNIT SKYLIGHTS
- A. General: Provide factory-assembled unit skylights that include glazing, extruded-aluminum glazing retainers, gaskets, and inner frames and that are capable of withstanding performance requirements indicated.
 - B. Unit Shape and Size: Double pitch.
 - C. Polycarbonate-Insulating-Panel Glazing: Manufacturer's standard polycarbonate sheet with cellular cross section that provides isolated airspaces and that is coextruded with a UV-protective layer.
 1. Thickness and Color:
 - a. Outer: 25mm 3 Wall Clear.
 - b. Inner: 16mm 3 Wall Clear.
 2. Self-Ignition Temperature: 650 deg F (343 deg C) or more for plastic sheets in thickness indicated when tested according to ASTM D 1929.
 3. Smoke-Production Characteristics: Smoke-developed index of 450 or less when tested according to ASTM E 84, and smoke density of 75 or less when tested according to ASTM D 2843

4. Burning Characteristics: Tested according to ASTM D 635. Class CC2, burning rate of 2-1/2 inches (64 mm) per minute or less for nominal thickness of 0.060 inch (1.5 mm) or thickness indicated for use.
- D. Glazing Gaskets: EPDM, neoprene, partially vulcanized butyl tape, or liquid-applied elastomeric sealant.
- E. Condensation Control: Fabricate unit skylights with integral internal gutters and nonclogging weeps to collect and drain condensation to the exterior.
- F. Thermal Break: Fabricate unit skylights with thermal barrier separating exterior and interior metal framing.

2.4 ACCESSORY MATERIALS

- A. Fasteners: Same metal as metal being fastened, nonmagnetic stainless steel, or other noncorrosive metal as recommended by manufacturer. Finish exposed fasteners to match material being fastened.
 1. Where removal of exterior exposed fasteners might allow access to building, provide nonremovable fastener heads.
- B. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat.

2.5 ALUMINUM FINISHES

- A. High-Performance Organic Finish: Three-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Coordinate installation of unit skylight with installation of substrates, vapor retarders, roof insulation, roofing membrane, and flashing as required to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight.
- B. Comply with recommendations in AAMA 1607 and with manufacturer's written instructions for installing unit skylights.
- C. Install unit skylights level, plumb, and true to line, without distortion.

- D. Anchor unit skylights securely to supporting substrates.
- E. Where aluminum surfaces of unit skylights will contact another metal or corrosive substrates, such as preservative-treated wood, apply bituminous coating on concealed metal surfaces or provide other approved permanent separation recommended in writing by unit skylight manufacturer.

3.3 FIELD QUALITY CONTROL

- A. After completion of installation and nominal curing of sealant and glazing compounds but before installation of interior finishes, test for water leaks according to AAMA 501.2.
- B. Perform test for total area of each unit skylight.
- C. Work will be considered defective if it does not pass tests and inspections.
- D. Additional testing and inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- E. Prepare test and inspection reports.

3.4 CLEANING

- A. Clean exposed unit skylight surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes.
- B. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Remove and replace glazing that has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Protect unit skylight surfaces from contact with contaminating substances resulting from construction operations.
- E. Unit Skylight Operating System: Clean and lubricate joints and hardware. Adjust for proper operation.

END OF SECTION 086200

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SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes coating removal, surface preparation, and the application of paint systems on the following exterior substrates:
 - 1. Wood.
 - 2. Steel.
 - 3. Wood.
- B. Related Requirements:
 - 1. Section 062013 "Exterior Finish Carpentry" for repairs to exterior woodwork.

1.3 REFERENCES

- A. MPI "Maintenance Repainting Manual" (MR Manual) August 2004 edition.
- B. Painting Contractors Association (PDCA) "PDCA Industry Standards" May 2019 edition.
- C. ASTM D3359 "Standard Test Methods for Rating Adhesion by Tape Test".

1.4 DEFINITIONS

- A. MPI Gloss Levels:
 - 1. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
 - 2. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
 - 3. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
 - 4. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
 - 5. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
 - 6. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
 - 7. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Indicate VOC content.
 - B. Samples for Initial Selection: For each type of topcoat product.
 - C. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 2. Label each coat of each Sample.
 3. Label each Sample for location and application area.
 - D. Product List: For each product indicated, include the following:
 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 - E. Qualification Data: For Installer.
- 1.6 CLOSEOUT SUBMITTALS
- A. Coating Maintenance Manual: Provide coating maintenance manual including area summary with finish schedule, area detail designating location where each product/color/finish was used, product data pages, material safety data sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.
- 1.7 MAINTENANCE MATERIAL SUBMITTALS
- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Paint: 10 gal. (38 L) of each material and color applied.
 2. Provide maintenance materials in new containers, full, tightly sealed and clearly labelled. Remnants of used materials are not acceptable.
- 1.8 TESTING
- A. General: Before beginning general paint and coatings removal or preparing mockups, test paint and coating removal methods on sample areas. A successful test is one where all loose and flaking paint and coatings are removed without causing damage or deterioration of the substrate. Tightly adhered paint and coatings may remain.
 1. Locate tests as directed by Architect.
 2. Size: 12" (4.72 cm) x 12" (4.72 cm).
 - B. Chemical Paint and Coatings Removal Method Patch Tests: Provide patch tests for chemical stripper to determine application thickness and dwell time. Perform tests in the presence of manufacturer's representative.
- 1.9 QUALITY ASSURANCE
- A. Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. Contractor shall provide a list of the last three comparable exterior repainting jobs including, name, location, specifying authority / project manager, start / completion dates and value of the work.

1. Field Supervision: Master Paint Institute (MPI) Maintenance Coating Specialist (MCS)
 2. Worker Qualifications: Master Paint Institute (MPI) Architectural Coating Technologist (ACT).
 - a. Workers performing lead paint remediation shall be RRP Certified.
- B. All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (MPI) Maintenance and Repainting Manual (herein referred to as the MPI Repainting Manual).
- C. Unless otherwise specified herein, all exterior repainting work shall be done in accordance with MPI Custom Grade requirements.
- D. Installation: The following requirements establish the standard of acceptance for the Work, when viewed using the final lighting source.
1. Vertical surfaces: No defects visible from a distance of 39 inches (1 meter) at 90 degrees to surface.
 2. Horizontal surfaces: No defects visible from a distance of 39 inches (1 meter) at 45 degrees to surface.
 3. Ceilings: No defects visible from floor at 45 degrees to surface.
 4. Final coat shall exhibit uniformity of sheen across full surface area.
 5. Defects include brush marks, streaks, runs, laps, drips, heavy stippling, pile up of paints, roller tracking, inadequate hiding of substrate, skipped or missed areas, and foreign materials in paint.
- E. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
 2. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- 1.10 DELIVERY, STORAGE, AND HANDLING
- A. Delivery and Handling: Deliver products to Project site in an undamaged condition in manufacturer's original sealed containers, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Packaging shall bear the manufacture's label with the following information:
1. Product name and type (description).
 2. Batch date.
 3. Color number.
 4. VOC content.
 5. Environmental handling requirements.
 6. Surface preparation requirements.
 7. Application instructions.

- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.11 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
- C. Hazardous Materials: Hazardous materials including lead paint are present in buildings and structures to be painted. A report on the presence of known hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
 - 1. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified.
 - 2. Perform preparation for painting of substrates known to include lead paint in accordance with EPA Renovation, Repair and Painting Rule and additional requirements of authorities having jurisdiction.
- D. WARRANTY
 - 1. Furnish a 100% two (2) year Maintenance Bond both in accordance with MPI Repainting Manual requirements. The Maintenance Bond shall be obtained from an approved bonding company and shall warrant that all repainting work has been performed in accordance with MPI Repainting Manual requirements.
 - a. All exterior repainting work shall be in accordance with MPI Repainting Manual requirements and shall be inspected by the Painting Association. The cost for such Painting Association inspections as well as either the Painting Association Guarantee or Maintenance Bond shall be included in the Base Bid Price.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product (Wood Substrates): Subject to compliance with requirements, provide Sherwin-Williams Company (The); products indicated or comparable product from one of the following:
 - 1. Benjamin Moore & Co.
 - 2. Dulux (formerly ICI Paints); a brand of AkzoNobel.
 - 3. PPG Architectural Coatings.
- B. Basis-of-Design Product (Steel Substrates): Subject to compliance with requirements, provide Tnemec Company, Inc.; products indicated or comparable product from one of the following:
 - 1. Sherwin-Williams Company (The);
- C. Comparable Products: Comparable products of approved manufacturers will be considered in accordance with Section 016000 "Product Requirements," and the following:
 - 1. Products are approved by manufacturer in writing for application specified.

2. Products meet performance and physical characteristics of basis of design product including published ratio of solids by volume, plus or minus two percent.

D. Source Limitations: Obtain paint materials from single source from single listed manufacturer.

1. Manufacturer's designations listed on a separate color schedule are for color reference only and do not indicate prior approval.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. VOC Content: For field applications, provide paints and coatings that complies with VOC content limits of authorities having jurisdiction.

C. Colors: As selected by Architect from manufacturer's full range.

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to inspect substates and preparation, and sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Where acceptability of substrate conditions is in question, apply samples and perform in-situ testing to verify compatibility, adhesion, and film integrity of new paint application.

1. Report, in writing, conditions that may affect application, appearance, or performance of paint.

B. Substrate Conditions:

1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

- a. Wood: 15 percent.
2. The degree of surface deterioration (DSD) shall be assessed using the assessment criteria indicated in the MPI Maintenance Repainting Manual. In general, the MPI DSD ratings and descriptions are as follows:
 - a. DSD-0: Sound Surface (may include visual (aesthetic) defects that do not affect film's protective properties).
 - b. DSD-1: Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.), minor cosmetic defects (runs, sags, etc.).
 - c. DSD-2: Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).
 - d. DSD-3: Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).
 - e. DSD-4: Substrate Damage (repair or replacement of surface required by others).
- C. Proceed with coating application only after unsatisfactory conditions have been corrected; application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Repainting Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
 1. SSPC-SP 3, "Power Tool Cleaning."
- E. Steel Substrates (Dome): Utilize caustic stripper to remove previous coatings using methods recommended in writing by paint manufacturer but not less than the following:
 1. SSPC-TU 6, "Chemical Stripping of Organic Coatings From Steel Structures."
- F. Wood Substrates:
 1. Prepare surfaces according to PDCA Standard P14, Level 3: Superior.
 - a. Pressure wash exterior surfaces prior to repainting in accordance with MPI standards for type of surfaces and recommended pressures to ensure complete removal of all loose paint, stains, dirt, and other foreign matter. This work shall be carried out only by qualified tradesman experienced in pressure water cleaning. The use of water hose cleaning will not be considered satisfactory, unless specifically specified. Allow sufficient drying time and test all surfaces using an electronic moisture meter before commencing work.
 - b. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
 - c. Sand surfaces that will be exposed to view, and dust off.

- d. Prime edges, ends, faces, and undersides of wood.
- e. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Repainting Manual" Custom Grade finish requirements.
 - 1. Apply paint using airless sprayers.
 - 2. Paint surfaces behind movable items same as similar exposed surfaces.
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- C. Sand and dust between each coat to provide an anchor for next coat and to remove defects (runs, sags, etc.) visible from a distance up to 1000 mm (39").
- D. Do not apply finishes on exterior surfaces that are not sufficiently dry. Unless manufacturer's directions state otherwise, each coat shall be sufficiently dry and hard before a following coat is applied.
- E. To avoid air entrapment in applied coats, apply materials in strict accordance with manufacturer's spread rates and application requirements.
- F. Provide containment for chemical strippers per Manufacturer's written instructions and SSPC Guide 6 (Class 2C) to prevent residue from impacting the immediate environment.
 - 1. Remove stripper residue per Manufacturer's written instructions.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
 - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.
- B. Repainted exterior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent:
 - 1. Brush / roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
 - 2. Evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
 - 3. Damage due to touching before paint is sufficiently dry or any other contributory cause.
 - 4. Damage due to application on moist surfaces or caused by inadequate protection from the weather.
 - 5. Damage and/or contamination of paint due to wind blown contaminants (dust, sand blast materials, salt spray, etc.).
- C. Repainted exterior surfaces shall be considered unacceptable if any of the following are evident under natural lighting conditions:
 - 1. Visible defects are evident on vertical surfaces when viewed at 90 degrees to the surface from a distance of 1000 mm (39").
 - 2. Visible defects are evident on horizontal surfaces when viewed at 45 degrees to the surface from a distance of 1000 mm (39").

3. Visible defects are evident on soffit and other overhead surfaces when viewed at 45 degrees to the surface
4. When the final coat on any surface exhibits a lack of uniformity of sheen across full surface area.

- D. Repainted surfaces rejected shall be made good at the expense of the Contractor. Small affected areas may be touched up; large affected areas shall be repainted. Runs, sags of damaged paint shall be removed by scraper or by sanding prior to application of paint.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

A. Wood Substrates:

1. Latex System:

- a. Prime Coat: Primer, latex for exterior wood.
 - 1) S-W 'Duration' Exterior Latex, K32-series, at 6.0 mils (0.153 mm) wet, 2.5 mils (0.064 mm) dry, per coat.
- b. Topcoat: Latex, exterior for wood.
 - 1) S-W 'Duration®' Exterior Latex, K32-series, at 6.0 mils (0.153 mm) wet, 2.5 mils (0.064 mm) dry, per coat.

B. Steel Substrates (Miscellaneous Metals):

1. Acrylic System:

- a. Prime Coat: Primer, acrylic for steel.
 - 1) S-W 'Pro Industrial™ Pro-Cryl®' Universal Primer, B66-1300 series, at 7.0 mils (0.178 mm) wet, 2.7 mils (0.069 mm) dry, per coat.
- b. Topcoat: Acrylic, exterior for wood.
 - 1) S-W 'Pro Industrial™' Exterior Acrylic, B66-650 series, at 6.0 mils (0.152 mm) wet, 2.2 mils (0.056 mm) dry, per coat.

C. Steel Substrates (Village Hall Dome):

1. Aliphatic Acrylic Polyurethane System:

- a. Prime Coat: Primer, zinc-rich.

- 1) Tnemec Hydro-Zinc, Series 94-H₂O, at 5.0 mils (0.125 mm) wet, 3 mils (0.075 mm) dry, per coat.
- b. Intermediate Coat: Aliphatic acrylic polyurethane.
 - 1) Tnemec Endura-Shield® II, 1075, at 3.5 mils (0.090 mm) wet, 2.5 mils (0.064 mm) dry, per coat.
- c. Topcoat: Latex, exterior for exterior wood.
 - 1) Tnemec Fluoronar® Metallic, Series 1078, at 4.5 mils (0.115 mm) wet, 2.5 mils (0.064 mm) dry, per coat.

END OF SECTION 099113

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