Project Manual

June 15, 2021

Façade Upgrade

Deer Brook Plaza

1225 Northeast Rice Road
Lee's Summit, MO 64086

Owner:

CP Deer Brook, LLC
c/o Colliers International
4520 Main St., Suite 1000
Kansas City, MO 64111

Architect

HMN Architects, Inc.
7400 W. 110th Street
Overland Park, KS 66210
(913) 451-9075

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Project Title Page

Project:	**Façade Upgrade** Deer Brook Plaza 1225 Northeast Rice Road Lee's Summit, MO 64086
Owner:	**CP Deer Brook, LLC c/o Colliers International** 4520 Main St., Suite 1000 Kansas City. MO 64111
Architect:	**HMN Architects, Inc.** 7400 West 110th Street, Ste 200 Overland Park, KS 66210 (913) 451-9075
Project Numbers:	**Architects Project No. 20007.20.001**
Issue:	**Construction Documents**
Date:	June 15, 2021

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SECTION 00 0105 – CERTIFICATION PAGE

ARCHITECTURAL

The documents intended to be authenticated by my seal are limited to:

Specifications: Divisions 00, 01, 02, 04, 05, 06, 07, 08 and 09

Drawing Sheets: G000, AD100, A101, A300, A301, A400

I hereby disclaim any responsibility for all other plans, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part of the project.

By: _____ 6-16-2021

HMN Architects, Inc.

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Facade Upgrade

Deer Brook Plaza

1225 Northeast Rice Road
Lee's Summit, MO 64086

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Division 05 – Metals

Division 06 - Wood, Plastics, and Composites

Division 07 - Thermal and Moisture Protection

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END OF SECTION - 00 0101

List of Drawing Sheets

General Construction Package

Facade Upgrade

Deer Brook Plaza

1225 Northeast Rice Road
Lee's Summit, MO 64086

Sheet Number	Sheet Title
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Architectural	
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A301	Exterior Elevations
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END OF SECTION 00 0115

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Invitation and Instructions to Bidders

Date of Invitation:	**June 15, 2021**
Project Title and Location:	**Façade Upgrade** Deer Brook Plaza 1225 Northeast Rice Road Lee's Summit, MO 64086
Project Owner:	**CP Deer Brook, LLC c/o Colliers International** 4520 Main St., Suite 1000 Kansas City. MO 64111
Architect:	**HMN Architects, Inc.** 7400 W. 110th Street, Suite 200 Overland Park, KS 66210 (913) 451-9075

1.1 INVITATION TO BID

A. The following General Contractors are invited to submit a **Stipulated Sum Bid Proposal** for the construction of the above referenced Project. The Bid Proposals are to be submitted on the forms furnished for that purpose by the Architect. Bid Proposals are to include all labor, insurance, permits, tools, equipment, materials, services, and incidentals necessary or required for the construction of the above Project as outlined by the Contract Documents.

1. ARC Contracting, (913) 492-8008
2. Complete Construction Service, (913) 387-4796
3. Jonkman Construction, (816) 221-4741
4. Kelly Construction, (816) 621-7600
5. WG Construction, (816) 556-1139

1.2 TIME AND PLACE TO DELIVER BIDS

A. Time to Deliver Bids: Bids will be received by the Owner and Architect until 3:00 p.m. (CDT) on Wednesday, July 7, 2021.

B. Place to Deliver Bids: Deliver Bid Proposals electronically to:
1. Colliers International, Attn: Jay Brooks at email address Jay.Brooks@Colliers.com
2. HMN Architects, Attn: Lon Wehr at email address lwehr@hmnarchitects.com.

Bids will be opened privately by the Owner and Architect on a date to be determined.

1.3 TYPE OF BID

A. **Stipulated Sum Bid Proposals** will be received for the Work, which includes site work general construction, heating, ventilating, air conditioning, plumbing, electrical and all related and miscellaneous work which will be awarded under a single contract.

1.4 PROCUREMENT OF DOCUMENTS

A. Contract Documents can be obtained through HMN Architects. Contract Documents will be distributed electronically in PDF file format only.

B. Printed sets may be obtained at the Bidder's expense (not refundable) for the actual cost of printing and handling.

1.5 PREBID CONFERENCE

A. A Prebid Conference will be held on Wednesday, June 23, 2021 at 10:30 a.m. (CDT) at Deer Brook Plaza. The Prebid Conference will be attended by representatives of the Owner and Architect. The meeting will be followed by a brief walk-through of the site. All interested Contractors, manufacturers and suppliers are encouraged to attend.

1.6 BID SECURITY

A. No Bid Bond is required.

1.7 EXAMINATION OF SITE AND DOCUMENTS

A. Each Bidder shall visit the Site of the proposed Work and become fully acquainted with conditions as they exist, so the Bidder may fully understand the facilities, difficulties, and restrictions related to the execution of the Work under contract.

B. Bidders shall also thoroughly examine and be familiar with the Drawings and Project Manual. Failure or omission of any Bidder to receive or examine any form, instrument, or document or to visit the Site and to become acquainted with existing conditions shall in no way relieve the Bidder from any obligation with respect to the Bidder's Bid Proposal.

1.8 INTERPRETATION OF DOCUMENTS

A. The Architect shall not be responsible for oral, telegraphic, or telephonic instructions or any other verbal explanations or interpretations of the Construction Documents.

B. Every request for such interpretation shall be made in writing to HMN Architects, Attn: Lon Wehr at email address lwehr@hmnarchitects.com. No inquiry received within 5 days of the date fixed for opening of the Bids will be given consideration.

C. Every interpretation made to a Bidder shall be in the form of an Addendum to the Contract Documents, which, if issued, shall be sent as promptly as is practical to all persons to whom Contract Documents have been issued. All such Addenda shall become part of the Contract Documents and must be acknowledged on the Bid Proposal Form as having been received and included as part of the Bid Proposal.

1.9 ALTERNATE MATERIALS, PRODUCTS AND EQUIPMENT

A. The materials, products and equipment described in the Bidding Documents establish a standard of required design, spare parts availability, strength, durability, usefulness, serviceability, operating cost, and convenience for purpose intended to be met by any proposed alternate or substitution.

1. Where two or more products or manufacturers are named with the stipulation, "...manufacturers offering products that may be incorporated in the work include the following:", provide a product from one of the listed manufacturers. An alternate product/manufacturer may be considered if procedures concerning "substitution" are followed. Allowing a substitution to be proposed does not indicate that any proposed substitution claiming equality is acceptable.

2. Request for bidding alternate materials, products and equipment **must** use the Section 00 4325 "Substitution Request Form." **Request submitted not using the required form will be returned not be considered.**

B. No request for alternate materials, products and equipment will be considered unless written request on the Submittal Request Form for approval has been received by the Architect at least seven calendar days prior to the date for receipt of Bids. Such request shall include the following items listed on the form:

1. Name of the material or equipment for which it is to be substituted.
2. A complete description of the proposed alternate material or equipment.
3. A detailed itemized comparison of physical and performance characteristics of the proposed alternate with the specified item, including drawings, performance, and test data (in identical units of weights and measure).
4. Other information necessary for an evaluation if requested by the Architect.
5. A statement setting forth changes in other materials, equipment, or other portions of the Work including changes in the work of other contracts that incorporation of the proposed alternate product would require should it be included.

C. Submit 1 copy of each request for an alternate product for consideration. The burden of proof of the merit of the proposed alternate is upon the proposer. The Architect will approve or disapprove the proposed alternate product and the Architect's decision will be final.

D. If the proposed product is approved prior to receipt of Bids, the Architect will set forth such approval in an Addendum. Bidders shall not rely upon approval made in any other manner.

1.10 RIGHT TO REJECT BID PROPOSALS

A. The Owner reserves the right to waive irregularities and to reject any or all Bid Proposals.

END OF SECTION 00 1116

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Proposal Form

Proposal to the Owner: **CP Deer Brook, LLC c/o Colliers International**
4520 Main St., Suite 1000
Kansas City. MO 64111

Proposal from: (Name of Bidder)
(Address of Bidder)

Project Title: **Façade Upgrade**
Deer Brook Plaza
1225 Northeast Rice Road
Lee's Summit, MO 64086

Date of Bid Proposal: **Date:** *July 7, 2021*

1.1 BID PROPOSAL AMOUNTS

A. The undersigned, in compliance with the "Invitation and Instructions to Bidders", proposes to perform the Work in accordance with Contract Documents prepared by HMN Architects, Inc. The undersigned, having examined the Contract Documents and related documents and the Site of the proposed Work and being familiar with all the conditions affecting the construction of the proposed Work, including the availability of materials and supplies, agrees to furnish all labor and materials, equipment and services necessary for the proper completion of the Work at the prices stated below, which stated sums include taxes, fees and all other charges applicable to materials, appliances, labor and all things subject to and upon which taxes or other charges may be levied.

B. In the Bid Proposal prices, the amounts shall be shown in both words and figures. In the case of discrepancy between the words and the figures, the words shall govern.

C. Bidder agrees to perform all of the Work necessary to complete the total project as described in the Project Manual and indicated on the Drawings for the sum of:

Base Bid:

_____Dollars $_____).

1.2 ALTERNATES

A. Alternate No. 1: Waterproofing and Restoration Coating System Over Existing Brick

ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.

_____ Dollars ($_____).

B. Alternate No. 2: Paint Existing Brick

ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.

_____ Dollars ($_____).

C. Alternate No. 3: Omit Painting East Elevation

ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.

_____ Dollars ($_____).

1.3 UNIT PRICES

A. Unit Price 1: Repair of Corroded Columns.

1. _____ Dollars ($_____) per column

B. Unit Price 2: Repair of Heavily Corroded Columns.

1. _____ Dollars ($_____) per column

C. Unit Price 3: Repair of Damaged Wood Framing.

1. _____ Dollars ($_____) per board foot

1.4 ADDENDA

A. The Bidder hereby acknowledges receipt of and inclusion in the Bid Proposal of the following issues of addenda, if any, distributed by the Architect.

Addendum No. 1, dated _____.
Addendum No. 2, dated _____.
Addendum No. 3, dated _____.

1.5 TIME OF COMMENCEMENT, COMPLETION AND DAMAGES

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date the City issues building permit, and shall fully complete the Work within:

_____ calendar days. (To be filled in by Bidder)

1.6 PROJECT SUPERINTENDENT

A. The undersigned Bidder agrees to use the following Project Superintendent:

Name: _____

Experience: Attach resume

1.7 GENERAL AGREEMENTS

A. The Bidder agrees to the following:

1. The Bidder has had an opportunity to examine the Site of the Work and has examined the Contract Documents.
2. The Bidder has carefully prepared the Bid Proposal upon the basis thereof and has carefully examined and checked the Bid Proposal and the materials, equipment and labor required there under, the cost thereof, and figures therefore, and hereby states that the amount or amounts set forth in the Bid Proposal is, or are, correct and that no mistake or error has occurred in the Bid Proposal or in the Bidder's computations upon which the Bid Proposal is based and the Bidder agrees that no claim for reformation, modification, rescission or correction of the Bid Proposal will be made after the scheduled closing time for the receipt of Bid Proposals.
3. The Bidder understands that the Owner reserves the right to reject any or all Bids and to waive any informalities in the bidding.
4. The Bidder agrees that this Bid shall not be withdrawn for period of 30 calendar days after the scheduled closing time for receiving Bids.
5. The Bidder understands that the Owner will not be liable for any amount in excess of the Stipulated Sum, except as expressly stated in written Change Orders duly executed and delivered by the Owner.
6. In preparing the Bid Proposal, the Bidder has verified and is reasonably assured of the availability of all labor, materials and products in this document.

1.8 CIVIL RIGHTS

A. Signing the Bid Proposal is certification that the Bidder, in compliance with the "Equal Opportunity" provisions of the Supplementary Conditions, does not or will not discriminate against any employee on the basis of race, religion, color, sex, national origin or age (per The Age Discrimination in Employment Act of 1967). The Bidder further certifies that the Bidder does not maintain or provide for employee facilities which are segregated on any of the above categories.

Dated this _____ day of _____, 2021

_____

(Name of Firm)

_____

(Street Address)

_____

(City, State, Zip)

_____

(Signed by and Title)

Please check as appropriate:

[ ] An individual

[ ] A partnership between:

*

*

[ ] A corporation organized under the laws of the

State of _____

END OF SECTION 00 4200

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Substitution Request Form

Submit One Item Per Form
Fill in All Blanks

Submitted To: **HMN Architects, Inc.**

Project Title: **Façade Upgrade**
Deer Brook Plaza

Specified Item: Description:

Section:
Page:
Line/ Paragraph:

Proposed Substitution: Description:

The undersigned request consideration of the following as a substitute product/ construction method:

1.1 SUBSTITUTION DOCUMENTATION

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

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

C. The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. The proposed substitution does not affect dimensions shown on drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing, and construction costs caused by the requested substitutions.
3. The undersigned will waive claims for additional costs which may subsequently become apparent.
4. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
5. Maintenance and service parts will be locally available for the proposed substitution.
6. Net reduction in Contract Amount: $_____.

7. Improvement in Delivery Schedule: _____ (days/weeks)

D. It is also stated the undersigned has investigated the proposed substitution and the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item/construction procedure.

Submitted by:	**For Architect's Use**:
Signature: _____	_____ Rejected
Firm: _____	_____ Accepted
Address: _____	_____ Accepted as Noted
_____	_____ Received Too Late
Date: _____	By: _____
Telephone: _____	Date: _____
	Remarks: _____

1.2 ATTACHMENTS

END OF SECTION 00 4325

SECTION 00 4327 - **ELECTRONIC DRAWING FILES**

PART 1 - GENERAL

1.1 DESCRIPTION

A. Electronic files shall be transmitted by the Architect, at the Contractor's Request.

1. In the Revit 2019 format.
2. In the AutoCAD 2021 format.

B. For the purposes of this project, printed, signed and sealed hard copy documents are the actual contract deliverable.
1. The use of these electronic files shall not in any way reduce the responsibility of the Contractor to verify dimensions, gauges, quantities, weights, construction means and methods, fabrication processes, coordination of the work with other trades and construction safety precautions.
2. Electronic drawing files are transmitted with the understanding and full acknowledgment that the Architect shall be held harmless for the accuracy, unauthorized re-use of the electronic files and unauthorized changes made by the user. Architect will furnish the Contractor electronic files of this project package (Architectural only).

C. Fees:
1. A service fee of $200.00 (two hundred dollars) per sheet for AutoCAD documents.

a. The approved fee shall be remitted to HMN Architects, Inc. prior to delivery of the electronic files.
b. The providing of this service is based upon receipt of requested electronic information to be provided by the RECIPIENT.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 RELEASE OF LIABILITY

A. The attached "Agreement for Transfer of Information in Machine Readable Form" shall be fully executed and returned along with the approved fee prior to the Architect's Release of the Electronic File.

B. Electronic files shall be for the sole use of the Contractor that pays the required fee and whose signature is on the "Agreement for Transfer of Information Form".

1. Use by any other contractor or subcontractor is prohibited.
2. Use of electronic files for any purpose other than preparation of shop drawings for this project is prohibited.

END OF SECTION 00 4327

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DOCUMENT 00 5213 – AGREEMENT FORM

1.1 AGREEMENT FORM

A. AIA Document A101, "Standard Form of Agreement Between Owner and Contractor," is hereby incorporated into the Procurement and Contracting Requirements by reference.

1. A copy of AIA Document A101, "Standard Form of Agreement Between Owner and Contractor," is bound in this Project Manual.

END OF DOCUMENT 00 5213

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AIA® Document A101™ – 2007

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)

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

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

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

The Owner and Contractor agree as follows.

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

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

AIA Document A201™–2007, 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.

TABLE OF ARTICLES

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 the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.
(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

The commencement date will be fixed in a notice to proceed.

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

N/A

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

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:
(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)

Portion of Work	Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.
(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

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

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

Item	Units and Limitations	Price Per Unit ($0.00)

§ 4.4 Allowances included in the Contract Sum, if any:
(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price

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. Application for payment shall be submitted on AIA Documents G702 and G703 and shall include alll supporting documentation.

§ 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 last day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the last day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than 30 (calendar) 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, unless objected to by the Architect, 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 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of ten percent (10 %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™–2007, General Conditions of the Contract for Construction;

.2 Add 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), less retainage of ten percent (10 %);

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201–2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and
(Section 9.8.5 of AIA Document A201–2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)

.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:
(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

N/A

§ 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 Section 12.2.2 of AIA Document A201–2007, 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 60 days after the issuance of the Architect's final Certificate for Payment, or as follows:

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as 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.)

§ 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:
(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, 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.)

[ ] Arbitration pursuant to Section 15.4 of AIA Document A201–2007

[X] Litigation in a court of competent jurisdiction

[ ] Other *(Specify)*

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 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.)

%

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

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

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

§ 8.6 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

§ 9.1.4 The Specifications:
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

Section	Title	Date	Pages

§ 9.1.5 The Drawings:
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

Number	Title	Date

§ 9.1.6 The Addenda, if any:

Number	Date	Pages

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

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007.
(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007.)

Type of insurance or bond	Limit of liability or bond amount ($0.00)

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

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
(Printed name and title)	*(Printed name and title)*

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AGREEMENT FOR TRANSFER OF INFORMATION
IN MACHINE READABLE FORM

PROJECT NAME: _____
_____
_____

Made this _____ day of _____, 20___

By and Between HMN Architects, Inc., Overland Park, KS (hereinafter referred to as ARCHITECT), and _____(hereinafter referred to as RECIPIENT).

The enclosed CAD electronic media are provided pursuant to your request for the purpose of:
Production of shop drawings

RECIPIENT agrees that in using it, modifying it, or accessing information from it, you are responsible for confirmation, accuracy, and checking of the data from the media. ARCHITECT hereby disclaims any and all responsibility from any results obtained in use of this CAD electronic media and does not guarantee any accuracy of the information. These CAD electronic files are not construction documents. Differences may exist between these CAD electronic flies and corresponding PDF file construction documents. ARCHITECT makes no representation regarding the accuracy or completeness of the CAD electronic files RECIPIENT receives. In the event that a conflict arises between the PDF file construction documents prepared by ARCHITECT and the CAD electronic files, the PDF file construction documents shall govern. RECIPIENT is responsible for determining if any conflict exists. By RECIPIENT'S use of these CAD electronic files, RECIPIENT is not relieved of RECIPIENT'S duty to fully comply with the contract documents, including, and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate work with that of other contractors for the project.

RECIPIENT agrees that it shall not use the information provided by ARCHITECT for any purpose other than that described above without the express written consent of ARCHITECT. RECIPIENT also hereby acknowledges that the data delivered by ARCHITECT is for use by RECIPIENT only and is not to be released to any other party without the written consent of the ARCHITECT.

ARCHITECT'S CAD electronic files are compatible with AutoCAD 2021 format. ARCHITECT makes no representation as to the compatibility of these files with RECIPIENT'S hardware or software. RECIPIENT understands that the automated conversion of information and data from the system and format used by ARCHITECT to an alternate system or format cannot be accomplished without the possibility of introduction of inexactitudes, anomalies, and errors. In the event project documentation provided to RECIPIENT in machine readable form is so converted, RECIPIENT agrees to assume all risk associated therewith, and to the fullest extent permitted by law, to hold harmless and indemnify ARCHITECT from and against all claims, liabilities, losses, damages, and costs, including but not limited to attorney's fees, arising there from or in connection therewith.

RECIPIENT recognizes that changes or modifications to ARCHITECT'S instruments of professional service introduced by anyone other than ARCHITECT may result in adverse consequences which ARCHITECT can neither predict nor control. Therefore, and in consideration of ARCHITECT'S agreement to deliver its instruments of professional service in machine readable form, RECIPIENT agrees, to the fullest extent permitted by laws to hold harmless and indemnify ARCHITECT from and against all claim, liabilities, losses, damages, and costs, including, but not limited to attorney's fee**,** arising out of or in any way connected with the modification, misrepresentation, misuse, or reuse by others of the machine readable information and data provided by ARCHITECT under this Agreement. The foregoing indemnification applies, without limitation, to any use of the project's documentation on other projects, for additions to this project, or for completion of this project by others, excepting only such use as may be authorized in writing by ARCHITECT.

ARCHITECT shall furnish RECIPIENT CAD electronic files of the **Deer Brook Plaza Façade Upgrade** project (Architectural only).

A service fee of $200.00 (two hundred dollars) shall be remitted to ARCHITECT prior to delivery of the CAD electronic files. The providing of this service is based upon receipt of requested CAD electronic information to be provided by the RECIPIENT.

Under no circumstances shall delivery of the CAD electronic files for use by RECIPIENT be deemed a sale by ARCHITECT, and ARCHITECT makes no warranties, either express or implied, of merchantability and fitness for any particular purpose. In no event shall ARCHITECT be liable for any loss of profit or any consequential damages as a result of RECIPIENT'S use or reuse of these CAD electronic files.

Signature _____	Signature _____
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
HMN Architects, Inc.	Company Name: _____
Date: _____	Date: _____

AGREEMENT FOR TRANSFER OF INFORMATION
IN MACHINE READABLE FORM

PROJECT NAME: _____
_____
_____

Made this _____ day of _____, 20___

By and Between HMN Architects, Inc., Overland Park, KS (hereinafter referred to as ARCHITECT), and _____(hereinafter referred to as RECIPIENT).

The enclosed REVIT electronic media are provided pursuant to your request for the purpose of:
Production of shop drawings
_____

RECIPIENT agrees that in using it, modifying it, or accessing information from it, you are responsible for confirmation, accuracy, and checking of the data from the media. ARCHITECT hereby disclaims any and all responsibility from any results obtained in use of this REVIT electronic media and does not guarantee any accuracy of the information. These REVIT electronic files are not construction documents. Differences may exist between these REVIT electronic flies and corresponding PDF file construction documents. ARCHITECT makes no representation regarding the accuracy or completeness of the REVIT electronic files RECIPIENT receives. In the event that a conflict arises between the PDF file construction documents prepared by ARCHITECT and the REVIT electronic files, the PDF file construction documents shall govern. RECIPIENT is responsible for determining if any conflict exists. By RECIPIENT'S use of these REVIT electronic files, RECIPIENT is not relieved of RECIPIENT'S duty to fully comply with the contract documents, including, and without limitation, the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions and coordinate work with that of other contractors for the project.

RECIPIENT agrees that it shall not use the information provided by ARCHITECT for any purpose other than that described above without the express written consent of ARCHITECT. RECIPIENT also hereby acknowledges that the data delivered by ARCHITECT is for use by RECIPIENT only, and is not to be released to any other party without the written consent of the ARCHITECT.

ARCHITECT'S REVIT electronic files are compatible with REVIT 2019 format. ARCHITECT makes no representation as to the compatibility of these files with RECIPIENT'S hardware or software. RECIPIENT understands that the automated conversion of information and data from the system and format used by ARCHITECT to an alternate system or format cannot be accomplished without the possibility of introduction of inexactitudes, anomalies, and errors. In the event project documentation provided to RECIPIENT in machine readable form is so converted, RECIPIENT agrees to assume all risk associated therewith, and to the fullest extent permitted by law, to hold harmless and indemnify ARCHITECT from and against all claims, liabilities, losses, damages, and costs, including but not limited to attorney's fees, arising there from or in connection therewith.

RECIPIENT recognizes that changes or modifications to ARCHITECT'S instruments of professional service introduced by anyone other than ARCHITECT may result in adverse consequences which ARCHITECT can neither predict nor control. Therefore, and in consideration of ARCHITECT'S agreement to deliver its instruments of professional service in machine readable form, RECIPIENT agrees, to the fullest extent permitted by laws to hold harmless and indemnify ARCHITECT from and against all claim, liabilities, losses, damages, and costs, including, but not limited to attorney's fee**,** arising out of or in any way connected with the modification, misrepresentation, misuse, or reuse by others of the machine readable information and data provided by ARCHITECT under this Agreement. The foregoing indemnification applies, without limitation, to any use of the project's documentation on other project, for additions to this project, or for completion of this project by others, excepting only such use as may be authorized in writing by ARCHITECT.

ARCHITECT shall furnish RECIPIENT electronic files of the **Deer Brook Plaza Façade Upgrade** project (Architectural only). This transfer of electronic files is provided one time only. No subsequent revisions to the REVIT model made by the Architect will be provided to RECIPIENT.

The transfer of REVIT files is not permitted without formal approval by Architect. The providing of this service is based upon agreement of RECIPIENT to provide Architect with any electronic data produced by RECIPIENT using the REVIT model including, but not limited, to cost estimating, shop drawings and record drawings.

Under no circumstances shall delivery of the electronic files for use by RECIPIENT be deemed a sale by ARCHITECT, and ARCHITECT makes no warranties, either express or implied, of merchantability and fitness for any particular purpose. In no event shall ARCHITECT be liable for any loss of profit or any consequential damages as a result of RECIPIENT'S use or reuse of these electronic files.

Signature _____	Signature _____
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
HMN Architects, Inc.	Company Name: _____
Date: _____	Date: _____

General Conditions

General Construction Package

Facade Upgrade

Deer Brook Plaza

1225 Northeast Rice Road
Lee's Summit, MO 64086

AIA A201 General Conditions of the Contract for Construction

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AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)
Façade Upgrade
Deer Brook Plaza
1225 Northeast Rice Road
Lee's Summit, MO 64086

THE OWNER:
(Name, legal status and address)
CP Deer Brook, LLC c/o Colliers International
4520 Main St., Suite 1000
Kansas City. MO 64111

THE ARCHITECT:
(Name, legal status and address)
HMN Architects, Inc.
7400 W. 110th St., Suite 200
Overland Park, KS 66210

TABLE OF ARTICLES

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

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

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INDEX
(Topics and numbers in bold are section headings.)

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

1.1.6.1 Sections of Division 01 – General Requirements, govern the execution of all sections of the specifications.

1.1.6.2 Furnish, Install and Provide: Furnish means to supply and deliver to project site, ready for installation. Install means to place in position for service or use. Provide means furnish and install, complete and ready for use.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

1.2.1.1 In the event of conflicting provisions among the Contract Documents that were not called to the Owner's or Architect's attention prior to award of Contract, the Architect shall decide which of the conflicting requirements shall govern, generally taking as a guideline the more stringent requirement, the more expensive material, or the greater quantity of Work, unless, in the opinion of the Architect, another requirement is more appropriate. The Architect's decision shall be final in such case and the Architect's decision shall not be further reviewable by arbitration or litigation.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

1.5.3 CONTRACTOR'S USE OF INSTRUMENTS OF SERVICE IN ELECTRONIC FORM

1.5.3.1 The Architect may, with the concurrence of the Owner, furnish to the Contractor versions of Instruments of Service in electronic form. The signed and sealed Contract Documents shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers.

1.5.3.2 The Contractor shall not transfer or reuse Instruments of Service in electronic or machine readable form without prior written consent of the Architect.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site.

2.2.3.1 Information shown on the Drawings as to the locations of existing utilities has been prepared from the most reliable data available to the Architect. The Owner and the Architect do not guarantee this information and it shall be the Contractor's responsibility to decide the location, character and depth of existing utilities. The Contractor shall assist the utilities companies, by every means possible to decide said locations and the locations of recent additions to the system not shown.

2.2.3.2 The Contractor shall, after Notice to Proceed and prior to date of mobilization, review data furnished by the Owner pursuant to this paragraph, verify and confirm the accuracy of information so furnished. In case of any inaccuracies, the contractor shall promptly notify the Owner, who shall correct any such inaccuracy. Failure to notify the Owner within 21 days shall act to bar any claims by the contractor arising from the inaccuracy of any such information.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations withrequirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. The accuracy of grades, elevations, dimensions or locations of existing conditions is not guaranteed by the Architect or the Owner and the Contractor is responsible of verifying same. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if

the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

3.2.5 Should any works or numbers that are necessary to a clear understanding of the work be illegible or omitted, or should an error or discrepancy occur in any of the Contract Documents, the contractor shall immediately notify the Architect of such omission, error or discrepancy and the Contractor shall not continue with that portion of the Work until clarification is received. If the Contractor continues without so notifying the Architect, the Contractor shall be responsible for the cost of correcting same, including any resulting damage.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor, Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors and for any damages, losses, costs and expenses, such as, reasonable attorney's fees, resulting from such acts and omissions.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

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

3.4.4 After the Contract has been executed, the Owner and the Architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).

3.4.5 By making requests for substitutions based on Subparagraph 3.4.2 above, the Contractor:

.1 represents that the contractor has personally investigated the proposed substitute product and decided that it is equal or superior in all respects to that specified.

.2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;

.3 certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs and waives all claims for additional costs related to the substitution that subsequently become apparent;

.4 will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

§ 3.5 WARRANTY

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

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

3.7.2.1 If the Contractor fails to give such notices, it shall be liable for and shall indemnify and hold harmless the Owner and the Architect and their respective employees, officers and agents, against any resulting fines, penalties, judgments or damages, including reasonable attorneys' fees, imposed on or incurred by the parties indemnified hereunder.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- **.1** Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. . Prior to contract award, the Contractor shall submit written qualifications of the Superintendent and Project Manager to the Owner for approval. The Superintendent and Project Manager shall have recent experience in similar types of construction. The Superintendent and Project Manager shall be satisfactory to the Owner and shall not be changed except with the prior written consent of the Owner. If the Superintendent or Project Manager is changed with the Owner's approval or ceases to be in the Contractor's employ, the same qualification criteria shall apply to replacement personnel.
§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The Owner's or Architect's silence as to a submitted schedule that exceeds time limits current under the Contract Documents shall not relieve the Contractor of his (or her) obligation to meet those time limits. The Owner's or Architect's silence shall not make the Owner or Architect liable for any Contractor damages incurred because of increased construction time or not meeting those time limits. Similarly, the Owner's or Architect's silence as to a Contractor's schedule showing performance ahead of such time limits shall not create or infer any rights in favor of the Contractor for performance ahead of such time limits.
§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval.

The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect, prior to final payment request, for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

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

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or

manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

3.18.3 The Contractor will hold harmless the Owner, the Architect, Architect's Consultants and their agents and employees from all liability, loss or expense, including but not limited to, reasonable attorney fees arising out of claims by subcontractors or suppliers of any material or equipment for installation or incorporation in the Work, including any items especially designed or fabricated for the Work or for tools or equipment rented or leased for the Work.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract

Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

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

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.7.1 The Contractor shall not submit any shop drawing that is merely a tracing or other copy of any of the Contract Documents. Each shop drawing shall be prepared by the Contractor, or a subcontractor or supplier of the Contractor. The Architect shall have the authority to reject any shop drawing that violates this provision and no extension of the Contract Time or additional compensation shall be given because of such rejection.
§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, after bid and before execution of the Owner-Contractor Agreement, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

5.2.1.1 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

5.2.1.2 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected subcontractor, manufacturer or fabricator was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute subcontractor, manufacturer's or fabricator's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

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

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

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

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

7.1.4 The overhead and profit charged by the Contractor shall be considered to include, but not limited to, performance bond, builder's risk and public liability insurance, job site office expense, incidental job supervision, field supervision, company benefits, general office overhead, and cost associated with the preparation of design documents, layout drawings, or shop drawings. The combined overhead and profit included in the total cost to the Owner of a change in the Work shall be negotiated and may vary according to the nature, extent, and complexity of the Work involved but in no case shall exceed the following schedule:

.1 For the Contractor, for Work done by the Contractor's own forces, 10 percent of the cost.

.2 For the Contractor, for Work done by the Contractor's Subcontractor, 5 percent of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-subcontractor involved, for Work done by that Subcontractor's or Sub-subcontractor's own forces, 10 percent of the cost.

.4 For each Subcontractor, for Work done by the Subcontractor's Sub-subcontractors, 5 percent of the amount due the Sub-subcontractor.

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.7.

.6 When both additions and credits are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net increase, if any.

.7 In order to simplify checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of cost including labor, materials and Subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also. Never will a change involving more than $500.00 be approved without such itemization.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

.1 The change in the Work;

.2 The amount of the adjustment, if any, in the Contract Sum; and

.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 Unit prices stated in the Contract Documents or subsequently agreed upon;

.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any,

provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

.1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

.2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and

.5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

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

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not , except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by a wrongful act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation ; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

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

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents. The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet or other documents approved by Owner and Architect.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

9.3.1.3 Until Substantial Completion, the Owner shall pay 90 percent of the amount due the Contractor because of progress payments.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

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

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a separate contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or

.7 failure to carry out the Work in accordance with the Contract Documents.

.8 rejection of the Work or any of the Work by any governmental authority having jurisdiction over the Project, or by the Owner's lender.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

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

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

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

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will

constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- **.1** liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents; or
- **.3** terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

10.1.1 Contractor shall comply with requirements of Interim Life Safety Measures (ILSM) temporarily to compensate for hazards posed by existing Life Safety Code deficiencies and construction activities.

- **.1** Ensure exits provide free and unobstructed egress. Train personnel if alternative exits are designated.
- **.2** Ensure free and unobstructed access to emergency department/services and for emergency services.
- **.3** Ensure fire alarm, detection and suppression systems are not impaired. Provide temporary, but equivalent systems when fire alarm systems are impaired. Inspect and test temporary systems monthly.
- **.4** Ensure temporary construction partitions are smoke tight and built of noncombustible materials.
- **.5** Provide additional firefighting equipment and train personnel to use the equipment.
- **.6** Prohibit smoking in or next to construction area.
- **.7** Develop and enforce storage, housekeeping and debris removal policies and procedures that reduce flammable and combustible fire load to lowest level necessary for daily operations.
- **.8** Conduct a minimum of two fire drills per shift per quarter.
- **.9** Perform hazard surveillance of buildings, grounds and equipment with special attention to excavations.
- **.10** Maintain a 1-hour fire rated barrier with 20 minute rated openings between major construction areas and areas of the building occupied by the Owner.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

.1 employees on the Work and other persons who may be affected thereby;

.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

10.2.9 A decision by the Owner to supplement or duplicate the security measures otherwise required to be done or provided by the Contractor according to these Contract Documents shall not in any way relieve the Contractor of its responsibility to safeguard and secure all Work and the Work Area or impose any liability or responsibility on the Owner for damages or loss because of trespass or theft.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed including private entities performing Work at the site and exempt from the coverage because of number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverage for the duration of the Project;

.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees or persons or entities excluded by statute from the requirements of Clause 11.1.1.1 but required by the Contract Documents to provide the insurance required by that Clause;

.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

.4 Claims for damages insured by usual personal injury liability coverage;

.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

.6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;

.7 Claims for bodily injury or property damage arising out of completed operations; and

.8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

.9 Liability Insurance shall include all major divisions of coverage and be on a comprehensive basis including:

1. Premises Operations (including X,C and U coverages as applicable).
2. Independent Contractor's Protective
3. Products and Completed Operations
4. Personal Injury Liability with Employment Exclusion deleted.
5. Contractual, including specified provision for contractor's obligation under Paragraph 3.18.
6. Owned, not-owned and hired motor vehicles.
7. Broad Form property Damage including Completed Operations.

.10 If the General Liability coverages are provided by a Commercial General Liability Policy on a claims-made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment certified following Subparagraph 9.10.2.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be written for not less than the following limits, or greater if required by law:

Workers' Compensation:

(1) State: Statutory
(2) Applicable Federal: Statutory
(3) Employer's Liability:
$100,000.00 per Accident
$1,000,000.00 Disease, policy Limit
$1,000,000.00 Disease, Each Employee

Comprehensive or commercial General Liability (including Premises-Operations; Independent contractors' Protective; Products and Completed Operations; Broad Form Property Damage):

(1) Bodily Injury:
$1,000,000.00 Each Occurrence
$2,000,000.00 Aggregate
(2) Property Damage:
$1,000,000.00 Each Occurrence
$2,000,000.00 Aggregate
(3) Products and Completed Operations to be maintained for 2 years after final payment:
$2,000,000.00 Aggregate
(4) Property Damage Liability Insurance shall provide S, C and U coverage.
(5) Broad Form property Damage Coverage shall include completed Operations.

Contractual Liability

(1) Bodily Injury:

$1,000,000.00 Each Occurrence
$2,000,000.00 Aggregate

(2) Property Damage:
$1,000,000.00 Each Occurrence
$2,000,000.00 Aggregate

Personal Injury, with Employment Exclusion deleted:
$2,000,000.00 Aggregate

Business Auto Liability (including owned, non-owned and hired vehicles):

(1) Bodily Injury:
$1,000,000.00 Each Occurrence
$2,000,000.00 Aggregate

(2) Property Damage:
$1,000,000.00 Each Occurrence

If the General Liability coverages are provided by a Commercial Liability policy, the:

(1) General Aggregate shall be not less than $2,000.000.00 and it shall apply, in total, to this Project only.
(2) Fire Damage Limit shall be not less than $5,000.00 on any one Fire.
(3) Medical Expense Limit shall be not less than $5,000.00 on any one person.

Umbrella Excess liability:
$1,000,000.00 over primary insurance
$2,000,000.00 retention for self-insured hazards each occurrence

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

.1 If this insurance is written on the comprehensive General Liability policy form, the Certificates shall be AIA Document G705, Certificate of Insurance.
.2 If this insurance is written on a Commercial General Liability policy form, ACORD form 25S will be acceptable.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. The form of policy for the coverage shall be Complete Value.

(Paragraph deleted)

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants,

separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Contractor shall furnish bonds on AIA Document A312, covering faithful performance of the contract and payment of obligations arising by that. Bonds may be obtained through the Contractor's usual source and the cost of it shall be included in the Contract Sum. The amount of each bond shall be equal to 100 percent of the Contract Sum.

14.4.1.1 The Contractor shall deliver the required bonds to the Owner by three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall before the commencement of the Work, submit evidence of bonding capacity and current bonding obligations as necessary for the satisfaction of the Owner that such bonds will be furnished,.

14.4.1.2 The Contractor shall require the attorney-in-fact who executes the required bonds for the surety to affix thereto a certified and current copy of the power of attorney.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

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

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

13.8 EQUAL OPPORTUNITY

13.8.1 The Contractor shall maintain policies of employment as follows:

13.8.1.1 The Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- **.3** Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- **.1** repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;

.3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or

.4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; and

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question

between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Such notice shall include, to the extent then known by Contractor, full details and substantiating data to permit evaluation by the Owner and the Architect. If further, or other information subsequently becomes known to the Contractor, it shall be promptly furnished to the Owner and the Architect in writing. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4. Failure to file any such Claim in accordance with this Paragraph 15.1 shall constitute a waiver thereof.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

15.1.5.1.1 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting document as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the claim.

15.1.5.1.2 the Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing,

delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

15.3.4 The Owner and the Contractor agree to include a similar mediation provision in all agreements with independent Contractors and consultants retained for the Project. The Owner and the Contractor further agree to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractor, subconsultants, suppliers or fabricators so retained. This provision by that makes mediation the primary method of dispute resolution between the parties to those agreements.

(Paragraphs deleted)

SECTION 01 1000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under separate contracts.
5. Access to site.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and drawing conventions.
9. Miscellaneous provisions.

1.2 PROJECT INFORMATION

A. Project Identification: Facade Upgrade

1. Project Location: Deer Brook Plaza, 1225 Northeast Rice Road, Lee's Summit, MO 64086

B. Owner: CP Deer Brook, LLC c/o Colliers International, 4520 Main St., Suite 1000, Kansas City. MO 64111

C. Architect: HMN Architects, Inc., 7400 W. 110th Street, Overland Park, Kansas 66210, (913) 451-9075.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The work is generally described as Façade Upgrade is a renovation of the existing Deer Brook Plaza. The Work of this project will include the following:

a. General Construction
b. Electrical
c. Demolition

1.4 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations to area within the Contract limits indicated.
2. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner and Tenant 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 COORDINATION WITH OCCUPANTS

A. Full Owner and/or Tenant Occupancy: Owner and/or Tenant will occupy site and existing building(s) during entire construction period. Cooperate with Owner and Tenants during construction operations to minimize conflicts and facilitate Owner and Tenant usage. Perform the Work so as not to interfere with Owner's and Tenant's day-to-day operations. Maintain existing entrances and exits unless otherwise indicated.

1. Maintain access to existing walkways, and other adjacent occupied or used facilities. Do not close or obstruct walkways, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's and/or Tenant'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 7:00 a.m. to 3:30 p.m., Monday through Friday, unless otherwise indicated or necessary to maintain existing entrances and exits. Provide premium time work when necessary to maintain existing entrances and exits during Owner's and/or Tenant's normal business hours.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner, Tenants 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 and/or Tenant 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 on Project site is not permitted.

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 scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 1000

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SECTION 01 2200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Requirements:

1. Section 01 2600 "Contract Modification Procedures".

1.3 DEFINITIONS

A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price 1: Repair of Corroded Columns
   1. Shore existing framing that the column is supporting.
   2. After the framing is shored, remove concrete by chipping it away to expose the non-corroded portion of the column below to ensure that all corroded steel is removed.
   3. All corroded steel shall be wire brushed down to white metal.
   4. Remaining steel shall be painted with a cold galvanizing paint.
   5. If after all corroded steel is removed, more than 1/16" of steel has been lost to corrosion, repair shall be required as described under Unit Price 2 - Repair of Heavily Corroded Columns.

B. Unit Price 2: Repair of Heavily Corroded Columns
   After all corroded steel is removed, repair required for columns that have more than 1/16" of steel lost to corrosion:
   1. Shore existing framing that the column is supporting.
   2. After the framing is shored, remove concrete by chipping it away to expose the existing column base plate.
   3. All corroded steel shall be wire brushed down to white metal.
   4. A 12" tall x ½" thick x 7" long plate shall be welded to both sides of the column web. The weld shall be a ¼" fillet weld and shall run 7" along the top of the plate and down 4" on both sides. The plates shall also be welded to the existing column base plate with 7" of ¼" fillet weld. If the existing weld between the column web and the base plate interferes with a flush placement of the new plate, the existing weld shall be ground smooth.
   5. After the plates are added, all steel shall be painted with a cold galvanizing paint.

C. Unit Price 3: Repair of Damaged Wood Framing
   1. Remove existing wood framing that is damaged by rot. Replace with new treated wood framing of the same dimensions.

END OF SECTION

:SECTION 01 2300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Waterproofing and Restoration Coating System Over Existing Brick
   1. Base Bid: Replace existing brick veneer located adjacent to the aluminum storefront system (Storefront Elevation) with thin stone veneer as drawn.
   2. Alternate: Existing brick veneer located adjacent to the aluminum storefront system (Storefront Elevation) to remain. Provide new Waterproofing and Restoration Coating system over the existing brick.

B. Alternate No. 2: Paint Existing Brick
   1. Base Bid: Replace existing brick veneer located adjacent to the aluminum storefront system (Storefront Elevation) with thin stone veneer as drawn.
   2. Alternate: Existing brick veneer located adjacent to the aluminum storefront system (Storefront Elevation) to remain. Paint brick color as selected by Architect.

C. Alternate No. 3: Omit Painting East Elevation
   1. Base Bid: Paint the entire east elevation of the buildings as drawn.
   2. Alternate: Omit painting the east elevation of the buildings.

END OF SECTION 01 2300

SECTION 01 2500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Section 01 6000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.2 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 ACTION 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 Project Manual Section 00 4325.
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 revisions 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. Research reports evidencing compliance with building code in effect for Project, from ICC-ES .
j. 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.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. 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.
m. 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 within seven days of 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.

1.4 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.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Requested substitution will not adversely affect Contractor's construction schedule.
c. Requested substitution has received necessary approvals of authorities having jurisdiction.
d. Requested substitution is compatible with other portions of the Work.
e. Requested substitution has been coordinated with other portions of the Work.

f. Requested substitution provides specified warranty.

B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after commencement of the Work .

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied:

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. Requested substitution will not adversely affect Contractor's construction schedule.
e. Requested substitution has received necessary approvals of authorities having jurisdiction.
f. Requested substitution is compatible with other portions of the Work.
g. Requested substitution has been coordinated with other portions of the Work.
h. Requested substitution provides specified warranty.
i. 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.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 2500

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SECTION 01 2600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.2 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."

1.3 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 or 20 days, when not otherwise specified 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 CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."

3. Where unit prices are not required by the bid documents and value of changes or extra work is determined by estimate and acceptance in a lump sum, by cost and percentages, or by cost and a fixed fee, the percentages for overhead and profit, or commission to be allowed for net increases shall in no case exceed the following:

a. Profit & Overhead

1) To Contractor for work performed by his own forces. 10%
2) To Contractor for work performed by other than his own forces. 5%
3) To Subcontractor for work performed by his own forces. 10%
4) To Subcontractor for work performed by other than his own forces. 5%

b. Percentages for overhead and profit will not be allowed on bond premiums.

4. Percentage charge shall include all indirect costs, overhead and profit, and shall be applied to the direct cost of work. Direct cost shall include all items of labor or materials, prorate charges for foremen, and social security, old age and unemployment insurance. Items considered as overhead or indirect costs include insurances other than mentioned above, use of equipment, superintendent, project management, timekeeper, clerks, watchman, use of small tools, incidental job burdens, and general office expenses.
5. Use of equipment, unless Contractor is paying for the equipment on an hourly use or per diem basis, and then only to be charged at cost on a prorate basis, and workmen's compensation insurance, bond expense.
6. Estimates for material shall be based on reasonable current market value at which materials are available to the Contractor and Subcontractor. Upon request, submit satisfactory evidence of such costs.
7. Work on proposed changes shall not be started until the estimate of proposed changes has been approved in writing by the Owner.
8. The Contractor shall maintain an accurate account of labor and material involved in each change. Such time and material records are subject of verification. Notify Architect when work on each change is to start and when it has been completed. To receive full recognition, labor assigned to Contract changes must, insofar as possible, work continuously on the change, rather than interchanging between contract work and the change.
9. In order that proposed changes in work, if they should occur, can be processed without undue delay, indicate in each separate proposal requesting a change in the Contract supporting information in detailed breakdown form, including the exact location of the change requested, the reason for the change, and the square feet, square yards, cubic yards, linear measure or any other unit of measure applicable to the work involved, together with the unit cost of labor by trades and materials. Labor unit costs shall include associated insurance. Other types of protection are assumed to be covered by overall job insurance with no additional charges assigned to unit costs.

B. Contractor-Initiated Work Change 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 01 2500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Work Change Proposal Request Form: Use form acceptable to Architect.

1.4 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.

1.5 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 2600

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SECTION 01 2900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Requirements:

1. Section 01 2600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

1.2 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:

a. Application for Payment forms with continuation sheets.
b. Submittal schedule.
c. Items required to be indicated as separate activities in Contractor's construction schedule.

2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

a. Project name and location.
b. Name of Architect.
c. Architect's project number.
d. Contractor's name and address.
e. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703 .
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

a. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.

5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.

8. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: Submit Application for Payment to Architect by the 20th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month .

C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

D. Retainage: The Owner will pay 90 percent of the amount due to the Contractor on account of progress payments. Upon issuance of the Substantial Completion, the Owner will pay 95 percent of the contract sum.

E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

F. Transmittal: Submit a signed and notarized original copy of each Application for Payment to Architect by email. Include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Submittal schedule (preliminary if not final).
5. List of Contractor's staff assignments.
6. List of Contractor's principal consultants.
7. Copies of building permits.
8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
9. Initial progress report.
10. Report of preconstruction conference.
11. Certificates of insurance and insurance policies.

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
5. AIA Document G706A-1994, "Contractor's Affidavit of Release of Liens."
6. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 2900

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SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination drawings.
2. Requests for Information (RFIs).
3. Project document management.
4. Project meetings.

B. Related Requirements:

1. Section 01 7300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 DEFINITIONS

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

1.3 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.

1.4 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction 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 to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

1.5 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, 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. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
b. 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.
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.
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. 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.

1.6 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. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect .
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

C. RFI Forms: AIA Document G716 Software-generated form with substantially the same content as indicated above, acceptable to Architect.

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 RFIs will be returned without action:

a. Requests for approval of submittals.
b. Requests for approval of substitutions.
c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 2600 "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.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect .
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.7 PROJECT DOCUMENTATION MANAGEMENT

A. Use Architect's Newforma software for purpose submittals. All other project correspondence shall be via email.

1.8 PROJECT MEETINGS

A. General: Contractor shall schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, and Architect, within three days of the meeting.

B. Preconstruction Conference: Contractor shall 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. 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.
2. 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. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Distribution of the Contract Documents.
    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 moisture and mold control.
    r. Procedures for disruptions and shutdowns.
    s. Construction waste management and recycling.
    t. Parking availability.
    u. Office, work, and storage areas.
    v. Equipment deliveries and priorities.
    w. First aid.
    x. Security.
    y. Progress cleaning.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Contract Documents.
    b. Options.
    c. Related RFIs.
    d. Related Change Orders.
    e. Purchases.
    f. Deliveries.
    g. Submittals.
    h. Review of mockups.
    i. Possible conflicts.
    j. Compatibility problems.

k. Time schedules.
l. Weather limitations.
m. Manufacturer's written instructions.
n. Warranty requirements.
o. Compatibility of materials.
p. Acceptability of substrates.
q. Temporary facilities and controls.
r. Space and access limitations.
s. Regulations of authorities having jurisdiction.
t. Testing and inspecting requirements.
u. Installation procedures.
v. Coordination with other work.
w. Required performance results.
x. Protection of adjacent work.
y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Contractor shall conduct progress meetings at biweekly intervals.

1. Attendees: In addition to representatives of Owner , and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

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

1) Review schedule for next period.

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

1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Status of documentation.
5) Deliveries.
6) Off-site fabrication.
7) Access.
8) Site utilization.
9) Temporary facilities and controls.

10) Progress cleaning.
11) Quality and work standards.
12) Status of correction of deficient items.
13) Field observations.
14) Status of RFIs.
15) Status of proposal requests.
16) Pending changes.
17) Status of Change Orders.
18) Pending claims and disputes.
19) Documentation of information for payment requests.

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 3100

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SECTION 01 3200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 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.

1.2 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.

B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

D. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

1.3 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 final 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. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.

3. Submittal Review Time: Include review and resubmittal times indicated in Section 01 3300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
5. 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.
6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
3. Work Restrictions: Show the effect of the following items on the schedule:

a. Coordination with existing construction.
b. Limitations of continued occupancies.
c. Uninterruptible services.
d. Partial occupancy before Substantial Completion.
e. Use of premises restrictions.
f. Provisions for future construction.
g. Seasonal variations.
h. Environmental control.

4. Work Stages: Indicate important stages of construction for each major portion of the Work.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

E. 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.

F. 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.

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 01 3200

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SECTION 01 3300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:

1. Section 01 7823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
2. Section 01 7839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.

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.

1.3 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.

B. Submit Product Data and Shop Drawings in PDF file format.
1. PDF files shall be searchable, provided with full text recognition.
2. PDF files shall be bookmarked

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.

1. Subject to requirements of Agreement for Transfer of Information Form, Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings.

a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.

b. Contractor shall execute a data licensing agreement in the form of Agreement included in Project Manual .
c. See Section 00 4327 Electronic Drawing Files, Section 00 4328 CAD Agreement for Transfer of Information and Section 00 4328 Revit Agreement for Transfer of Information.

B. 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. 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.

C. 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.

D. 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 sequential number (e.g., 06 1000-001). Resubmittals shall include an alphabetic suffix after another sequential number (e.g., 06 1000-001r01).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software acceptable to Owner**,** containing the following information:

a. Project name.
b. Date.
c. Name and address of Architect.
d. Name of Contractor.
e. Name of firm or entity that prepared submittal.
f. Names of subcontractor, manufacturer, and supplier.
g. Category and type of submittal.
h. Submittal purpose and description.

i. Specification Section number and title.
j. Specification paragraph number or drawing designation and generic name for each of multiple items.
k. Drawing number and detail references, as appropriate.
l. Location(s) where product is to be installed, as appropriate.
m. Related physical samples submitted directly.
n. Indication of full or partial submittal.
o. Transmittal number.
p. Submittal and transmittal distribution record.
q. Other necessary identification.
r. Remarks.

E. Options: Identify options requiring selection by Architect.

F. Deviations: Identify deviations from the Contract Documents on submittals.

G. 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.

H. 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.

I. 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:

1. Transmit electronic submittals as color PDF electronic files directly to Architect via Newforma information transfer site specifically established for Project.

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.
6. Submit Product Data in the following format:

    a. PDF electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, 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 , but no larger than 30 by 42 inches.
3. Submit Shop Drawings in the following format:

    a. PDF electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

a. Generic description of Sample.
b. Product name and name of manufacturer.
c. Sample source.
d. Number and title of applicable Specification Section.

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.

    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

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 three full set(s) 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: 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. Mark up and retain one returned Sample set as a project record sample.

        1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Submit product schedule in the following format:

    a. PDF electronic file.

F. Coordination Drawings Submittals: Comply with requirements specified in Section 01 3100 "Project Management and Coordination."

G. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 2900 "Payment Procedures.

H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 4000 "Quality Requirements."

I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 7700 "Closeout Procedures."

J. Maintenance Data: Comply with requirements specified in Section 01 7823 "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. 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.

M. 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.

N. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

O. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

P. 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.

Q. 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.

R. 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.

S. Schedule of Tests and Inspections: Comply with requirements specified in Section 01 4000 "Quality Requirements."

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.

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 .

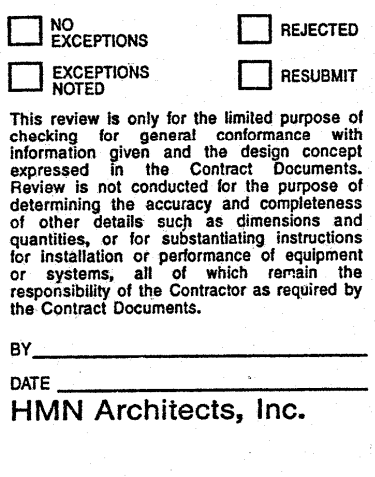
B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 7700 "Closeout Procedures."

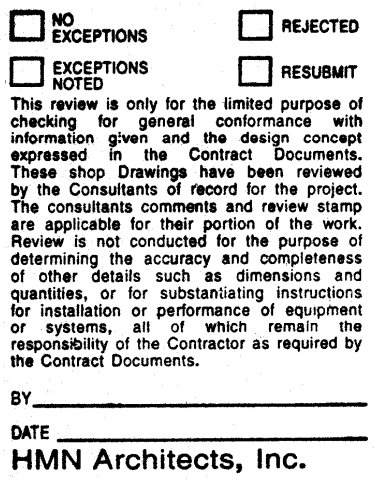
C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows: On advice of counsel, retain appropriate terms for action stamp and insert term and explanation of each action taken in subparagraph below. See Evaluations.





C. 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.

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 not be reviewed and may be discarded.

END OF SECTION 01 3300

SECTION 01 4000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
3. Specific test and inspection requirements are not specified in this Section.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. 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 (Nationally Recognized Testing Laboratories), an NVLAP (National Voluntary Laboratory Accreditation Program), 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 previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

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

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 INFORMATIONAL SUBMITTALS

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

1.5 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.

8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items indicated in individual Specification Sections.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329 ; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

a. Provide test specimens representative of proposed products and construction.
b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
c. When testing is complete, remove test specimens, assemblies, and mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

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.
2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.

a. Allow seven days for initial review and each re-review of each mockup.

5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed unless otherwise indicated.

1.7 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.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Architect, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified [special inspector] to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

1. ASTM E336-14 Standard Test Method for Measurement of Airborne sound Attenuation between rooms in buildings; Annex 1, Measurement of Field Transmission Loss.
2. Testing will be from room to room (side to side).

B. Special Tests and Inspections: Conducted by a qualified [special inspector] as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 7300 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 4000

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SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

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

B. Related Requirements:

1. Section 01 1000 "Summary" for work restrictions and limitations on utility interruptions.

1.2 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, 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 metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.3 INFORMATIONAL SUBMITTALS

A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.

1.4 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

C. Accessible Temporary Egress: Comply with applicable provisions in ICC/ANSI A117.1.

1.5 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

A. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide concrete bases for supporting posts.

2.2 TEMPORARY FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, Construction Manager, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly.

C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.3 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.

1. Locate facilities to limit site disturbance as specified in Section 01 1000 "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. 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. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

E. 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.

F. Telephone Service: Provide superintendent with cellular telephone .

G. Electronic Communication Service: Provide a computer in the primary field office adequate for use by Architect and Owner to access project electronic documents and maintain electronic communications.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Use of Permanent Roads and Paved Areas: Use designated permanent roads and paved areas for access to existing building.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

D. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

E. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

    a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touchup signs so they are legible at all times.

F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 01 7300 "Execution."

G. 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. Repair damage to existing facilities.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 31 1000 "Site Clearing."

D. Stormwater Control: Comply with requirements of authorities having jurisdiction. .

E. Tree and Plant Protection: Comply with requirements specified in Section 01 5639 "Temporary Tree and Plant Protection."

F. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel.

G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.

H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

I. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses.

1. Prohibit smoking on site.
2. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. 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 and to airborne mold spores, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.

C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Discard or replace water-damaged and wet material.
4. Discard, replace, or clean stored or installed material that begins to grow mold.
5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

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.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 7700 "Closeout Procedures."

END OF SECTION 01 5000

SECTION 01 7300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Installation of the Work.
2. Cutting and patching.
3. Coordination of Owner-installed products.
4. Progress cleaning.
5. Starting and adjusting.
6. Protection of installed construction.

B. Related Requirements:

1. Section 01 1000 "Summary" for limits on use of Project site.
2. Section 01 7700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.2 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

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

2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of utilities and construction indicated as existing are not guaranteed. Before beginning , investigate and verify the existence and location of utilities, mechanical and electrical systems, and other construction affecting the Work.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

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

3.2 PREPARATION

A. 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 caused by differing field conditions outside the control of

Contractor, submit a request for information to Architect according to requirements in Section 01 3100 "Project Management and Coordination."

3.3 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. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

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

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operationsusing methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete : Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. 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.
5. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
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: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 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.

3.7 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.

B. Repairing includes replacing defective parts, refinishing damaged surfaces and touching up with matching materials.

C. Restore permanent facilities used during construction to their specified condition.

D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01 7300

SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:
   1. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:
   1. Section 02 4119 "Selective Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
   1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 01 7419

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SECTION 01 7700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

B. Related Requirements:
1. Section 01 7823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
2. Section 01 7839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.2 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.

1.3 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest control inspection.

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, maintenance manuals, damage or settlement 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 Owner. Label with manufacturer's name and model number where applicable.

    a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of maintenance information submittals.

5.
7. Submit changeover information related to Owner's occupancy, use, and maintenance.

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. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
2. Complete startup and testing of systems and equipment.
3. Perform preventive maintenance on equipment used prior to Substantial Completion.
4. Instruct Owner's personnel in maintenance of products, equipment, and systems.
5. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
6. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
7. Complete final cleaning requirements, including touchup painting.
8. 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.
3. The Architect will perform no more than one (1) inspection to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents.

a. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for any additional inspections.
b. The Contract Amount will be reduced by such amount by Change Order.

1.6 FINAL COMPLETION PROCEDURES

A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 01 2900 "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.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in maintenance of products.

B. Inspection: Submit a written request for final inspection to determine acceptance. 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.
2. The Architect will perform no more than one (1) inspection to determine whether the Work or a designated portion thereof has attained Final completion in accordance with the Contract Documents.

a. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for any additional inspections.
b. The Contract Amount will be reduced by such amount in a Change Order.

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.

1. Organize list of spaces in sequential order.
2. Organize items applying to each space by major element.
3. Submit list of incomplete items in the following format:

a. PDF electronic file. Architect will return annotated copy.

1.8 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Organize warranty documents into an orderly sequence based on the table of contents of the 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.

C. Provide one electronic and one hard copy 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. Remove tools, construction equipment, machinery, and surplus material from Project site.
d. Clean exposed surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition.
e. Sweep concrete floors broom clean in unoccupied spaces.

f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
g. Wipe surfaces electrical equipment and similar equipment.
h. Leave Project clean and ready for occupancy.

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
1. 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.

END OF SECTION 01 7700

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SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Maintenance documentation directory manuals.
2. Product maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

A. Submit maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved 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 maintenance submittals is acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit maintenance manuals in the following format:

1. Submit on digital media acceptable to Architect. Enable reviewer comments on draft submittals.
2. Submit PDF copies.

C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

D. Comply with Section 017700 "Closeout Procedures" for schedule for submitting maintenance documentation.

1.3 FORMAT OF MAINTENANCE MANUALS

A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.

2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

1.4 PRODUCT MAINTENANCE MANUALS

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. 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.

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 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823

SECTION 01 7839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 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 01 7823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 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 color scanned PDF electronic files of jobsite record prints. PDF files shall be searchable, provided with full text recognition.
2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.

b. Final Submittal:

1) Submit paper- original set of jobsite marked-up record prints.
2) Submit one color scanned PDF file set and one color scanned hard copy set of the original jobsite marked-up record set. PDF files shall be searchable, provided with full text recognition.
3) Include each drawing sheet whether or not changes and additional information were recorded.

B. Record Specifications: Submit one paper copy of the original jobsite marked-up copy and one annotated PDF electronic files of Project's Specifications, including addenda and contract modifications. PDF files shall be searchable, provided with full text recognition.

C. Record Product Data: Submit one paper copy and one annotated PDF electronic files and directories of each submittal. PDF files shall be searchable, provided with full text recognition.

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. Record data as soon as possible after obtaining it.
c. Record and check the markup before enclosing concealed installations.

2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
2. Format: Annotated PDF electronic file with comment function enabled.
3. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
4. Refer instances of uncertainty to Architect for resolution.
5. Architect will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.

C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Annotated PDF electronic file with comment function enabled.
3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
4. 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.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. Note related Change Orders, record Product Data, and record Drawings where applicable.

B. Format: Submit record Specifications as color scanned PDF electronic file(s) of marked-up paper copy of Specifications.

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.
3. Note related Change Orders, record Specifications, and record Drawings where applicable.

B. Format: Submit record Product Data as color scanned PDF electronic file(s) of marked-up paper copy of Product Data.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as color scanned PDF electronic file(s) of marked-up miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 01 7839

SECTION 02 4119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 INFORMATIONAL SUBMITTALS

A. Predemolition Photographs or Video: Submit before Work begins.

1.4 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1. Before selective demolition, Owner will remove the following items:

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Storage or sale of removed items or materials on-site is not permitted.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction videotapes or photographs .

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems and protect them against damage.

1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
2. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
c. Equipment to Be Removed: Disconnect and cap services and remove equipment.

d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Section 01 5000 "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
4. Dispose of demolished items and materials promptly

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 4119

SECTION 02 4126 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes procedural requirements for cutting and patching.

1.2 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

C. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching, in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections of these Specifications.

B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

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 existing 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 existing 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 Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to minimize interruption of services to occupied areas.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Cut existing construction and subsequently patch to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction.

1. In general, 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. Existing 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. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Remove pipe and conduit to the greatest extents possible. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

C. Patching: Patch construction with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

1. 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.
2. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

END OF SECTION 02 4126

SECTION 04 7300 - MANUFACTURED STONE VENEER

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Stone masonry adhered to concrete backup.
2. Stone masonry adhered to wood framing and sheathing.
3. Stone masonry adhered to cold-formed metal framing and sheathing.

1.2 REFERENCES

A. ASTM C 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
B. ASTM C 177 - Standard Test Method for Steady-State Head Flux Measurements and Therma Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
C. ASTM C 190 - Method of Test for Tensile Strength of Hydraulic Cement Mortars
D. ASTM C 192 - Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
E. ASTM C 482 - Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste
F. ASTM C 567 - Standard Test Method for Determining Density of Structural Lightweight Concrete
G. ASTM C 1329 - Standard Specification for Portland Cement
H. ASTM C 1670 - Standard Specification for Adhered Manufactured Stone Masonry Veneer Units.
I. ASTM C 1780 - Standard Practice for Installation Methods for Adhered Manufactured Stone Masonry Veneer
J. ICC AC 38 Acceptance Criteria for Water Resistive Barriers
K. ICC ESR 2598 Coronado Stone Products Evaluation Report

1.3 SUBMITTALS

A. Submit following in accordance with Section 01 3300.
B. Product Data: Manufacturer's specification and data sheets for each product used, including:

1. Preparation instructions.
2. Storage and handling requirements and recommendations.
3. Installation guidelines.
4. Cleaning and maintenance methods.

C. Shop Drawings: Submit elevations and cross-section details showing proper installation methods.
D. Sample Selection

1. Standard sample board with selected stone profile and color shall be submitted for each product specification.

E. Sample Verification: A field panel sample with the minimum size of 3’ x 3’ shall be installed for every product selection showing: styles, colors, textures and grout colors.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
G. Closeout Submittals: Provide manufacturer’s warranty and maintenance recommendations.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Coronado Stone Products
B. Installer Qualifications: Minimum 5 years experience with similar scope of work and must be able to furnish list of previous jobs and references if requested by Architect.
C. Certifications: Products approved by ICC-ES Evaluation Service.
D. Mock-Up: Provide field panel sample to evaluate preparation and application techniques.
    a. Adhered masonry mock-up shall incorporate surrounding construction, including wall assembly, fasteners, flashing, and other related accessories installed in accordance with manufacturer’s installation methods.
        1. Mock-up size: Approximately 60 inches long by 48 inches high by full thickness.
        2. Mock-up may remain as part of the work.
H. Pre-Installation Conference: Conduct a pre-installation meeting to verify all products, application methods, site conditions and warranty terms no less than thirty days prior to stone veneer installation.

1.5 DELIVERY, STORAGE & HANDLING

A. Coordination of on-site delivery and storage shall be arranged in advance to avoid work delays.
B. Store and handle stone products in accordance with the manufacturer’s recommendations.
C. All material stored on-site shall be protected from the elements before and during the installation process. Store material under cover and in a dry location.
D. Store mortar, sealant and other installation material in compliance with the manufacturer’s recommendations.

1.6 PROJECT CONDITIONS

A. Protection of Stone Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work.
B. Maintain manufacturer’s recommended environmental conditions to ensure optimum results.
C. Cold Weather Requirements: Installations shall be performed in temperatures exceeding 40 degrees Fahrenheit prior to, during and for 48 hours after completion of work. If temperatures are below 40 degrees Fahrenheit, masons shall use heaters and tents during the installation process to regulate temperature.
D. Hot Weather Requirements: If temperatures exceed 90 degrees Fahrenheit during the installation, additional moisture will need to be added to the backs of the stone veneer and scratch coated surface. Shade and/or frequent misting of the wall and stone may be required.

1.7 WARRANTY

A. Provide manufacturer’s 50-year limited warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturer: Coronado Stone Products, 11191 Calabash Ave, Fontana, CA 92337; Tel: 800-847-8663; Web: www.Coronado.com

B. Substitutions: No substitutions.

2.2 MATERIALS

A. Manufactured Stone Veneer:

1. Profile / Color: Amalfi Ledge Salerno

B. Manufactured Stone Veneer - Properties: Units consisting of Portland cement, lightweight aggregates and oxide pigments.

1. Compressive Strength: Tested in accordance with ASTM C39 and ASTM C192, greater than 1800 psi.
2. Shear Bond Test: Tested in accordance with ASTM C482, greater than 50 psi.
3. Water Absorption: Tested in accordance with section 3.1.4 and 4.6 of ICC-ES AC51.
4. Freeze / Thaw: Tested in accordance with ASTM C67, less than 3% mass loss.
5. Unit Weight: Shipping weight is less than 15 lbs. per sq ft, density is determined in accordance with ASTM C567.

C. Provide 90-degree corner pieces.

2.3 INSTALLATION MATERIALS

A. Veneer Mortar

1. Laticrete Thin Brick Mortar by Laticrete International, Inc.

a. Characteristics:

1) Preblended and Bagged Latex-Portland Cement Mortar.
2) Weather, frost, shock resistant, and non-flammable.
3) Non-Sag, medium bed performance, ¾ inch (19 mm) thick without shrinkage.
4) Compressive strength per ASTM C270: greater than or equal to 2000 psi when tested in accordance with ASTM C109.
5) Shear Bond Strength: greater than or equal to 300 psi when tested in accordance with ASSI A118.4.
6) Sag on Wall: 0.0 inch (0.0 mm) in accordance with ISO 13007.

B. Pointing Mortar

1. Laticrete Masonry Pointing Mortar by Laticrete International, Inc.
2. Characteristics:

a. Compressive Strength: Minimum 3000 psi in accordance with ASTM C91.
b. Color:

C. Potable Water

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not begin the installation process until substrates have been properly prepared.
B. Notify architect of any unsatisfactory preparation of substrate before proceeding.
C. Correct all unsatisfactory substrate conditions before installation begins.
D. Verify roofs use proper water displacement methods to direct moisture away from the installed stone veneer.
E. If substrate surface is questionable, bonding tests shall be performed before installation to assess adhesion and confirm proper bonding strength.
F. Flashing must be installed at wall penetrations and terminations of the stone veneer. Assure that all flashing and kickouts are corrosion resistant, integrated with the WRB properly (when used), and installed in accordance with the local building code requirements.

3.2 PREPARATION

A. Clean all surfaces thoroughly prior to installation.
B. Use manufacturer surface preparation recommendations to achieve best result.

3.3 INSTALLATION

A. Product shall be pulled from a variety of boxes and blended on site during installation to ensure a consistent overall project color on the wall.
B. Install in accordance with manufacturer's installation instructions. Visit this page for detailed installation instructions - https://www.coronado.com/InstallationGuide
C. Application details and mortar recommendations may vary depending on the stone style. Consult manufacturer for proper installation instructions.
D. All dry-stacked and large format standard stones shall be installed using a polymer-modified mortar meeting ANSI A118.4 or ANSI 118.15.
E. All applications in freeze-thaw environments require a polymer-modified mortar.

3.4 CLEANING AND PROTECTION

A. Installed manufactured stone veneer can be cleaned with a mild soap and water solution.
B. Cleaning efflorescence can be done by lightly scrubbing the face of the stone with a soft bristle brush and water. In some cases, a 25% vinegar 75% water solution may need to be used. Do not use any harsh cleaning methods to remove efflorescence.
C. Touch-up, repair or replace damaged stone before completion of project.
D. Water repellents and enhancers can be used to further protect a finished project. Only breathable, penetrating water-based silane water repellents shall be used.

END OF SECTION 04 7300

SECTION 05 4000 - COLD-FORMED METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Exterior non-load-bearing wall framing.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of cold-formed steel framing product and accessory.

B. Shop Drawings: Provide shop drawings prepared by cold-formed metal framing manufacturer.

   1. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel framing; fabrication; and fastening and anchorage details, including mechanical fasteners.
   2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.

C. Delegated-Design Submittal: For cold-formed steel framing.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Welding certificates.

C. Product Test Reports: For each listed product, for tests performed by a qualified testing agency.

   1. Steel sheet.
   2. Expansion anchors.
   3. Power-actuated anchors.
   4. Mechanical fasteners.
   5. Vertical deflection clips.
   6. Horizontal drift deflection clips.
   7. Miscellaneous structural clips and accessories.

D. Research/Evaluation Reports: For cold-formed steel framing.

   1. Metal stud manufacturer to have a third party evaluation report for its products that are reviewed to the local building code or its model code.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Member in good standing of the Steel Framing Industry Association (SFIA).

B. Product Tests: Mill certificates or data from a qualified independent testing agency indicating steel sheet complies with requirements, including base-steel thickness, yield strength, tensile strength, total elongation, chemical requirements, and metallic-coating thickness.

C. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel".
2. AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel".

D. Comply with AISI Specifications and Standards.

1. AISI S100 “North American Specification for the Design of Cold-Formed Steel Structural Members”.
2. AISI S200 “North American Standard for Cold-Formed Steel Framing – General Provisions”.
3. AISI S201 “North American Standard for Cold-Formed Steel Framing – Product Standard”.
4. AISI S211 “North American Standard for Cold-Formed Steel Framing – Wall Stud Design”.
5. AISI S212 “North American Standard for Cold-Formed Steel Framing – Header Design”.
6. AISI S213 “North American Standard for Cold-Formed Steel Framing – Lateral Design”.
7. AISI “Code of Standard Practice for Cold-Formed Steel Structural Framing”.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect and store cold-formed steel framing from corrosion, moisture staining, deformation, and other damage during delivery, storage, and handling as required in AISI's "Code of Standard Practice".

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide cold-formed metal framing products manufactured by ClarkDietrich Building Systems; as specified in other Part 2 articles or comparable products from members of the SFIA:

1. Dietrich Metal Framing (Or Approved Equivalent)

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide cold-formed steel framing capable of withstanding design loads within limits and under conditions indicated.

1. Design Loads:

a. Dead Loads:

1) EIFS: 12 psf
2) Stone: 30 psf at Stone

b. Wind Loads: (Components & Cladding Service Loads)

1) Wall Corner Zone:

a) Windward: 20psf
b) Leeward: 26 psf

2) Parapet Corner Zone:

a) Windward: 75 psf
b) Leeward: 50 psf

3) Typical Wall:

a) Windward: 20 psf
b) Leeward: 22 psf

4) Typical Parapet:

a) Windard: 57 psf
b) Leeward: 44 psf

2. Deflection Limits: Design framing systems to withstand design loads without deflections greater than the following:

a. Exterior Non-Load-Bearing Framing: Horizontal deflection of 1/360 of the wall height.

3. Design framing systems to provide for movement of framing members located outside the insulated building envelope without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F.
4. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows:

a. Upward and downward movement of 3/4 inch.

5. Design exterior non-load-bearing wall framing to accommodate horizontal deflection without regard for contribution of sheathing materials.

B. Cold-Formed Steel Framing Design Standards:

1. Wall Studs: AISI S211.
2. Headers: AISI S212.
3. Lateral Design: AISI S213.

C. AISI Specifications and Standards: Unless more stringent requirements are indicated, comply with AISI S100 and AISI S200.

2.3 COLD-FORMED STEEL FRAMING, GENERAL

A. Framing Members, General: Comply with ASTM C 955 for conditions indicated.

B. Steel Sheet: ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of grade and coating weight as follows:

1. Grade: ST50H
2. Coating: G60

C. Steel Sheet for Vertical Deflection Clips: ASTM A 1003/A 1003M, ASTM A 653/A 653M, structural steel, zinc coated, of grade and coating as follows:

1. Grade: 50
2. Coating: G90

2.4 EXTERIOR NON-LOAD-BEARING WALL FRAMING

A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:

1. Basis-of-Design Product: ClarkDietrich Building Systems.
2. Minimum Base-Steel Thickness: 0.0538 inch
3. Flange Width: 1-5/8 inches
4. Lip Width: ½”
5. Section Properties (Minimum):

a. Sx = 0.954 in^3
b. Ix = 2.86 in^4
c. Ma = 30.3 k*in

B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and as follows:

1. Minimum Base-Steel Thickness: Match steel studs
2. Flange Width: 1-1/4”

C. Vertical Deflection Clips: Manufacturer's standard bypass clips, capable of accommodating upward and downward vertical displacement of primary structure through positive mechanical attachment to stud web and capable of resisting forces imposed by the wall system.

1. Basis-of-Design Product: ClarkDietrich Building Systems; FCSC or a comparable product by one of the members of the SFIA:
2. Minimum Base-Steel Thickness: FastClip Slide Clip**;** 0.0677 inch

D. Bridging and Spacer Bar:

1. Stability bridging to be provided at studs not continually sheathed on both sides.

2.5 ANCHORS, CLIPS, AND FASTENERS

A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.

B. Powder-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with allowable load capacities calculated according to ICC-ES AC70, greater than or equal to the design load, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.

C. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, self-tapping, steel drill screws. Minimum shank diameter = 0.216”

1. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.

D. Welding Electrodes: Comply with AWS standards.

2.6 FABRICATION

A. Fabricate cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.

1. Fabricate framing assemblies using jigs or templates.
2. Cut framing members by sawing or shearing; do not torch cut.
3. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, pneumatic pin fastening, or riveting as standard with fabricator. Wire tying of framing members is not permitted.

    a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
    b. Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by no fewer than three exposed screw threads.

4. Fasten other materials to cold-formed steel framing by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.

B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or permanent distortion.

C. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
2. Squareness: Fabricate each cold-formed steel framing assembly to a maximum out-of-square tolerance of 1/8 inch.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine supporting substrates and abutting structural framing 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 PREPARATION

A. Before sprayed fire-resistive materials are applied, attach continuous angles, supplementary framing, or tracks to structural members indicated to receive sprayed fire-resistive materials.

B. After applying sprayed fire-resistive materials, remove only as much of these materials as needed to complete installation of cold-formed framing without reducing thickness of fire-resistive materials below that are required to obtain fire-resistance rating indicated. Protect remaining fire-resistive materials from damage.

C. Install load bearing shims or grout between the underside of load-bearing wall bottom track and the top of foundation wall or slab at stud or joist locations to ensure a uniform bearing surface on supporting concrete or masonry construction.

D. Install sealer gaskets at the underside of wall bottom track or rim track and at the top of foundation wall or slab at stud or joist locations.

3.3 INSTALLATION, GENERAL

A. Install cold-formed framing in accordance with ASTM C1007 and AISI S200 "North American Standard for Cold-Formed Steel Framing - General Provisions" and to manufacturer's written instructions unless more stringent requirements are indicated.

B. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.

C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.

1. Screw, bolt, or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane and true position between fabricated panels not exceeding 1/16 inch.

D. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.

1. Cut framing members by sawing or shearing; do not torch cut.
2. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, or riveting. Wire tying of framing members is not permitted.

a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

b. Locate mechanical fasteners and install according to Shop Drawings, and complying with requirements for spacing, edge distances, and screw penetration.

E. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.

F. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.

G. Do not bridge building expansion joints with cold-formed steel framing. Independently frame both sides of joints.

H. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

I. Erection Tolerances: Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.4 EXTERIOR NON-LOAD-BEARING WALL INSTALLATION

A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.

B. Fasten both flanges of studs to bottom track unless otherwise indicated. Space studs as follows:

1. Stud Spacing: Maximum 16 inches

C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.

D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral support.

1. Connect FastClip Slide Clip (FCSC) vertical deflection clips to bypassing studs and anchor to building structure.

E. Install horizontal bridging in wall studs when gypsum sheathing is not applied to both side of stud, spaced vertically in rows indicated on Shop Drawings but not more than 48 inches apart. Fasten at each stud intersection.

F. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

G. .

3.5 REPAIRS AND PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, to ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION 05 4000

SECTION 05 5213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Steel **pipe** railings.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Manufacturer's product lines of mechanically connected railings.
2. Grout, anchoring cement, and paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples: For each type of exposed finish required.

D. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Steel Pipe Railings:
1. Hollaender Mfg. Co.
2. Kee Safety, Inc.
3. R & B Wagner, Inc.
4. Trex Commercial Products
5. TrueNorth Steel
6. Tuttle, a Dant Clayton Division
7. VIVA Railings, LLC

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design railings, including attachment to building construction.

B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
b. Infill load and other loads need not be assumed to act concurrently.

2.3 METALS, GENERAL

A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

1. Provide flange tapped for anchoring guardrail to finished pavement surface.

2.4 STEEL AND IRON

A. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40.

1. Provide galvanized finish for exterior installations and where indicated.

B. Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.5 FASTENERS

A. General: Provide the following:
1. Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/A 153M or ASTM F 2329 for zinc coating.

2.6 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for exterior applications.

2.7 FABRICATION

A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

B. Form work true to line and level with accurate angles and surfaces.

C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

D. Welded Connections for Aluminum Pipe: Fabricate railings to interconnect members with concealed internal welds that eliminate surface grinding, using manufacturer's standard system of sleeve and socket fittings.

E. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

F. Form changes in direction by bending.

G. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

H. Close exposed ends of railing members with prefabricated end fittings.

I. Provide returns at ends of rails unless otherwise indicated.

J. Brackets, Flanges, Fittings, and Anchors: Provide brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

2.8 STEEL AND IRON FINISHES

A. Galvanized Railings:

1. Hot-dip galvanize exterior steel railings, including hardware, after fabrication.
2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (6 mm in 3.5 m).

B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1. Coat, with a heavy coat of bituminous paint, concealed surfaces of aluminum that are in contact with grout, concrete, masonry, wood, or dissimilar metals.

3.2 ADJUSTING AND CLEANING

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.

END OF SECTION 05 5213

SECTION 06 1053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Wood blocking and nailers.
3. Wood furring
4. Plywood backing panels.

1.2 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.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:

1. Preservative-treated wood.
2. Power-driven fasteners.

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, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded 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.
2. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat all miscellaneous carpentry unless otherwise indicated.

1. Wood nailers, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 DIMENSION LUMBER FRAMING

A. Framing: No. 2 grade and the following species:

1. Hem-fir (north); NLGA.
2. Southern pine; SPIB.
3. Douglas fir-larch; WCLIB or WWPA.
4. Mixed southern pine; SPIB.
5. Spruce-pine-fir; NLGA.
6. Douglas fir-south; WWPA.
7. Hem-fir; WCLIB or WWPA.
8. Douglas fir-larch (north); NLGA.
9. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Furring.

B. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine, No. 2 grade; SPIB.
2. Eastern softwoods, No. 2 grade; NELMA.
3. Northern species, No. 2 grade; NLGA.
4. Western woods, No. 2 grade; WCLIB or WWPA.

2.5 PLYWOOD BACKING PANELS

A. Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

1. Plywood shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.6 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M .

B. Power-Driven Fasteners: NES NER-272.

C. Screws for Fastening to Metal Framing: ASTM C 1002 , length as recommended by screw manufacturer for material being fastened.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit.

B. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install treated plywood backing panels with classification marking of testing agency exposed to view.

D. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

E. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

END OF SECTION 06 1053

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SECTION 06 1600 - SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall and soffit sheathing.
2. Sheathing joint and penetration treatment.

1.2 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.

PART 2 - PRODUCTS

2.1 PRESERVATIVE-TREATED PLYWOOD

A. Preservative Treatment by Pressure Process: AWPA U1; Category UC3b for exterior construction.

B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.

C. Application: Treat all plywood unless otherwise indicated.

2.2 WALL SHEATHING

A. Plywood Wall Sheathing: Exterior sheathing.

B. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/1177M.

1. Thickness: Match thickness of existing adjacent sheathing material that is being patched.

2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. For wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M .

2.4 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

A. Sealant for Glass-Mat Gypsum Sheathing: Silicone emulsion sealant complying with ASTM C 834, compatible with sheathing tape and sheathing and recommended by tape and sheathing manufacturers for use with glass-fiber sheathing tape and for covering exposed fasteners.

1. Sheathing Tape: Self-adhering glass-fiber tape, minimum 2 inches (50 mm) wide, 10 by 10 or 10 by 20 threads/inch (390 by 390 or 390 by 780 threads/m), of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing and with a history of successful in-service use.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

D. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.2 WOOD PANEL INSTALLATION

A. Fastening Methods: Fasten panels as indicated below:

1. Wall Sheathing:

a. Nail or screw to wood framing.
b. Screw to cold-formed metal framing.
c. Space panels 1/8 inch (3 mm) apart at edges and ends.

3.3 GYPSUM SHEATHING INSTALLATION

A. Comply with GA-253 and with manufacturer's written instructions.

1. Fasten gypsum sheathing to cold-formed metal framing with screws.

2. Install boards with a 3/8-inch (9.5-mm) gap where non-load-bearing construction abuts structural elements.
3. Install boards with a 1/4-inch (6.4-mm) gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.

B. Seal sheathing joints according to sheathing manufacturer's written instructions.

1. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel silicone emulsion sealant to embed entire face of tape in sealant. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.

END OF SECTION 06 1600

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SECTION 07 2423 - DIRECT-APPLIED EXTERIOR FINISH SYSTEM (DEFS)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Materials and installation of the direct-applied exterior finish system for patching and repair of existing DEFS system.

B. Related Sections include the following:

1. Division 06 Section 09 2900 "Gypsum Board" for Moisture-Resistant Sheathing Board
2. Division 07 Section 07 6200 "Sheet Metal Flashing and Trim"
3. Division 07 Section 07 9200 "Joint Sealants"
4. Division 09 Section 09 2600 "Gypsum Board Assemblies"

1.2 REFERENCES

A. ASTM Standards:

1. A 526 Specification for Sheet Steel Zinc Coated (Galvanized) by the Hot-Dip Process, Commercial Quality
2. C 79 Standard Specification for Gypsum Sheathing Board
3. C 150 Specification for Portland Cement
4. C 1177 Specification for Glass Mat Gypsum Substrate for Use as Sheathing
5. E 84 Test Method for Surface Burning Characteristics of Building Materials
6. E 119 Method for Fire Tests of Building Construction and Materials

B. Gypsum Association

1. GA-253 Application of Gypsum Sheathing

C. Proprietary Specifications

1. GP Gypsum Corporation Publication #101514

1.3 DESIGN REQUIREMENTS

A. Maximum allowable system deflection, normal to the plane of the soffit, of L/360.

B. Wind load in conformance with code requirements.

C. Provide minimum 1/2 inch (13 mm) wide expansion joints in the system where they exist in the substrate or supporting construction, at a minimum of every 30 feet (up to a maximum area of 900 sq. ft.), and where the system adjoins dissimilar construction or materials. Refer to drawings.

D. Provide minimum 1/4 inch (6 mm) wide sealant joints at penetrations through the system (lights, vents, etc.).

E. Backer rod and sealant, or suitable accessories for system terminations or joints shall be provided by the sealant contractor.

1.4 PERFORMANCE REQUIREMENTS

A. System Performance

Test	Method	Criteria	Result
Impact Resistance	EIMA 101.86	High: 90 to 150 in-lbs(10.2 to 17.0J)	Achieved: One layer of Mesh
Adhesion	ASTM C-297	Minimum 10 psi	Passed
Adhesion after 10 Freeze/ Thaw Cycles	ASTM C-297	Minimum 10 psi	Passed

B. Component Performance - Acrylic Based Finishes

Test	Method	Criteria	Result
Accelerated Weathering	ASTM G-23	No deleterious effects* at 2000 hours when viewed under 5x magnification	Passed
Freeze/Thaw Resistance	ICBO Acceptance Criteria	No deleterious effects* at 10 cycles	Passed
Mildew Resistance	ASTM D-3273	No growth supported during 28 day exposure period	No growth at 42 days
Surface Burning	ASTM E-84	All Components Flame Spread less than 25, Smoke Developed less than 450	Passed
* No deleterious effects: no cracking, checking, crazing, erosion, rusting, blistering, peeling or delamination.			

1.5 SUBMITTALS

A. Manufacturer's specifications, details, installation instructions and product data.

B. Applicator's certificate of instruction.

C. Samples for approval as directed by architect or owner.

D. Manufacturer's standard warranty.

E. A list of minimum three (3) job references.

F. Prepare and submit project-specific details (when required by contract documents).

1.6 QUALITY ASSURANCE

A. Manufacturer requirements

1. Member in good standing of the EIFS Industry Members Association (EIMA).

2. System manufacturer for a minimum of twenty (20) years.
3. Manufacturing facilities ISO 9002 Quality System certified.

B. Mockups: Build sample panels for each type of exposed unit masonry assembly to verify selections made under sample Submittals and to demonstrate aesthetic effects.

1. Build mockups in accordance with Section 01 4339.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials in their original sealed containers bearing manufacturer's name and identification of product.

B. Protect coatings (pail products) from freezing 32 degF (0 degC) and temperatures in excess of 90 deg F (32 deg C). Store away from direct sunlight.

C. Protect Portland cement based materials (bag products) from moisture and humidity. Store under cover off the ground in a dry location.

1.8 PROJECT/SITE CONDITIONS

A. Maintain ambient and surface temperatures above 40 deg F (4 deg C) during application and drying period, minimum 24 hours after application of coatings.

B. Provide supplementary heat for installation in temperatures less than 40 deg F (4 deg C).

C. Provide protection of surrounding areas and adjacent surfaces from application of materials.

1.9 COORDINATION/ SCHEDULING

A. Install flashings, copings and sealant immediately after installation of the system and when coatings are dry.

1.10 WARRANTY

A. Provide manufacturer's standard labor and material warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

1. Dryvit Systems, Inc.

B. Provide components from single source manufacturer or approved supplier.

2.2 ACCESSORIES

A. Corner bead, casing bead, starter track, expansion and control joint accessories. All accessories shall meet the requirements of ASTM C 1063 and its referenced documents.

1. Depth of accessories (grounds) shall be sized for the coating thickness.
2. All accessories shall be manufactured of zinc, unless notes otherwise.

2.3 SHEATHING

A. As indicated in drawings.

2.4 BASE COAT

A. One-component polymer modified cementitious high build base coat with less than 33 percent Portland cement content by weight, or an approved equal.

2.5 REINFORCING MESH

A. Standard Mesh

1. Mesh - nominal 4.5 oz./yd.2 (153 g/m2), symmetrical, interlaced open-weave glass fiber fabric made with minimum 20 percent by weight alkaline resistant coating for compatibility with manufacturer's materials.

B. Specialty Mesh

1. Corner Mat - nominal 6.25 oz./yd.2 (212 g/m2), pre-creased, heavy-duty open-weave woven glass fiber fabric with alkaline resistant coating for compatibility with manufacturer's materials (used for maximum impact protection at inside and outside corners).
2. Detail Mesh - nominal 4.5 oz/sq yd (153 g/m2), flexible, symmetrical, interlaced glass fiber fabric, with alkaline resistant coating for compatibility with manufacturer's materials (used for standard EIFS backwrapping and aesthetic detailing).

2.6 FINISH COAT

A. Acrylic based or silicone enhanced textured wall coating.

PART 3 - EXECUTION

3.1 ACCEPTABLE INSTALLERS

A. Prequalify under Quality Assurance requirements of this specification.

3.2 EXAMINATION

A. Inspect structural framing for:

1. Metal support size/spacing/depth -- minimum 18 gauge, 3-5/8 inch (91 mm) metal studs spaced a maximum of 16 inches (400 mm) on center.
2. Straightness, trueness and uniformity of dimension.
3. Compliance with tolerances -- horizontal alignment within 1/8 inch in 10 feet (3 mm in 3 m) of the soffit length.
4. Framing construction -- framing members provided wherever joints in sheathing occur and constructed in accordance with applicable building code requirements.

B. Inspect sheathing surfaces for:

1. Contamination -- algae, chalkiness, dirt, dust, efflorescence, form oil, fungus, grease, laitance, mildew or other foreign substances.
2. Cracks -- measure crack width and record location of cracks.
3. Damage and deterioration.
4. Moisture content and moisture damage -- use a moisture meter to determine if the surface is dry enough to receive the coatings and record any areas of moisture damage.
5. Compliance with specification tolerances -- record areas that are out of tolerance (greater than 1/4 inch in 8-0 feet [6mm in 2438 mm] deviation in plane).

C. Inspect sheathing application for compliance with applicable requirement:

1. Glass mat faced gypsum sheathing -- Georgia Pacific Publication #101514.

D. Report deviations from the requirements of project specifications or other conditions that might adversely affect the installation to the General Contractor.

3.3 SURFACE PREPARATION

A. Replace weather damaged sheathing and repair damaged or cracked surfaces.

B. Level surfaces to comply with required tolerances.

3.4 INSTALLATION

A. Accessory Installation

1. Install appropriate starter accessory.
2. Install appropriate casing bead accessories at system terminations (such as expansion or control joints, lights or vent strips, etc.) in accordance with locations indicated on architectural drawings. Maintain a gap of minimum 1/4" (6 mm) between the accessory and the abutment to form a sealant joint.
3. Follow accessory manufacturer's instructions for accessory butt joints to maintain water tightness.
4. Provide expansion joints in sheathing at minimum intervals of 30 feet (9.1 m) up to a maximum area of 900 square feet (82.8 m2), wherever the system abuts dissimilar construction or an existing joint occurs in construction. Fit sheathing snugly into accessories prior to attachment.
5. Fasten surface mount accessories (for example, casing beads and surface mount expansion joints) through the sheathing into framing at locations indicated on architectural drawings. Where necessary, level surfaces such as outside corners with appropriate leveling material to maintain plumbness and squareness.

B. Base Coat Application

1. Apply base coat over the sheathing with proper spray equipment or a stainless steel trowel to a uniform thickness of approximately 1/16 inch (1.6 mm). Apply base coat in strips of 40 inches (1 m) and immediately embed reinforcing mesh into the wet base coat by troweling from the center to the edge of the mesh. Avoid wrinkles in the mesh. Overlap the mesh minimum 2-1/2 inches (64 mm) at mesh joints and stagger mesh overlaps minimum 8 inches (200 mm) from sheathing joints.
2. Where surface mount accessories are used, such as deep “V” expansion joint, overlap the mesh from the sheathing onto the perforated accessory flange (refer to details).

3. The mesh must be fully embedded so that no mesh color shows through the base coat when it is dry. Feather mesh overlaps to avoid reading the mesh through the finish coating. Allow base coat to thoroughly dry before applying primer or finish.
4. For soffit applications that will utilize a heavy texture finish coat to conceal minor surface irregularities, the full mesh may be deleted. Tape joints with a 6 inch (150 mm) wide strip of mesh embedded in base coat, then apply minimum 1/16 inch (1.6 mm) thick base coat over the entire surface of the sheathing. Feather the taped sheathing joints to avoid reading the joints through the finish coating.

C. Finish Coat Application

1. Apply finish directly over the base coat ONLY AFTER THE BASE COAT/PRIMER HAS THOROUGHLY DRIED. Apply the finish by spraying, or troweling with a stainless steel trowel, depending on finish specified. General rules for application of finishes are as follows:

    a. Avoid application in direct sunlight.
    b. Apply finish in a continuous application, always working to a wet edge.
    c. Weather conditions affect application and drying time. Hot or dry conditions limit working time and accelerate drying and may require adjustments in the scheduling of work to achieve desired results; cool or damp conditions extend working time and retard drying and may require added measures of protection against wind, dust, dirt, rain and freezing. Adjust work schedule and provide protection.
    d. Do not install finish on accessories.
    e. Float "R" (rilled texture) with a plastic trowel to achieve their rilled texture.
    f. Do not install separate batches of finish side-by-side.
    g. Do not apply finish over irregular or unprepared surfaces or surfaces not in compliance with the project specifications.

D. Sealant Installation

1. Seal all open joints in the system with appropriate sealant in accordance with sealant manufacturer’s recommendations to prevent any water from getting into or behind the system.

END OF SECTION 07 2423

SECTION 07 2500 – WATER-RESISTIVE BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Building wrap.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For water-resistive barrier and flexible flashing, from ICC-ES.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

A. Building Wrap: ASTM E 1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.

   1. DuPont Tyvek Commercial Wrap, or approved equal.
   2. Water-Vapor Permeance: Not less than 28 perms.
   3. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

B. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

A. Cover sheathing with water-resistive barrier as follows:

   1. Cut back barrier 1/2 inch (13 mm) on each side of the break in supporting members at expansion- or control-joint locations.
   2. Apply barrier to cover vertical flashing with a minimum 4-inch (100-mm) overlap unless otherwise indicated.

B. Building Wrap: Comply with manufacturer's written instructions and warranty requirements.

1. Seal seams, edges, fasteners, and penetrations with tape.
2. Extend into jambs of openings and seal corners with tape.

3.2 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing where indicated to comply with manufacturer's written instructions.

1. Lap seams and junctures with other materials at least 4 inches (100 mm) except that at flashing flanges of other construction, laps need not exceed flange width.
2. Lap flashing over water-resistive barrier at bottom and sides of openings.
3. Lap water-resistive barrier over flashing at heads of openings.

3.3 DRAINAGE MATERIAL INSTALLATION

A. Install drainage material over building wrap and flashing to comply with manufacturer's written instructions.

END OF SECTION 07 2500

SECTION 07 6200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Formed roof sheet metal fabrications.
2. Formed wall sheet metal fabrications.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Distinguish between shop- and field-assembled work.
3. Include identification of finish for each item.
4. Include pattern of seams and details of termination points, expansion joints and expansion-joint covers, direction of expansion, roof-penetration flashing, and connections to adjoining work.

C. Samples: For each exposed product and for each color and texture specified.

1.4 INFORMATIONAL SUBMITTALS

A. Product certificates.

B. Product test reports.

C. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.6 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.

1. For copings and roof edge flashings that are SPRI ES-1 tested, shop shall be listed as able to fabricate required details as tested and approved.

1.7 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. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. SPRI Wind Design Standard: Manufacture and install copings tested according to SPRI ES-1 .

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces .

2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.

1. Exposed Coil-Coated Finish:

a. Refer to Section 09 9600 - High Performance Coatings.

2. Color: As Shown on the drawings.

2.3 UNDERLAYMENT MATERIALS

A. Synthetic Underlayment: Laminated or reinforced, woven polyethylene or polypropylene, synthetic roofing underlayment; bitumen free; slip resistant; suitable for high temperatures over 220 deg F (111 deg C); and complying with physical requirements of ASTM D 226/D 226M for Type I and Type II felts.

B. Products: Subject to compliance with requirements, provide one of the following:

1. Atlas Roofing Corporation; Summit.
2. Engineered Coated Products; Nova-Seal II.
3. Kirsch Building Products, LLC; Sharkskin Comp.
4. SDP Advanced Polymer Products Inc; Palisade.

C. Self-Adhering, High-Temperature Sheet: Minimum 30 mils (0.76 mm) thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer according to written recommendations of underlayment manufacturer.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Carlisle Coatings & Waterproofing Inc.
b. Grace Construction Products; W.R. Grace & Co. -- Conn.
c. Polyguard Products, Inc.
d. SDP Advanced Polymer Products Inc.

2. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F (116 deg C) or higher.

3. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F (29 deg C) or lower.

D. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. (0.16 kg/sq. m)minimum.

2.4 MISCELLANEOUS MATERIALS

A. General: 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 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.

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.

2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
3. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.

C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

D. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

F. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.

G. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.5 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Obtain field measurements for accurate fit before shop fabrication.
2. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
3. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

C. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.

D. 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.

E. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

A. Copings: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, fasten and seal watertight. Shop fabricate interior and exterior corners.

1. Fabricate from the Following Materials:

a. Aluminum: Minimum 0.032 thick.

B. Base Flashing: Fabricate from the following materials:

1. Galvanized Steel: Minimum 0.023 thick.

C. Counterflashing and Flashing Receivers: Fabricate from the following materials:

1. Stainless Steel: 0.019 inch thick.
2. Galvanized Steel: Minimum 0.023 thick.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

A. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, according to manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.

B. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller. Cover underlayment within 14 days.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete the sheet metal flashing and trim system.

1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
3. Space cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.

5. Torch cutting of sheet metal flashing and trim is not permitted.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws .

E. 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.

F. Seal joints as required for watertight construction. Prepare joints and apply sealants to comply with requirements in Section 07 9200 "Joint Sealants."

G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

H. ROOF FLASHING INSTALLATION

I. Copings: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated.

J. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints minimum of 4 inches (100 mm).

3.3 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows and doors.

3.4 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder.

C. Clean off excess sealants.

D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 07 62000

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SECTION 07 9200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Extent of each form and type of joint sealer is indicated on drawings and by provisions of this section.

B. The applications for joint sealers as work of this section include the following:

1. Concrete construction joints.
2. Wall joints (exterior).
3. Flashing and coping joints.
4. Joints at doors, window frames and other materials.
5. Joints between dissimilar materials.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product specifications, handling/installation/curing instructions, and performance tested data sheets for each elastomeric product required.

B. Samples: Submit 3, 12" long samples of each color required (except black) for each of sealant and caulking compound exposed to view. Install sample between 2 strips of material similar to or representative of typical surfaces where compound will be used, held apart to represent typical joint widths.

C. Job-Site Mock-up: Install approximately 25' of each color required for exterior sealant on the building for the Architect's approval. Do not proceed with remainder of caulking until sample has been approved by Architect.

1.4 JOB CONDITIONS

A. Weather Conditions: Do not proceed with installation of liquid sealants under unfavorable weather conditions. Install elastomeric sealants when temperature is in lower third of temperature range recommended by manufacturer for installation.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General Sealer Performance Requirements: Provide colors indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors. Select materials for compatibility with joint surfaces and other indicated exposures, and except as otherwise indicated select modulus of elasticity and hardness or grade recommended by manufacturer for

each application indicated. Where exposed to foot traffic, select materials of sufficient strength and hardness to withstand stiletto heel traffic without damage or deterioration of sealer system.

B. Elastomeric Sealants: For exterior use.

1. Two-Component Polyurethane Sealant: Polyurethane-based 2-part elastomeric sealant, complying with FS TT-S-00227, Class A, Type 1 (self-leveling) unless Type 2 recommended by manufacturer for application shown.
2. Products offered by manufacturers to comply with requirements include the following:

a. Type 1 - THC-900; Tremco Inc.
b. Type 2 - Dymeric; Tremco Inc.

3. Color: In general, the following colors shall be used.

a. Adjacent to Aluminum or Metal: Match color of metal.
b. Adjacent to masonry (both sides): Match color mortar.
c. Adjacent to other exterior wall material (both sides): Match color of wall material.

C. Joint Fillers, Pavement Types:

1. Bituminous Joint Filler: Provide resilient and non-extruding type pre-molded bituminous composition of organic fiber or granulated cork, between 2 bituminous felt liners, complying with ASTM D 944 or D 1751, AASHTO M 33 or M 213, and (if fiber type) FS HH-F-341, Type III.

D. Miscellaneous Materials:

1. Joint Primer/Sealer: Provide type of joint primer/sealer recommended by sealant manufacturer for joint surfaces to be primed or sealed.
2. Sealant Backer Rod: Compressible rod stock of polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended by sealant manufacturer for compatibility with sealant.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

A. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise.

3.2 JOINT PREPARATION

A. Clean out joints immediately before installation of sealant or caulking compound. Remove dirt, insecure coatings, moisture and other substances which could interfere with bond or sealant or caulking compound. Etch concrete and masonry joint surfaces as recommended by sealant manufacturer. Roughen vitreous and glazed joint surfaces as recommended by sealant manufacturer.

B. Prime or seal joint surfaces where indicated and where recommended by sealant manufacturer. Do not allow primer/sealer to spill or migration onto adjoining surfaces.

3.3 INSTALLATION

A. Set joint filler units as depth or position in joint to coordinate with other work, including installation of bond breakers, backer rods and sealants. Do not leave voids or gaps between ends of joint filler units.

B. Install sealant backer rod for liquid-applied sealants, except where shown to be omitted or recommended to be omitted by sealant manufacturer for application indicated.

C. Employ only proven installation techniques, which will ensure that sealants are deposited in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of joint bond surfaces equally on opposite sides. Except as otherwise indicated, fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. Where horizontal joints are between a horizontal surface and vertical surface, fill joint to form a slight cove, so that joint will not trap moisture and dirt.

D. Install sealant to depths as shown or, if not shown, as recommended by sealant manufacturer but within the following general limitations, measured at center (thin) section of bead.

1. For sidewalks, pavements and similar joints sealed with elastomeric sealants and subject to traffic and other abrasion and indentation exposures, fill joints to a depth equal to 50% of joint width, but neither more than 5/8" deep nor less than 3/8" deep.
2. For normal moving joints sealed with elastomeric sealants but not subject to traffic, fill joints to a depth equal to 50% of joint width, but neither more than 1/2" deep nor less than 1/4" deep.
3. For joint sealed with non-elastomeric sealants and caulking compounds, fill joints to a depth of 50% of joint width.

E. Spillage: Do not allow sealants or compounds to overflow or spill onto adjoining surfaces, or to migrate into voids of adjoining surfaces. Clean adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage.

F. Recess exposed edges of gaskets and exposed joint fillers slightly behind adjoining surfaces, unless otherwise shown, so that compressed units will not protrude from joints.

3.4 CURE AND PROTECTION

A. Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength and surface durability. Advise Contractor of procedures required for cure and protection of joint sealers during construction period, so that they will be without deterioration or damage (other than normal wear and weathering) at time of substantial completion.

END OF SECTION 07 9200

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SECTION 08 8450 – SKYLIGHT RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

A. Field maintenance procedures for restoration of Kalwall Panels and Systems.

1.2 SUBMITTALS

A. Product Data: Submit manufacturer's product specifications and instructions.

B. Job-Site Mock-up: Provide a mockup of minimum one Kalwall panel. Do not proceed with the remainder of restoration until mockup has been approved by Owner and Architect.

1.3 QUALITY ASSURANCE

A. Qualifications: Resurfacing of Kalwall Panels shall be done by a qualified firm that is approved, authorized, or licensed by Kalwall Corporation as a certified provider of Kalwall and its service/maintenance. The resurfacing contractor shall be trained and certified to weatherseal the Kalwall system.

B. Refinishing the Kalwall Aluminum Clamp-Title Installation system shall be done by a qualified subcontractor. Refer to Section 09 9000 – High-Performance Coatings for the qualification requirements.

PARTS 2 AND 3 - PRODUCTS AND EXECUTION

2.1 RESURFACING KALWALL PANELS

A. Resurfacing shall be done in accordance with Kalwall Corporation Technical Bulletins as provided on the following pages:

2.2 REFINISHING KALWALL ALUMINUM CLAMP-TITE INSTALLATION SYSTEM

A. Refinishing shall be done in accordance with Kalwall Corporation Technical Bulletins as provided on the following pages:

KALWALL CORPORATION
TECHNICAL BULLETIN (Revised April 2019)

RESURFACING WITH WEATHERSEAL #96 L-R (Roller Method)

NOTE: Periodically inspect the Kalwall system for required maintenance. Where required to walk on a Kalwall system, wear non-slip, soft-soled footgear and step on the aluminum Clamp-tite™ installation system rather than the panels. If absolutely required to step on the panels, step on the I- beam grid lines rather than the center of the grid.

DEFINITION:

Weatherseal #96 L-R (Weatherseal) is an air drying, water base, roller or spray applied thermoset material designed for resurfacing Kalwall panels. VOC: less than 50 g/l (0.35 lbs./gal).
One (1) gallon covers approximately 150 sq. ft. resulting in a 3.0 mils dry film thickness.
This transparent coating for fiberglass reinforced polyester face material can, if applied timely, restore original luster and finish of the weatherable surface of Kalwall panels.

MAINTENANCE SCHEDULE:

Wall and roof areas will weather at differing rates under varying climate and exposure conditions. Periodic inspection will reveal if maintenance is required, including cleaning and/or repairs from storms, accidents, vandalism, etc. If the exterior face has weathered exposing the reinforcing fiberglass strands (fiber bloom), apply Weatherseal immediately.

SURFACE PREPARATION:

STEP 1: Remove any sealant tape squeeze-out at battens and curb perimeter.
STEP 2: Using #60 grit wet and dry sandpaper on a power vibrator or an orbital disk sander, sand the exposed surface moderately until exposed fibers and embedded dirt are removed. CAUTION: use double insulated sander and G.F.I. circuit while wet sanding.
STEP 3: Use a non-abrasive detergent and water solution to clean and scrub thoroughly.
STEP 4: Rinse panels with clean water and allow panels to dry completely before applying Weatherseal.
STEP 5: Mask off the Kalwall aluminum Clamp-tite™ installation system. Do not apply Weatherseal to the Kalwall aluminum Clamp-tite installation system.

MIXING:

1 Gallon Kit: Add 12 oz. of part B and 1 oz. of defoamer to a gallon of part A using a paint mixer with hand drill.
5 Gallon Kit: Add 54 oz. of part B and 5 oz. of defoamer to 4.5 gallons of part A using a paint mixer with hand drill.
Mix only what can be applied within 1-2 hours. If needed, dilute with water as required.
Thoroughly mix each gallon can kit immediately prior to use.

APPLICATION:

The surface must be completely dry. Apply with a 3/8" nap roller. New rollers should be "de-furred" with masking tape before use and discarded at the end of the day. Apply one coat at a time. Two to three coats will be needed, depending on pitch (vertical wall or flat roof), age, and porosity after surface preparation. The first coat may be needed to "seal" the surface, resulting in no film build-up. Two more coats may be required to achieve a minimum two mil film thickness. Apply as thick as possible without runs. Stir frequently while in use. If possible, two people should do roller coating, one applying the coating vertically, one horizontally. Finish off with the horizontal passes, working from top to bottom. Weatherseal should be applied in the shade or on a dry overcast day with temperature 50°- 80°F. If applied in the direct sun, up to a pint of water per gallon may be added to prevent drying too quickly. Product is intended for professional use only.

DRYING TIME:

Weatherseal will dry to a tack free condition within one hour depending on temperature. Maximum hardness is attained in seven days at 70°F. A second coat may be applied after one to three hours.

EQUIPMENT CLEANUP:

Warm soap and water will satisfactorily clean the application equipment. Methyl Ethyl Ketone (MEK), acetone, or lacquer thinner will satisfactorily clean the application equipment if the coating has dried.

PRECAUTION:

Normal personal hygiene and handling precautions apply. Avoid breathing vapor. Use with adequate ventilation; do not apply in areas that are not well ventilated. Avoid contact with eyes. Do not ingest. Keep out of reach of children. Do not use near open flame.
Keep from freezing.

CLEANING PANELS:

Commercially available, non-abrasive detergents are recommended to clean newly Weathersealed panels.
Do not use gasoline, lacquer thinner, other petroleum based substances or ketone based solvents. Kerosene, Paint Thinner, or Lestoil® may be used for removing pitch or tar.

Note: All above cleaners and solvents must be washed off with non-abrasive detergent and water immediately after using.

AVAILABILITY:

Weatherseal may be ordered by 1 gallon or 5 gallon kits from Kalwall Corporation.

NOTE: The instructions presented herein are correct to the best of our knowledge. However, no warranty is included, express or implied. Kalwall Corporation is not responsible for incorrectly installed material or for joints that leak. The Buyer assumes sole responsibility for reliance on representations and recommendations as to the use of these products.

KALWALL CORPORATION
TECHNICAL BULLETIN (Revised April 2019)

RESURFACING WITH WEATHERSEAL #96 L-R (Spray Method)

NOTE: Periodically inspect the Kalwall system for required maintenance. Where required to walk on a Kalwall system, wear non-slip, soft-soled footgear and step on the aluminum Clamp-tite™ installation system rather than the panels. If absolutely required to step on the panels, step on the I- beam grid lines rather than the center of the grid.

DEFINITION:

Weatherseal #96 L-R (Weatherseal) is an air drying, water base, roller or spray applied thermoset material designed for resurfacing Kalwall panels. VOC: less than 50 g/l (0.35 lbs./gal).
One (1) gallon covers approximately 150 sq. ft. resulting in a 3.0 mils dry film thickness.
This transparent coating for fiberglass reinforced polyester face material can, if applied timely, restore original luster and finish of the weatherable surface of Kalwall panels.

MAINTENANCE SCHEDULE:

Wall and roof areas will weather at differing rates under varying climate and exposure conditions. Periodic inspection will reveal if maintenance is required, including cleaning and/or repairs from storms, accidents, vandalism, etc. If the exterior face has weathered exposing the reinforcing fiberglass strands (fiber bloom), apply Weatherseal immediately.

SURFACE PREPARATION:

STEP 1: Remove any sealant tape squeeze-out at battens and curb perimeter.
STEP 2: Using #60 grit wet and dry sandpaper on a power vibrator or an orbitaldisk sander, sand he exposed surface moderately until exposed fibers and embedded dirt are removed. CAUTION: use double insulated sander and G.F.I. circuit while wet sanding.
STEP 3: Use a non-abrasive detergent and water solution to clean and scrub thoroughly.
STEP 4: Rinse panels with clean water and allow panels to dry completely before applying Weatherseal.
STEP 5: Mask off the Kalwall aluminum Clamp-tite™ installation system. Do not apply Weatherseal to the Kalwall aluminum Clamp-tite installation system.

MIXING:

1 Gallon Kit: Add 12 oz. of part B and 1 oz. of defoamer to a gallon of part A using a paint mixer with hand drill.
5 Gallon Kit: Add 54 oz. of part B and 5 oz. of defoamer to 4.5 gallons of part A using a paint mixer with hand drill.
Mix only what can be applied within 1-2 hours. If needed, dilute with water as required.
Thoroughly mix each gallon can kit immediately prior to use.

APPLICATION:

The surface must be completely dry. Apply one coat at a time, which will consist of two passes at right angles to each other. One coat of Weatherseal will be approximately one mil thick. If possible, two people should do coating, one applying the coating vertically, one horizontally. Two to three coats will be needed, depending on pitch (vertical wall or flat roof), age, and porosity after surface preparation. The first coat may be needed to "seal" the surface, resulting in no film build-up. Two more coats may be required to achieve a minimum two mil film thickness. Apply as thick as possible without runs. Finish off with the horizontal passes, working from top to bottom. Product is intended for professional use only.

Weatherseal should be applied in the shade or on a dry overcast day with temperature 50°- 80°F. If applied in the direct sun, up to a pint of water per gallon may be added to prevent drying too quickly. Stir frequently while in use.

For spraying (which typically provides a smoother coating) the Binks® “Trophy Series” of HVLP, LVMP, and Conventional spray equipment and Kremlin Rexson air assisted airless spray equipment are examples of quality, proven coating application equipment. Consult your local finishing equipment specialist.

Weatherseal must be spray applied on a day when no wind is blowing. If wind is blowing slightly, spraying is possible if applier is shielded from the wind.

DRYING TIME:

Weatherseal will dry to a tack free condition within one hour depending on temperature. Maximum hardness is attained in seven days at 70°F. A second coat may be applied after one to three hours.

EQUIPMENT CLEANUP:

Warm soap and water will satisfactorily clean the application equipment. Methyl Ethyl Ketone (MEK), acetone, or lacquer thinner will satisfactorily clean the application equipment if the coating has dried.

PRECAUTION:

Normal personal hygiene and handling precautions apply. Avoid breathing vapor. Use with adequate ventilation; do not apply in areas that are not well ventilated. Avoid contact with eyes. Do not ingest. Keep out of reach of children. Do not use near open flame.
Keep from freezing.

CLEANING PANELS:

Commercially available, non-abrasive detergents are recommended to clean newly Weathersealed panels.
Do not use gasoline, lacquer thinner, other petroleum based substances or ketone based solvents. Kerosene, Paint Thinner, or Lestoil® may be used for removing pitch or tar.

Note: All above cleaners and solvents must be washed off with non-abrasive detergent and water immediately after using.

AVAILABILITY:

Weatherseal may be ordered by 1 gallon or 5 gallon kits from Kalwall Corporation.

NOTE: The instructions presented herein are correct to the best of our knowledge. However, no warranty is included, express or implied. Kalwall Corporation is not responsible for incorrectly installed material or for joints that leak. The Buyer assumes sole responsibility for reliance on representations and recommendations as to the use of these products.

KALWALL CORPORATION

TECHNICAL BULLETIN (Revised April 2019)

REFINISHING KALWALL ALUMINUM CLAMP-TITE™ INSTALLATION SYSTEMS

NOTE: Periodically inspect the Kalwall system for required maintenance. Where required to walk on a Kalwall system, wear non-slip, soft-soled footgear and step on the aluminum Clamp-tite installation system rather than the panels. If absolutely required to step on the panels, step on the I-beam grid lines rather than the center of the grid.

DESCRIPTION:

Kalwall Corrosion Resistant Finish (KCRF) is a spray applied, air-dried, fluoropolymer based coating. KCRF spray cans are used to touch up scratches or damage to the aluminum Clamp-tite installation system.

SURFACE PREPARATION:

Surface must be clean, dry, and free of loose paint or corrosion. Rough up area to be refinished with fine grade sandpaper. Wipe clean with a Methyl Ethyl Ketone (MEK- provided by others) soaked rag.

APPLICATION:

Mask around areas with tape to avoid overspray. After making sure finish is well mixed, apply according to directions on can. To avoid runs, several thin coats are preferable to one thick coat.

EQUIPMENT CLEANUP:

Use MEK or other solvents to clean the equipment. Remove masking tape. Clean off any tape mastic with naphtha.

PRECAUTIONS:

Normal personal hygiene and handling precautions apply. Avoid breathing vapor. Use with adequate ventilation; do not apply in areas that are not well ventilated.
Avoid contact with eyes. Do not ingest. Keep out of reach of children. Do not use near open flame. Keep from freezing.

AVAILABILITY:

KCRF is available in spray cans from Kalwall Corporation.

NOTE: The instructions presented herein are correct to the best of our knowledge. However, no warranty is included, express or implied. Kalwall Corporation is not responsible for incorrectly installed material or for joints that leak. The Buyer assumes sole responsibility for reliance on representations and recommendations as to the use of these products.

END OF SECTION 08 8450

SECTION 09 9000 - HIGH-PERFORMANCE COATINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Exterior High-Performance Coating Systems: Surface preparation and field application of exterior high-performance coating systems to items and surfaces scheduled.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM) D 16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.

B. Steel Structures Painting Council (SSPC) SP6 - Commercial Blast Cleaning Procedures.

C. Steel Structures Painting Council (SSPC) SP10 - Near White Blast Cleaning Procedure.

1.3 DEFINITIONS

A. General: Standard coating terms in accordance with ASTM D523.
   1. Gloss Level 1 (Flat): Not more than 5 units at 60 degrees and 10 units at 85 degrees, in accordance with ASTM D523.
   2. Gloss Level 2 (Low Sheen): Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, in accordance with ASTM D523.
   3. Gloss Level 3 (Eggshell): 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, in accordance with ASTM D523.
   4. Gloss Level 4 (Satin): 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, in accordance with ASTM D523.
   5. Gloss Level 5 (Semi-Gloss): 35 to 70 units at 60 degrees, in accordance with ASTM D523.
   6. Gloss Level 6 (Gloss): 70 to 85 units at 60 degrees, in accordance with ASTM D523.
   7. Gloss Level 7 (High-Gloss): More than 85 units at 60 degrees, in accordance with ASTM D523.

B. Environments: The following terms distinguish between different corrosive exposures:
   1. Severe Environments: Highly corrosive industrial atmospheres. Sustained exposure to high humidity and condensation and with frequent cleaning using strong chemicals. Environments with heavy concentrations of strong chemical fumes and frequent splashing and spilling of harsh chemical products are severe environments.
   2. Moderate Environments: Corrosive industrial atmospheres with intermittent exposure to high humidity and condensation, occasional mold and mildew development, and regular cleaning with strong chemicals. Environments with exposure to heavy concentrations of chemical fumes and occasional splashing and spilling of chemical products are moderate environments.
   3. Mild Environment: industrial atmospheres with normal exposure to moderate humidity and condensation, occasional mold and mildew development, and infrequent cleaning with strong chemicals. Environments with low levels of mild chemical fumes and occasional splashing and spilling of chemical products are mild environments. Normal outdoor weathering is also considered a mild environment.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: For each paint system indicated, including:
   1. Material List: An inclusive list of required coating materials. Indicate each material and cross reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.

2. Preparation instructions and recommendations.
3. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. For additional requirements for painting the existing Kalwall Skylight system framing and trim, refer to the Section 08 8450 - Skylight Restoration description for Refinishing Kalwall Aluminum Clamp-Tite Installation System.

C. Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.

D. Paint exposed surfaces. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

E. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

F. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label:

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F. Maintain storage containers in a clean condition, free of foreign materials and residue.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50° and 90°F.

C. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45° and 95°F.

D. Do not apply paint in snow, rain, fog, or mist: or when relative humidity exceeds 85 percent: or at temperatures less than 5°F above the dew point: or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.8 EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.

B. Quantity: Furnish Owner with an additional three percent, but not less than 1 gal (3.8 l) or 1 case, as appropriate, of each material and color applied.

PART 2 PRODUCTS

2.1 KALWALL SKYLIGHT FRAMING AND TRIM

A. For additional requirements for painting the existing Kalwall Skylight system framing and trim, refer to the Section 08 8450 - Skylight Restoration description for Refinishing Kalwall Aluminum Clamp-Tite Installation System.

2.2 MANUFACTURERS

A. Basis of Design: PPG Paints; Email: request info (david.engle@ppg.com); Web: https://www.ppgpaints.com

2.3 PAINT MATERIALS GENERAL

A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. VOC Classification: Provide high-performance coating materials, including primers, undercoats, and finish-coat materials, that meet the applicable local, state or federal VOC requirements.

C. Color: Match Duranar XL Chocolate Bronze.

D. Gloss Level 4 (Satin)

2.4 EXTERIOR HIGH-PERFORMANCE COATING SYSTEMS

A. Fluoropolymer System: One finish coat applied over an epoxy primer.

1. Substrate:

A. Old Factory Coated and Existing Field Coated Metal/Surfaces:

1. Surface Preparation:

a. Existing caulk, sealant, and residue/contamination to be completely removed from substrate to be coated by means deemed appropriate by contractor. Do not coat over caulking. If caulking is not removed, and is painted up to caulking, coating subject to delamination along caulk edge.

b. Solvent Clean, per SSPC SP-1, or power-wash substrate to remove any contamination that may be present, including any silicone residue and chlorides.

c. Abrade entire substrate to create a minimum and uniform surface profile of 1.0 mil. on surface.

d. Prepare any corroded surfaces per SSPC SP-11, Power Tool Cleaning to Bare Metal, removing existing coatings, corrosion, while obtaining a surface profile of 1.5 to 2.0 mils. Feather sand edges.

2. Primer:

PPG Paints: Apply one coat of Coraflon ADS 573/574 Epoxy Primer, by spraying, @ 2.0 – 4.0 mils DFT. All edges and bolts to be stripe coated.
[Refer to Technical Data Sheets for PPG Products]
[Brush and roll application may require 2 coats]

3. Color Coat:

PPG Paints: Apply one coat of Coraflon ADS, by spraying, @ 1.8 – 2.2 mils DFT. May require multiple passes or coats to achieve recommended dft. All edges and bolts to be stripe coated.
[Brush and roll application may require 2 coats Solid Colors Only]
[Refer to Technical Data Sheets for PPG Products]

Note: Metallic colors will require a coat of Coraflon ADS Clear at 1.8 to 2.2 mils dft. Metallic colors are conventional spray application.

B. Kynar Factory Coated Metal:

1. Surface Preparation:

a. *Existing caulk, sealant, and residue/contamination to be completely removed* from substrate to be coated by means deemed appropriate by contractor. Do not coat over caulking. If caulking is not removed, and is painted up to caulking, coating subject to delamination along caulk edge.

b. Solvent Clean, per SSPC SP-1, or power-wash substrate to remove any contamination that may be present, including any silicone residue and chlorides.

c. Abrade entire substrate to create a minimum and uniform surface profile of 1.0 mil. on surface.

e. Prepare corroded any surfaces per SSPC SP-11, Power Tool Cleaning to Bare Metal, removing existing coatings, corrosion, while obtaining a surface profile of 1.5 to 2.0 mils. Feather sand edges.

2. Primer:

   PPG Paints: Apply one coat of Coraflon ADS 510/512 Epoxy Primer, using multiple passes spraying, @ 2.0 – 4.0 mils DFT. May require multiple passes or coats to achieve recommended dft. All edges and bolts to be stripe coated.
   [Refer to Technical Data Sheets for PPG Products]
   [Brush and roll application may require 2 coats]

3. Color Coat:

   PPG Paints: Apply one coat of Coraflon ADS, by spraying, @ 1.8 – 2.2 mils DFT. All edges and bolts to be stripe coated.
   [Brush and roll application may require 2 coats Solid Colors]
   [Only Refer to Technical Data Sheets for PPG Products]

Metallic colors will require a coat of Coraflon ADS Clear at 1.8 to 2.2 mils dft. Metallic colors are conventional spray application.

PART 3 EXECUTION

3.1 KALWALL SKYLIGHT FRAMING AND TRIM

A. For additional requirements for painting the existing Kalwall Skylight system framing and trim, refer to the Section 08 8450 - Skylight Restoration description for Refinishing Kalwall Aluminum Clamp-Tite Installation System.

3.2 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
   1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.
   2. If a potential incompatibility of primers applied by others exists, obtain the following from the primer Applicator before proceeding:
      a. Confirmation of primer's suitability for expected service conditions.
      b. Confirmation of primer's ability to be top coated with materials specified.

3.3 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
   1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
   1. Schedule cleaning and painting so dust and other contaminants from the cleaning

process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
   1. Provide barrier coats over incompatible primers or remove and reprime.
   2. Provide barrier coats over incompatible primers or remove primers and reprime substrate.
   3. Nonferrous-Metal Substrates: Clean nonferrous and galvanized surfaces according to manufacturer's written instructions for the type of service, metal substrate, and application required.
      a. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

D. Material Preparation: Carefully mix and prepare coating materials according to manufacturer's written instructions.
   1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.
   2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.
   3. Use only the type of thinners approved by manufacturer and only within recommended limits.
   4. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.4 APPLICATION

A. General: Apply high-performance coatings according to manufacturer's written instructions.
   1. Use applicators and techniques best suited for the material being applied.
   2. Do not apply high-performance coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
   3. Coating surface treatments, and finishes are indicated in the coating system descriptions.
   4. Provide finish coats compatible with primers used.
   5. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, grilles, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.

B. Application Procedures: Apply coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
   1. The number of coats and film thickness required is the same regardless of application method.
   2. Completed Work: Match approved Samples for color, texture, and coverage. Remove, refinish, or recoat work that does not comply with specified requirements.

3.5 FIELD QUALITY CONTROL

A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:
   1. Owner will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.

2. Owner may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor may be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.6 CLEANING

A. After completing painting, clean glass and paint spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.7 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

C. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 09 9000

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SECTION 09 9113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following exterior substrates:

1. Concrete.
2. Clay masonry.
3. Concrete masonry units (CMUs).

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples: For each type of paint system and each color and gloss of topcoat.

1.3 QUALITY ASSURANCE

A. 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.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide products by PPG Industries, Inc or approved equal.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Materials for use within each paint system shall be 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, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

B. Colors: As shown on the drawings

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.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMUs): 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification 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.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."

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.

3.4 CLEANING AND PROTECTION

A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Nontraffic Surfaces:

1. High-Build Latex System: Dry film thickness of not less than 10 mils (0.25 mm).

    a. Prime Coat: As recommended in writing by topcoat manufacturer.
    b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
    c. Topcoat: Latex, exterior, high build.

B. Clay Masonry Substrates:

1. High-Build Latex System: Dry film thickness of not less than 10 mils (0.25 mm).

    a. Prime Coat: As recommended in writing by topcoat manufacturer.
    b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
    c. Topcoat: Latex, exterior, high build.

C. CMU Substrates:

1. Latex System:

    a. Prime Coat: Block filler, latex, interior/exterior.
    b. Intermediate Coat: Latex, exterior, matching topcoat.
    c. Topcoat: Latex, exterior, low sheen.

END OF SECTION 09 9113

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SECTION 09 9113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following exterior substrates:

1. Concrete.
2. Clay masonry.
3. Concrete masonry units (CMUs).

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples: For each type of paint system and each color and gloss of topcoat.

1.3 QUALITY ASSURANCE

A. 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.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide products by PPG Industries, Inc or approved equal.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Materials for use within each paint system shall be 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, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

B. Colors: As shown on the drawings

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.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMUs): 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification 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.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."

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.

3.4 CLEANING AND PROTECTION

A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Nontraffic Surfaces:

1. High-Build Latex System: Dry film thickness of not less than 10 mils (0.25 mm).

    a. Prime Coat: As recommended in writing by topcoat manufacturer.
    b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
    c. Topcoat: Latex, exterior, high build.

B. Clay Masonry Substrates:

1. High-Build Latex System: Dry film thickness of not less than 10 mils (0.25 mm).

    a. Prime Coat: As recommended in writing by topcoat manufacturer.
    b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
    c. Topcoat: Latex, exterior, high build.

C. CMU Substrates:

1. Latex System:

    a. Prime Coat: Block filler, latex, interior/exterior.
    b. Intermediate Coat: Latex, exterior, matching topcoat.
    c. Topcoat: Latex, exterior, low sheen.

END OF SECTION 09 9113

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SECTION 09 9653 - WATERPROOFING AND RESTORATION COATING

PART 1 - GENERAL

1.1 SUMMARY

A. Provide all labor, materials and equipment necessary to apply waterproofing and restoration coating.

1.2 REFERENCES

A. Section Includes

1. ASTM E 96: Test Method for Water Vapor Transmission of Materials
2. ASTM G 26:Practice for Operating Light Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Non Metallic Materials
3. ASTM C 661-85: Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer
4. ASTM B 117-90:Test Method of Salt Spray (Fog) Testing
5. ASTM D 610-85: Method for Evaluating Degree of Rusting on Painted Steel Surfaces
6. ASTM D 522-88: Test Method for Mandrel Bend Test of Attached Organic Coatings
7. ASTM D 660-93: Test Method for Evaluating Degree of Checking of Exterior Paints
8. ASTM D 661-93: Test Method for Evaluating Degree of Cracking of Exterior Paints
9. ASTM D 662-93: Test Method for Evaluating Degree of Erosion of Exterior Paints
10. ASTM D 714-87: Test Method for Evaluating Degree of Blistering of Paints
11. ASTM D 4260: Standard Practice For Acid Etching Concrete.
12. ASTM D 4258: Standard Practice For Surface Cleaning Concrete For Coating
13. ASTM D 4259: Standard Practice For Abrading Concrete
14. ASTM D 2794: Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
15. ASTM D 4214-89: Test Method for Evaluating Degree of Chalking of Exterior Paint Films
16. ASTM D 2370-92: Test Methods for Tensile Properties of Organic Coatings
17. Fed Spec TT-C-555-B Wind Driven Rain
18. DS433, Weatherlastic® Smooth
19. DS436, Weatherprime®
20. #5100 Data Sheet Plastiflex® Elastomeric Adhesive Caulk (Brush Grade) by Scott Paint Company
21. # 5200 Data Sheet Plastiflex® Elastomeric Patching Compound (Knife Grade) by Scott Paint Company

1.3 DESCRIPTION

A. The Dryvit Weatherlast products include a waterproof elastomeric coating and primer for use over exterior concrete, masonry, stucco, exterior insulation and finish systems (EIFS) and direct-applied exterior finish systems (DEFS).

1.4 SUBMITTALS

A. Samples

1. Submit two (2) 2 ft x 4 ft (.61 m x 1.2 m) samples of each proposed finish to the Architect for approval. Proposed finishes:

a. SW7019 Gauntlet Gray (preferred option)

b. SW7018 Dovetail (lighter tone option)

c. SW7045 Intellectual Gray (preferred option)

d. SW7044 Amazing Gray (lighter tone option)

e. PPG 1023-5 Stone Gray (preferred option)

f. PPG 1023-4 Desert Dune (lighter tone option)

g. SW7017 Dorian Gray (preferred option)

h. SW7016 Mindful Gray (lighter tone option)

Note: The above list includes a lighter tone option for each preferred color option due to Weatherlastic Smooth colors being slightly darker than the same color in Dryvit DPR finish. Only two of the above listed colors will be selected for the final installation.

B. Mock-up

1. Provide a minimum 6 ft x 6 ft (1.8 m x 1.8 m) area of actual project wall shall be coated with the accepted finish to establish a standard of acceptance by the Architect.

C. Manufacturer's Information

1. Submit manufacturer's product information and specifications.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer shall be Dryvit Systems, Inc.

a. Materials shall be manufactured at a facility covered by a current ISO 9001:2015 and ISO 14001:2015 certification. Certification of the facility shall be done by a registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).

2. The applicator shall be knowledgeable in the application of exterior acrylic and elastomeric architectural coatings and waterproofing products.

B. Substrates

1. Application of Weatherlast products shall be applied only to the following substrates when prepared in accordance with this specification.

a. Sound unglazed brick, unit masonry or concrete.
b. Sound stucco.
c. Sound exterior insulation and finish systems (EIFS).
d. Sound direct-applied exterior finish systems (DEFS).

2. The applicator shall verify that the proposed substrate is acceptable prior to application of Weatherlast products.

C. Performance Requirements

1. The Weatherlastic Smooth coating shall meet or exceed the following tests.

   a. Water Vapor Transmission (ASTM E 96 Water Method) - 15 perms at 10 mils dry film thickness.
   b. Accelerated Weathering (ASTM G 26 Test Method 1, BH Apparatus)

      1) After 3,000 hours exposure, the coating shall exhibit as a minimum:
         a) Chalking index of 9 per ASTM D 4214-89 Method B
         b) Checking index of 10 per ASTM D 660-93
         c) Cracking index of 10 per ASTM D 661-93
         d) Blistering index of 10 per ASTM D 714-87
         e) Erosion index of 9 per ASTM D 662-93
         f) Rusting index of 10 per ASTM D 610-85

   c. Salt Spray (Fog) Resistance (ASTM B 117-90)

      1) After 500 hours exposure, the coating shall exhibit as a minimum:

         a) Chalking index of 10 per ASTM D 4214-89 Method B
         b) Checking index of 10 per ASTM D 660-93
         c) Cracking index of 10 per ASTM D 661-93
         d) Blistering index of 10 per ASTM D 714-87
         e) Erosion index of 10 per ASTM D 662-93
         f) Rusting index of 10 per ASTM D 610-85

   d. Hardness (ASTM C 661-85) Type A Shore Durometer; 69.5 @ 20 mils DFT
   e. Impact Resistance (ASTM D 2794); 98 in-lbs.
   f. Resistance to Wind Driven Rain (Federal Test Method TT-C-555B) - Passes
   g. Low-Temperature Flexibility; 1/8 in (3.2 mm) diameter mandrel at -30 °F (-34 °C). No cracking or adhesion loss (Evaluated per ASTM D 522-88).
   h. Tensile Properties (ASTM D 2370-92):

      1) Tensile Strength - 100 psi @ 77 °F (25 °C) 488 psi @ - 0 °F (18 °C)
      2) Elongation - 77% @ 77 °F (25 °C) 123% @ -0 °F (18 °C)

1.6 DELIVERY, STORAGE and HANDLING

A. All Weatherlast materials shall be delivered to the job site in the original, unopened packages with labels intact.

B. Upon arrival, materials shall be inspected for physical damage, freezing or overheating. Questionable materials shall not be used.

   1. All Weatherlast materials shall be stored at the job site, and at all times, in a cool, dry location, out of direct sunlight, protected from weather and other damage. Minimum storage temperature shall be 40 °F (4 °C).
   2. For all other products, refer to specific product data sheets.

C. Maximum storage temperature shall not exceed 100 °F (38 °C). NOTE: Minimize exposure of materials to temperatures over 90 °F (32 °C). Finishes exposed to temperatures over 110 °F (43 °C) for even short periods may exhibit skinning, increased viscosity and should be inspected prior to use.

1.7 JOB CONDITIONS

A. Existing conditions: The applicator shall have access to electric power, clean water and a clean work area at the location where the Weatherlast materials are to be installed.

B. Environmental Conditions:

1. The ambient air and wall temperatures shall be from 40 °F (4 °C) minimum to 100 °F (38 °C) maximum for application of Weatherlastic Smooth, and Weatherprime®. The temperature shall remain so for at least 24 hours thereafter or longer if necessary for the materials to be sufficiently dried.

C. Protection

1. Adjacent areas/materials shall be protected from damage, drops and spills during the application of Weatherlast materials.
2. The Weatherlast materials shall be protected by permanent or temporary means from weather and other damage, prior to, during, and immediately after application. Care must be taken to prevent condensation and/or heat buildup when using tarp or plastic to prevent damage to the Weatherlast materials.

D. Sequencing and Scheduling:

1. Application of the Weatherlast materials shall be coordinated with other construction trades.
2. Sufficient labor and equipment shall be employed to ensure a continuous operation.

1.8 LIMITED MATERIALS WARRANTY

A. Dryvit shall offer a written Limited Materials Warranty upon receipt of a properly executed warranty request and completed project form.

1.9 MAINTENANCE

A. Submit Dryvit publications for Cleaning and Recoating.

PART 2 - PRODUCTS

2.1 GENERAL

A. All Weatherlast products shall be supplied by and obtained from Dryvit or its authorized distributors. Substitutions or addition of other materials will void the warranty.

2.2 COMPONENTS

A. Weatherlastic Elastomeric Coating

1. Weatherlastic Smooth: A smooth, nontextured 100% acrylic based coating utilizing an elastomeric binder.

B. Weatherprime Acrylic Primer: A pigmented, exterior, acrylic emulsion primer.

2.3 MATERIALS

A. Water: Shall be clean and potable.

B. Patching Material

1. The following products have been evaluated and found to be compatible with Weatherlast products:

a. #5100 Plastiflex® Elastomeric Adhesive Caulk (brush grade) - Available from Scott Paint (www.scottpaint.com) (1-800-282-2016)
b. #5200 Plastiflex Elastomeric Patching Compound (knife grade) - Available from Scott Paint (www.scottpaint.com) (1-800-282-2016)

2.4 EQUIPMENT

A. Mixing shall be done with a clean Goldblatt Jiffler Mixer #15311H7 or equivalent powered by a 1/2 in (12.7 mm) drill at 400-500 RPM.

B. Tools associated with the painting trade.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examination of Substrate.

1. Ensure that the substrate is of a type and condition listed in Section 1.06.B.

B. Ensure that minimum application temperatures are met per Section 1.08.B.

3.2 SUBSTRATE PREPARATION

A. Coated Substrates

1. Shall be cleaned to remove all chalk dirt, dust, loose coatings and other foreign materials.
2. Loose, delaminated or spalled areas shall be repaired with an appropriate procedures and materials compatible with the substrate material.

B. Noncoated Surfaces

1. Surfaces shall be cleaned to remove all dirt, dust, form release agents, or other foreign matter which may interfere with the bond of a finish coating.
2. Loose, delaminated or spalled areas of masonry, stucco or concrete substrates shall be repaired with an appropriate cementitious patching compound and allowed to cure a minimum of 7 days.
3. Concrete shall cure a minimum of 28 days prior to application of the Weatherlast products.
4. Surfaces shall be primed with Weatherprime tinted to match the final color.
5. Cracks shall be treated as per Section 3.02.D.
6. Sills

a. All sills shall receive a liberal coat of compatible brush grade patching compound.

7. Parapets

   a. Treat top and back of parapets in the same manner as exterior walls, terminating at roof counter flashing.
   b. Recaulking to roof flashing may be required. Use an appropriate high grade urethane sealant and allow to cure prior to application of compatible brush grade patch compound.

8. Terminations and juncture of dissimilar materials.

   a. Caulk as necessary using compatible high grade urethane sealant and allow to cure prior to application of compatible brush grade patch compound.

C. New Construction

1. Stucco

   a. Stucco shall be dry and fully cured for a minimum of 7 days prior to application of coatings.
   b. Clean stucco walls to ensure removal of dirt, dust, efflorescence or any other foreign matter which may interfere with bond of a surface coating.
   c. Prime stucco surface with Weatherprime acrylic primer.

2. Masonry

   a. Remove all fins, mortar droppings, etc. and ensure that mortar joints are sound and free of cracks or voids.
   b. Surface should be clean, dry and free of dust, dirt, or other foreign matter which may interfere with application or bond of a surface coating.

      1) Surface shall be cleaned in accordance with ASTM D 4261 Standard Practice For Surface Cleaning Concrete Unit Masonry For Coating.

   c. Face of block shall be filled with a block filler or cementitious parge coat and allowed to dry. As an alternate, a skim coat of Genesis®, Primus® or Primus® DM mixture may be used.

3. Concrete; precast, tilt-up, poured-in-place

   a. Concrete shall be allowed to cure a minimum of 28 days prior to application of surface coatings.
   b. Surfaces shall be free of dirt, dust, form release agents, efflorescence, curing compounds, etc.
   c. Very smooth precast or poured-in-place concrete shall be cleaned by appropriate methods to ensure a proper bond of surface coatings. Refer to:

      1) ASTM D 4260: Standard Practice For Acid Etching Concrete.
      2) ASTM D 4258: Standard Practice For Surface Cleaning Concrete For Coating.
      3) ASTM D 4259: Standard Practice For Abrading Concrete.

   d. Apply Weatherprime acrylic primer to the concrete surface and allow to dry.

D. Cracks shall be treated as follows:

1. Static cracks up to 1/32 in (.8 mm) can be bridged by Weatherlastic finishes without special treatment.

2. Static cracks up to 1/8 in (3.2 mm) in width in concrete, CMU or stucco.

   a. Remove all loose material and clean the crack.
   b. Apply compatible patch compound directly over the crack and feather out a minimum of 4 in (102 mm) on each side.

3. Static cracks 1/8 in to 1/4 in (3.2 mm to 6.4 mm) wide in concrete, CMU, or stucco.

   a. Chip or grind out crack to a minimum 1/4 in (6.4 mm) wide by 1/4 in (6.4 mm) deep groove.

b. Clean and remove all loose materials.
c. Fill groove with compatible knife grade patch compound.
d. Bridge crack with compatible brush grade patch compound. Apply at approximately 1/4 in (6.4 mm) thickness over the crack and feather out a minimum of 102 mm (4 in) on each side.

4. Static cracks over 1/4 in (6.4 mm) wide in concrete, CMU, or stucco.

a. Clean and remove all loose and unsound material from crack.
b. Repair crack with non-shrinking cementitious patching mortar or cement plaster mix and allow to cure a minimum of 7 days.
c. Coat with Weatherprime and top dress with a compatible patching material if necessary.

5. Dynamic cracks 1/16 in to 1/2 in (1.6 mm to 12.7 mm) wide in concrete, CMU, or stucco.

a. Chip or grind out the crack so that the width is equal to the depth, but not less than 1/4 in (6.4 mm).
b. Clean and remove all loose material from crack.
c. Fill the crack with a high grade urethane sealant. Tool into joint and allow to cure minimum 24 hours.
d. Apply a coat of compatible brush grade patch compound over the crack and feather out to a minimum of 4 in (102 mm) on each side.

6. Prime patched surfaces with Weatherprime acrylic primer.
7. Cracks in EIFS and DEFS systems shall be repaired using procedures described in Dryvit publication DS498.
8. EIFS and DEFS surfaces shall be skimmed out with Dryvit NCB™ or Freestyle® to fill in texture prior to application of textured Weatherlast finishes.

3.3 WEATHERLASTIC APPLICATIONS

A. The substrate and substrate preparation shall be inspected by the contractor to ensure it is in compliance with this specification.

B. Mixing

1. Weatherlastic Smooth coating and Weatherprime shall be mixed thoroughly to a uniform homogeneous consistency using a Goldblatt Jiffler Mixer No. 15311H7 powered by a 1/2 in (12.7 mm) drill 400-500 RPM or equivalent.

C. General.

1. The Weatherlastic Smooth coating can be brush, roller, or spray applied in accordance with specific product instructions.
2. No additives shall be added under any circumstances.
3. Weatherlastic Smooth shall be applied to an entire wall surface in a continuous application.
4. The coating shall be protected from airborne contamination such as dust, soot, etc. and from weather and other damage until fully dried.
5. The wall surfaces to be coated shall not be hot to the touch and the coating must be applied in the shade.

D. Compatible Patching Material

1. Brush grade patching material shall be applied using a nylon brush to the required thickness.
2. Knife grade patching material shall be applied using a putty knife or spatula to the required thickness.

E. Weatherprime

1. Shall be applied to recommended coating thickness by brush, roller or airless spray equipment.

2. A maximum 3/4 in (19 mm) nap polyester or polyester blend with nylon or lamb's wool, beveled ends and phenolic core is recommended.
3. A 18 in (457 mm) wide roller frame with 2 1/4 in (57 mm) inside diameter roller is recommended.
4. Apply in a continuous application, maintaining a wet edge, to a natural break.

F. Weatherlastic Smooth Coating Application

1. Brush application recommended only for cutting in and trim, not for entire wall elevation.

a. Nylon bristle brush is recommended.
b. For waterproofing performance, a minimum 11 mils dry film thickness (22 mils wet film thickness), shall be applied.

2. Roller Application

a. Minimum 10 in (254 mm) wide roller cover with 1 1/4 in - 1 1/2 in (32 mm – 38 mm) nap is recommended.
b. Completely saturate the roller cover and keep the roller loaded with coating to avoid foaming. Do not dry-roll or over-roll as this will cause excessive entrapment of air within the coating.
c. For waterproofing performance, a minimum 11 mils dry film thickness (22 mils wet film thickness), shall be applied.

3. Spray Application

a. Application by airless spray equipment or mastic pump and gun allows application of coating at total required application rate with a minimum of stipple or thickness variations.
b. Equipment should have the capacity to pump minimum of 2 gal (7.6 L) of coating per minute.
c. Material hose should be minimum 1/2 in (12.7 mm) I.D. for spraying coating more than a 50 ft (15.2 m) length. Minimum bursting of 800 lbs (360 kg) is recommended.
d. Tip orifice sizes of .021- 032 will be required depending on equipment used.
e. Cross apply coating holding spray gun perpendicular to, and approximately three feet from the surface. Avoid excessive material build-up by holding spray gun away from the wall when pulling the trigger, thenbringing gun across area to be coated. Maintain a wet edge, and avoid starting and stopping in the middle of the wall. Do not attempt to overreach spray pattern as this may result in appearance of irregular spray pattern. Place scaffolding and equipment to facilitate quick application without numerous interruptions.
f. A 10% loss from overspray should be anticipated.
g. Backrolling over sprayed areas is recommended to control pinholing on spray applications over porous surfaces.
h. All sprayed applications must be free of pinholes to insure waterproofing performance.
i. For waterproofing performance, a minimum 11 mils dry film thickness (22 mils wet film thickness), shall be applied.

3.4 FIELD QUALITY CONTROL

A. Dryvit Systems, Inc. and/or its distributors will provide field service support if reasonably requested by the applicator. The applicator shall be responsible for the proper application of the Dryvit materials.

B. The applicator shall certify in writing that the quality of work performed relative to the substrate system, details, installation procedures and workmanship is in accordance with project specifications and manufacturer's instructions.

C. Sealant applicator shall certify in writing that the sealant application is in accordance with the sealant manufacturer's and Dryvit's recommendations.

3.5 CLEAN-UP

A. Materials left over by the applicator at the job site shall be removed by the applicator.

B. The applicator shall clean adjacent materials and surfaces and the work area of foreign materials resulting from their work.

END OF SECTION 09 9653

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